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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

o **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2019.

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

o **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report . . . . . .

For the transition period from to

Commission file number: 001-35126

21Vianet Group, Inc.

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Cayman Islands

(Jurisdiction of incorporation or organization)

Guanjie Building Southeast 1st Floor, 10# Jiuxianqiao East Road,
Chaoyang District
Beijing, 100016
The People's Republic of China

(Address of principal executive offices)

Ms. Sharon Xiao Liu, Chief Financial Officer
21Vianet Group, Inc.
Guanjie Building Southeast 1st Floor, 10# Jiuxianqiao East Road,
Chaoyang District
Beijing, 100016
The People's Republic of China
Phone: (86) 10 8456-2121
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(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
American depositary shares, each representing six Class A ordinary shares, par value US$0.00001 per share	**VNET**	**NASDAQ Global Select Market**
Class A ordinary shares, par value US$0.00001 per share*		

* Not for trading, but only in connection with the listing on the Nasdaq Global Select Market of the American depositary shares

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

505,253,850 Class A ordinary shares issued and outstanding and excluding treasury shares, and 174,649,638 Class B ordinary shares and 60,000 Class C ordinary shares, par value US$0.00001 per share, as of December 31, 2019.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes o No x

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes o No x

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes x No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer x	Non-accelerated filer o	Emerging growth company o

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. o

†The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

US GAAP x	International Financial Reporting Standards as issued by the International Accounting Standards Board o	Other o

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 o Item 18 o

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No x

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes o No o

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INTRODUCTION

Unless otherwise indicated and except where the context otherwise requires, references in this annual report on Form 20-F to:

- "ADSs" refers to our American depositary shares, each representing six Class A ordinary shares, par value US$0.00001 per share;
- "21Vianet," "we," "us," "our company," and "our" refer to 21Vianet Group, Inc., its subsidiaries and its consolidated affiliated entities;
- "China" or the "PRC" refers to the People's Republic of China, excluding, for the purpose of this annual report only, Hong Kong, Macau and Taiwan;
- "ordinary shares" or "shares" refer to our ordinary shares, which include all Class A ordinary shares, par value US$0.00001 per share, Class B ordinary shares, par value US$0.00001 per share, and Class C ordinary shares, par value US$0.00001 per share, collectively;
- "variable interest entities," or "VIEs," refer to Beijing Yiyun Network Technology Co., Ltd. (previously known as Beijing aBitCool Network Technology Co., Ltd.), or 21Vianet Technology, Beijing iJoy Information Technology Co., Ltd., or BJ iJoy, and WiFire Network Technology (Beijing) Co., Ltd. (previously known as aBitcool Small Micro Network Technology (BJ) Co., Ltd.), or WiFire Network, three domestic PRC companies in which we do not have equity interests but whose financial results have been consolidated into our consolidated financial statements in accordance with U.S. GAAP due to our having effective control over, and our being the primary beneficiary of, the three companies;
- "consolidated affiliated entities" refer to our variable interest entities and their direct and indirect subsidiaries; and
- "RMB" and "Renminbi" refer to the legal currency of China. Unless otherwise noted, all translations from RMB to U.S. dollars and from U.S. dollars to RMB in this annual report were made at a rate of RMB6.9618 to US$1.00, the exchange rate on December 31, 2019 as set forth in the H.10 statistical release published by the Federal Reserve Board.

FORWARD-LOOKING STATEMENTS

This annual report on Form 20-F contains forward-looking statements that involve risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. These forward-looking statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Known and unknown risks, uncertainties and other factors, including those listed under "Risk Factors," may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements.

You can identify some of these forward-looking statements by words or phrases such as "may," "will," "expect," "anticipate," "aim," "estimate," "intend," "plan," "believe," "is/are likely to," "potential," "continue" or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements include:

- our goals and strategies and our expansion plans;
- our future business development, financial condition and results of operations;
- the expected growth of the data center and cloud services market;

- our expectations regarding demand for, and market acceptance of, our services;
- our expectations regarding keeping and strengthening our relationships with customers;
- our plans to invest in research and development to enhance and complement our existing solution and service offerings;
- international trade policies, protectionist policies and other policies that could place restrictions on economic and commercial activity; and
- general economic and business conditions in the regions where we provide our solutions and services.

These forward-looking statements involve various risks and uncertainties. Although we believe that our expectations expressed in these forward-looking statements are reasonable, our expectations may later be found to be incorrect. Our actual results could be materially different from our expectations. Other sections of this annual report include additional factors that could adversely impact our business and financial performance. Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time and it is not possible for our management to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. You should read thoroughly this annual report and the documents that we refer to with the understanding that our actual future results may be materially different from and worse than what we expect. We qualify all of our forward-looking statements by these cautionary statements.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

Selected Consolidated Financial Data

The following selected consolidated financial information for the periods and as of the dates indicated should be read in conjunction with our consolidated financial statements and related notes and "Item 5. Operating and Financial Review and Prospects" in this annual report.

Our selected consolidated financial data presented below for the years ended December 31, 2017, 2018 and 2019 and our balance sheet data as of December 31, 2018 and 2019 have been derived from our audited consolidated financial statements included elsewhere in this annual report. Our audited consolidated financial statements are prepared in accordance with U.S. GAAP.

Our selected consolidated financial data presented below for the year ended December 31, 2015 and 2016 and our balance sheet data as of December 31, 2015, 2016 and 2017 have been derived from our audited financial statements not included in this annual report.

Starting in 2016, we began reporting our operating results in two operating segments, namely hosting and related services and managed network services. Content delivery network services, or CDN services, which were previously offered as part of our hosting and related services business segment, were moved to the managed network services business segment in the fourth quarter of 2016. Our consolidated statements of operations for the years ended December 31, 2015 and 2016 as presented in this annual report were modified to reflect this change in segment reporting for consistency purposes.

In September 2017, we completed the disposal of our managed network services business segment, including CDN services, hosting area network services, route optimization and last-mile broadband businesses, and deconsolidated the financial results related to the managed network services business segment in our consolidated statements of operations starting from the fourth quarter of 2017.

	For the Years Ended December 31,					
	2015	2016	2017	2018	2019	
	RMB	RMB	RMB	RMB	RMB	US$
			(in thousands, except share and per share data)			
Consolidated Statement of Operations Data:						
Net revenues:						
Hosting and related services	2,369,223	2,668,655	2,975,178	3,401,037	3,788,967	544,251
Managed network services	1,265,149	973,119	417,527	—	—	—
Total net revenues	3,634,372	3,641,774	3,392,705	3,401,037	3,788,967	544,251
Cost of revenues[1]	(2,780,614)	(2,929,638)	(2,634,295)	(2,456,166)	(2,849,518)	(409,308)
Gross profit	853,758	712,136	758,410	944,871	939,449	134,943
Operating (expenses) income:						
Sales and marketing expenses[1]	(359,460)	(352,926)	(256,682)	(172,176)	(206,309)	(29,634)
Research and development expenses[1]	(142,835)	(149,337)	(149,143)	(92,109)	(88,792)	(12,754)
General and administrative expenses[1]	(568,741)	(639,648)	(519,950)	(462,637)	(415,277)	(59,651)
(Allowance)/reversal for doubtful debt	(32,199)	(117,564)	(37,427)	598	(1,557)	(224)
Changes in the fair value of contingent purchase consideration payable	(43,325)	93,307	(937)	13,905	—	—
Impairment of long-lived assets	—	(392,947)	(401,808)	—	—	—
Impairment of goodwill	—	—	(766,440)	—	—	—
Impairment of receivables from equity investees	—	—	—	—	(52,142)	(7,490)
Other operating income	8,569	6,783	5,439	5,027	6,862	986
Operating (loss) profit	(284,233)	(840,196)	(1,368,538)	237,479	182,234	26,176
Net loss	(401,275)	(931,922)	(917,644)	(186,736)	(181,246)	(26,033)
Net (income) loss attributable to non-controlling interest	(26,824)	298,324	144,914	(18,329)	(1,046)	(150)
Net loss attributable to Company's ordinary shareholders	(428,099)	(633,598)	(772,730)	(205,065)	(182,292)	(26,183)
Loss per share:						
Basic	(0.85)	(1.37)	(1.36)	(0.30)	(0.27)	(0.04)
Diluted	(0.85)	(1.37)	(1.36)	(0.30)	(0.27)	(0.04)
Loss per ADS:						
Basic	(5.10)	(8.22)	(8.16)	(1.80)	(1.62)	(0.24)
Diluted	(5.10)	(8.22)	(8.16)	(1.80)	(1.62)	(0.24)
Shares used in loss per share computation:						
Basic	492,065,239	617,169,833	672,836,226	674,732,130	668,833,756	668,833,756
Diluted	492,065,239	617,169,833	672,836,226	674,732,130	668,833,756	668,833,756

(1) Share-based compensation was included in the related operating expense categories as follows:

	For the Years Ended December 31,					
	2015	2016	2017	2018	2019	
	RMB	RMB	RMB	RMB	RMB	US$
			(in thousands)			
Allocation of share-based compensation expenses:						
Cost of revenues	12,422	(4,110)	(277)	2,668	1,884	271
Sales and marketing expenses	13,488	2,490	(681)	2,139	354	51
Research and development expenses	10,303	(2,924)	142	1,385	1,177	169
General and administrative expenses	153,814	123,273	47,945	53,346	40,501	5,817
Total share-based compensation expenses	190,027	118,729	47,129	59,538	43,916	6,308

	As of December 31,					
	2015	2016	2017	2018	2019	
	RMB	RMB	RMB	RMB	RMB	US$
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash and cash equivalents	1,685,054	1,297,418	1,949,631	2,358,556	1,808,483	259,772
Restricted cash (current asset)	195,230	1,963,561	242,494	265,214	478,873	68,786
Short-term investments	102,300	277,946	548,890	245,014	363,856	52,265
Accounts and notes receivable, net	694,108	655,459	455,811	524,305	657,158	94,395
Total current assets	3,437,921	5,158,561	4,245,542	4,678,109	5,228,184	750,982
Restricted cash (non-current asset)	128,515	33,544	3,344	37,251	69,821	10,029
Total assets	10,847,710	12,421,524	9,908,161	11,150,717	14,273,706	2,050,289
Total current liabilities	2,821,019	4,373,857	1,764,184	2,191,210	4,469,021	641,932
Total liabilities	6,023,106	5,570,507	4,707,157	5,787,533	9,042,078	1,298,811
Total mezzanine equity	790,229	700,000	—	—	—	—
Total shareholders' equity	4,034,375	6,151,017	5,201,004	5,363,184	5,231,628	751,478

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Risks Related to Our Business and Industry

We may not be able to successfully implement our growth strategies.

We plan to further increase our services capacities. In 2019, we increased the aggregate number of cabinets under our management by 5,637 from 30,654 as of December 31, 2018 to 36,291 as of December 31, 2019. In order to support our growing customer demand, we plan to add new cabinets in 2020 through new self-built data centers and new phases of existing self-built data centers. To achieve this expansion plan, we will be required to commit a substantial amount of operating and financial resources. Our planned capital expenditures, together with our ongoing operating expenses, will cause substantial cash outflows. If we are not able to generate sufficient operating cash flows or obtain alternative financings, our ability to fund our growth strategy may be limited. Alternative debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. Any inability to obtain additional debt or equity financing or to generate sufficient cash from operations may require us to prioritize projects or curtail capital expenditures and could adversely affect our results of operations.

In addition, site selection is a critical factor in our expansion plans, and there may not be suitable properties available with the necessary combination of high power capacity and optical fiber connectivity, which may have a negative impact on our revenue growth. Moreover, we may not have sufficient customer demand in the markets where our data centers are located. We may overestimate the demand for our services and as a result may increase our data center capacity or expand our internet network more aggressively than needed, resulting in a negative impact to our gross profit margins. Furthermore, the costs of construction and maintenance of new data centers constitute a significant portion of our capital expenditures and operating expenses. If our planned expansion does not achieve the desired results, our operating margins could be materially reduced, which would materially impair our profitability and adversely affect our business and results of operations.

Delays in the construction of new data centers or the expansion of existing data centers could involve significant risks to our business.

In order to meet customer demand in some of our existing and new markets, we need to expand existing data centers, lease new facilities or obtain suitable land to build new data centers. Expansion of existing data centers and/or construction of new data centers are currently underway, or being contemplated, in many of our markets. Such expansion and/or construction require us to carefully select and rely on the experience of one or more designers, general contractors, and subcontractors during the design and construction process. If a designer, general contractor, or significant subcontractor experiences financial or other problems during the design or construction process, we could experience significant delays and/or incur increased costs to complete the projects, resulting in negative impacts on our results of operations.

Government policies and restrictions on the construction of new data centers or the expansion of existing data centers may also have a material impact on our business. For example, since January 2019, Ministry of Industry and Information Technology, or MIIT, and other regulatory authorities encourage data centers to adhere to certain average levels of energy conservation and aim to reach several goals including, among others, maintaining the power usage effectiveness (PUE) of newly constructed large and extra-large data centers at or below 1.4 from the year 2022 onwards. Some local governmental authorities also issued regulations and relevant implementation rules in order to control the construction and expansion of data centers. For example, on September 6, 2018, the General Office of the People's Government of Beijing Municipality issued a notice prohibiting new construction or expansion of data centers which are involved in providing internet data services or information processing and storage support services within certain areas of Beijing. Governmental authorities in Shanghai also announced similar guidance on January 2, 2019, which provides that the PUE of newly constructed Internet data center is required to be strictly controlled below 1.3, and the PUE of reconstructed internet data centers is required to be strictly controlled below 1.4. These regulatory developments and uncertainties regarding their implementation may adversely affect the expansion and/or construction progress of our data centers.

In addition, we need to work closely with the local power suppliers where our proposed data centers are located. If we experience significant delays in the supply of power required to support the data center expansion or new construction, either during the design or construction phases, the progress of the data center expansion and/or construction could deviate from our original plans, which could cause material and negative effect on our revenue growth, profitability and results of operations.

Any significant or prolonged failure in our infrastructure or services would lead to significant costs and disruptions and would reduce our revenues, harm our business reputation and have a material adverse effect on our financial results.

Our data centers, power supplies and network are vulnerable to disruptions and to failure. Problems with the cooling equipment, generators, backup batteries, routers, switches, or other equipment, whether or not within our control, could result in service interruptions and data losses for our customers as well as equipment damage. Our customers locate their computing and networking equipment in our data centers, and any significant or prolonged failure in our infrastructure or services could significantly disrupt the normal business operations of ourcustomers and harm our reputation and reduce our revenue. While we offer data backup services and disaster recovery services, which could mitigate the adverse effects of such a failure, most of our customers do not subscribe for these services. Accordingly, any failure or downtime in one of our data centers could affect many of our customers. The total destruction or severe impairment of any of our data centers could result in significant downtime of our services and loss of customer data. Since our ability to attract and retain customers depends on our ability to provide highly reliable service, even minor interruptions in our service could harm our reputation.

While we have not experienced any material interruptions in the past, services interruptions continue to be a significant risk for us and could materially impact our business. Any services interruptions could:

- require us to waive fees or provide free services;
- cause our customers to seek damages for losses incurred;
- require us to replace existing equipment or add redundant facilities;
- cause existing customers to cancel or elect to not renew their contracts;

- affect our reputation as a reliable provider of data center services; or
- make it more difficult for us to attract new customers or cause us to lose market share.

Any of these events could materially increase our expenses or reduce our revenue, which would have a material adverse effect on our results of operations.

We depend on third-party suppliers for key elements of our network infrastructure, data center and telecommunication network services, and we also compete with some of the third-party suppliers, primarily China Telecom and China Unicom, for certain telecommunication resources.

Our success depends in part upon our relationships with third-party suppliers, primarily China Telecom or China Unicom, for key elements of network infrastructure and telecommunication network services, including hosting facilities and bandwidth, and to some extent, optical fibers. We directly enter into agreements with the local subsidiaries of China Telecom or China Unicom, from which we lease cabinets in the data centers built and operated by them, with power systems, cabling and wiring and other data center equipment pre-installed. Because each local subsidiary of China Telecom or China Unicom has independent authority and budget to enter into contracts, our contract terms with these subsidiaries vary and are determined on a case-by-case basis. We generally define "partnered" data centers as the data center space and cabinets we lease from China Telecom, China Unicom and other third parties through agreements. Based on the specific requests of our customers, demands in different cities and our strategy for points of presence, or POP, establishment, the locations and number of our partnered data centers may change from time to time. As of December 31, 2019, we leased a total of 4,244 cabinets that are housed in our 51 partnered data centers, accounting for 11.7% of the total number of our cabinets under management.

We also rely on our internet bandwidth suppliers, which are primarily China Telecom and China Unicom, for a significant portion of our bandwidth needs and lease optical fibers from them to connect our data centers with each other and with the telecommunications backbones and other internet service providers, or ISPs. Our agreements with local subsidiaries of China Telecom or China Unicom usually have a one-year term with automatic renewal option. We can offer no assurances that these service providers will continue to provide service to us on a cost-effective basis or on otherwise competitive terms, if at all, or that these providers will provide us with additional capacity to adequately meet customer demand or to expand our business. Any of these factors could limit our growth prospects and materially and adversely affect our business.

China Telecom and China Unicom also provide data center and bandwidth services and directly compete with us while we exercise little control over them. See "—We may not be able to compete effectively against our current and future competitors." We believe that we have good business relationships with China Telecom and China Unicom, and we have access to adequate hosting facilities and bandwidth to provide our services. However, there can be no assurance that we can always secure hosting facilities and bandwidth from China Telecom and China Unicom on commercially acceptable terms, or at all.

In addition, we currently purchase routers, switches and other equipment from a limited number of suppliers. We do not carry significant inventories of the products we purchase, and we have no guaranteed supply arrangements with our suppliers. The loss of a significant vendor could delay any build-out of our infrastructure and increase our costs. If our suppliers fail to provide products or services that comply with evolving internet standards or that interoperate with other products or services we use in our network infrastructure, we may be unable to meet all or a portion of our customer service commitments, which could materially and adversely affect our results of operations.

Furthermore, we have experienced and expect to continue to experience interruptions or delays in network services. Any failure on our part or the part of our third-party suppliers to achieve or maintain high data transmission capacity, reliability or performance could significantly reduce customer demand for our services and damage our business and reputation. As our customer base grows and their usage of telecommunications resources increases, we may be required to make additional investments in our capacity to maintain adequate data transmission speed. The availability of such capacity may be limited or the cost may be unacceptable to us. If adequate capacity is not available to us as our customers' usage increases, our network may be unable to achieve or maintain sufficiently high data transmission capacity, reliability or performance. In addition, our operating margins may suffer if our bandwidth suppliers increase the prices for their services and we are unable to pass along the increased costs to our customers.

Our leases for data centers could be terminated early, we may not be able to renew our existing leases on commercially reasonable terms, and our rent could increase substantially in the future, which could materially and adversely affect our operations.

We lease buildings with suitable power supplies and safe structures meeting our data center requirements and convert them into data centers by installing power generators, air conditioning systems, cables, cabinets and other equipment. We also build our own data centers from the ground up after obtaining suitable land. We also purchase data centers in use or under construction from third parties. We generally refer to these three types of data centers as "self-built" data centers. Our operating leases generally have three to twenty years lease terms with renewal options. As of December 31, 2019, our self-built data centers house 32,047 cabinets, or 88.3% of the total number of our cabinets under our management. We plan to renew our existing leases upon expiration. However, we may not be able to renew these leases on commercially reasonable terms, if at all. We may experience an increase in our rent payments. In addition, although the lessors of our self-built data centers generally do not have the right of early termination and we have not experienced any early termination as of the date of this annual report, the lease could be terminated early if we are in material breach of the lease agreements or the leased premises become unavailable due to reasons beyond the lessors' control. If our leases for data centers were terminated early, we may have to relocate our data center equipment and the servers and equipment of our customers to a new building and incur significant costs related to relocation. Any relocation could also affect our ability to provide services and harm our reputation. As a result, our business and results of operations could be materially and adversely affected.

We may be subject to legal proceedings or arbitration claims in the ordinary course of our business, and the court ruling or arbitration award may not be favorable to us.

We have been involved, and may continue to be involved, in legal proceedings or arbitration claims in the ordinary course of our business including those in relation to contract disputes between us and our suppliers or other business partners. For instance, in March 2019, we received a court notification regarding a lawsuit launched by one of our third-party suppliers against us, alleging that we had not fully fulfilled our contractual obligations under a network infrastructure cooperation agreement entered into by and between 21Vianet Beijing and the supplier in 2013. While we believe that the claims against us in this litigation are without merit and intend to defend the action vigorously, we cannot assure you that this lawsuit will be ultimately resolved in our favor. Such proceedings or claims, regardless of their outcomes, could harm our reputation, divert our management's attention and cause us to incur a substantial amount of legal expenses. If the outcomes of these legal proceedings or arbitration claims are unfavorable to us, we may incur significant legal liabilities and our reputation, financial condition and results of operations could be materially and adversely affected.

We were named as a defendant in a putative shareholder class action lawsuit in the past, if we are involved in similar class action lawsuits, such proceedings could have a material adverse impact on our business, financial condition, results of operation, cash flows and reputation.

In the past, we have been named as defendant in a putative shareholder class action lawsuit described in "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal and Administrative Proceedings—Litigation," which has been settled, but we may be involved in similar class action lawsuits in the future. Any such class action lawsuit, whether or not successful, may utilize a significant portion of our cash resources, divert management's attention from the day-to-day operations of our company, harm our reputation and restrict our ability to raise capital in the future, all of which could harm our business. We also may be subject to claims for indemnification related to these matters, and we cannot predict the impact that indemnification claims may have on our business or financial results.

Difficulties in identifying, consummating and integrating acquisitions and alliances and potential write-off in connection with our investment or acquisitions may have a material and adverse effect on our business and results of operations.

As part of our growth strategy, we have acquired, and may in the future acquire, companies that are complementary to our business. From time to time, we may also make alternative investments and enter into strategic partnerships or alliances as we see fit. For example, we are Microsoft's local partner for all of its three major cloud offerings: Microsoft Azure, Office 365, and Dynamics 365. We had also been IBM's local partner for its cloud services (previously known as Bluemix) until December 2019. In March 2017, we entered into an investment agreement with Warburg Pincus to establish a multi-stage joint venture and build a digital real estate platform in China, with an aim to form additional joint ventures to jointly develop IDC projects, and we reached agreements to restructure our partnership with Warburg Pincus in July 2019. In October 2019, we signed a memorandum of understanding with Alibaba to deploy IDC services in support of Alibaba's expansion throughout Eastern China. However, past and future acquisitions, partnerships or alliances may expose us to potential risks, including risks associated with:

- the integration of new operations and the retention of customers and personnel;
- significant volatility in our operating profit (loss) due to changes in the fair value of our contingent purchase consideration payable;

- unforeseen or hidden liabilities, including those associated with different business practices;
- the diversion of management's attention and resources from our existing business and technology by acquisition, transition and integration activities;
- failure to achieve synergies with our existing business and generate revenues as anticipated;
- failure of the newly acquired businesses, technologies, services and products to perform as anticipated;
- inability to generate sufficient revenues to offset additional costs and expenses;
- breach or termination of key agreements by the counterparties;
- international operations conducted by some of our acquired business;
- potential claims over payment of contingent purchase consideration; or
- the potential loss of, or harm to, relationships with both our employees and customers resulting from our integration of new businesses.

Any of the potential risks listed above could have a material and adverse effect on our ability to manage our business and our results of operation. In particular, if we cannot deploy IDC services for Alibaba in a timely and satisfactory manner, we may not be able to continue to retain Alibaba as our customer or provide upgraded services to it, which would adversely and materially affect our reputation, which will in turn have a negative impact on our business, results of operations and financial conditions.

In addition, we record goodwill if the purchase price we pay in the acquisitions exceeded the amount assigned to the fair value of the net assets or business acquired. We are required to test our goodwill and intangible assets for impairment annually or more frequently if events or changes in circumstances indicate that they may be impaired. We may record impairment of goodwill and acquired intangible assets in connection with our acquisitions if the carrying value of our acquisition goodwill and related acquired intangible assets in connection with our past or future acquisitions are determined to be impaired. We cannot assure you that the acquired businesses, technologies, services and products from our past acquisitions and any potential transaction will generate sufficient revenue to offset the associated costs or other potential unforeseen adverse effects on our business. Furthermore, we may need to raise additional debt or sell additional equity or equity-linked securities to make or complete such acquisitions. See "—We may require additional capital to meet our future capital needs, which may adversely affect our financial position and result in additional shareholder dilution."

We may not be able to increase sales to our existing customers and attract new customers, which would adversely affect our results of operations.

Our growth depends on our ability to continue to expand our service offerings to existing customers and attract new customers. We may be unable to sustain our growth for a number of reasons, such as:

- capacity constraints;
- inability to identify new locations or reliable data centers for cooperation or lease;
- a reduction in the demand for our services due to the current or future economic recession;
- inability to market our services in a cost-effective manner to new customers;
- inability of our customers to differentiate our services from those of our competitors or inability to effectively communicate such distinctions;
- inability to successfully communicate the benefits of data center services to businesses;

- the decision of businesses to host their internet infrastructure internally or in other hosting facilities as an alternative to the use of our data center services;
- inability to increase our sales to existing customers; and
- reliability, quality or compatibility problems with our services.

A substantial amount of our past revenues were derived from expanded service offerings to existing customers. Our costs associated with increasing revenues from existing customers are generally lower than costs associated with generating revenues from new customers. Therefore, slowing revenue growth or declining revenues from our existing customers, even if offset by an increase in revenues from new customers, could reduce our operating margins. Any failure to grow our revenues from existing customers or attract new customers for a prolonged period of time could have a material adverse effect on our results of operations. In particular, if we are unable to suit the needs or satisfy the requirements of our existing top customers, such as industry-leading internet companies or cloud service providers, we may not be able to maintain them for existing services or attract them for upgraded services, which may adversely and materially affect our business, results of operations and financial condition.

We may not be able to compete effectively against our current and future competitors.

We face competitions from various industry players, including carriers such as China Telecom and China Unicom, carrier-neutral service providers in China such as SINNET and GDS, cloud services providers such as AWS and AliCloud, VPN service providers such as Citic Telecom CPC, China Telecom, PCCW, and CBCcom, as well as new market entrants in the future. Competition is primarily centered on the quality of service and technical expertise, security, reliability and functionality, reputation and brand recognition, financial strength, the breadth and depth of services offered, geographic coverage and price. Some of our current and future competitors may have substantially greater financial, technical and marketing resources, greater brand recognition, and more established relationships in the industry than we do. As a result, some of these competitors may be able to:

- adapt to new or emerging technologies and changes in customer requirements more quickly;
- bundle services and provide at reduced prices;
- take advantage of acquisition and other opportunities more readily;
- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing, and sales of their services; and
- devote greater resources to the research and development of their products and services.

If we are unable to compete effectively and successfully against our current and future competitors, our business prospects, financial condition and results of operations could be materially and adversely affected.

Our self-built and partnered data centers are vulnerable to security breaches, which could disrupt our operations and have a material adverse effect on our business, financial performance and results of operations.

A party who is able to compromise the security measures of our data centers and networks or the security of our infrastructure could misappropriate either our proprietary information or the information of our customers, or cause interruptions or malfunctions in our operations. In addition, we have limited control over our partnered data centers, which are primarily operated by China Telecom or China Unicom. We may be required to devote significant capital and resources to protect against such threats or to alleviate problems caused by security breaches. As techniques used to breach security change frequently and are generally not recognized until launched against a target, we may not be able to implement security measures in a timely manner or, if and when implemented, we may not be certain whether these measures could be circumvented. Any breaches that may occur could expose us to increased risk of lawsuits, regulatory penalties, loss of existing or potential customers, harm to our reputation and significant increases in our security costs, which could have a material adverse effect on our financial performance and results of operations. For a detailed discussion, see “Item 4. Information on the Company—B. Business Overview—Regulations—Regulations on Internet Security.”

In addition, any assertions of alleged security breaches or systems failure made against us, whether true or not, could harm our reputation, cause us to incur substantial legal fees, divert management's attention and have a material adverse effect on our business, reputation, financial condition and results of operations.

A severe or prolonged downturn in the global or Chinese economy could materially and adversely affect our business and our results of operation.

The global macroeconomic environment is facing numerous challenges. The growth rate of the Chinese economy has gradually slowed since 2010 and the trend may continue. There is considerable uncertainty over the long-term effects of the expansionary monetary and fiscal policies adopted by the central banks and financial authorities of some of the world's leading economies, including the United States and China. Unrest, terrorist threats and the potential for war in the Middle East and elsewhere may increase market volatility across the globe. There have also been concerns about the relationship between China and other countries, including the surrounding Asian countries, which may potentially have economic effects. In particular, there is significant uncertainty about the future relationship between the United States and China with respect to trade policies, treaties, government regulations and tariffs. Economic conditions in China are sensitive to global economic conditions, as well as changes in domestic economic and political policies and the expected or perceived overall economic growth rate in China. Any severe or prolonged slowdown in the global or Chinese economy may materially and adversely affect our business, results of operations and financial condition.

The uncertainty surrounding the implementation and effect of Brexit and related negative developments in the European Union could adversely affect our business, financial condition and results of operations.

In 2016, the United Kingdom voted to leave the European Union ("EU") (commonly referred to as "Brexit"). As a result of the referendum, a complex and uncertain process of negotiation is now taking place to determine the future terms of the United Kingdom's relationship with the EU, with the United Kingdom has officially exited the EU on January 31, 2020 and the planned transition period will run from February 1, 2020 to December 31, 2020. During the transition period, the United Kingdom will cease to be an EU member but will still follow all of the EU's rules and regulations, and will remain in the single market and the customs union and contribute to the EU budget. This transition period would also see the United Kingdom and the EU negotiate a trade agreement that would be likely to commence immediately following the end of the transition period. After December 31, 2020 or any later date on which the transition period would end, the relationship between the United Kingdom and the EU would be regulated by any trade agreement concluded during the transition period. A 'no-deal' Brexit scenario could still occur. In the absence of further transitional arrangements with the EU, therefore, there is a greater risk that trade between United Kingdom and EU businesses will be materially adversely affected. Our customers who have significant operations in the United Kingdom may incur additional costs and expenses to adapt to potentially divergent regulatory frameworks from the rest of the E.U.

The long-term nature of the United Kingdom's relationship with the EU is unclear and there is considerable uncertainty when, or if, any withdrawal agreement or long-term relationship strategy, including trade deals, will be agreed to and implemented by the United Kingdom and the EU. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in political institutions and regulatory agencies. Brexit could also have the effect of disrupting the free movement of goods, services, and people between the United Kingdom, the EU and elsewhere. This may cause us to adjust our strategy in order to compete effectively in global markets and could adversely affect our business, financial condition, operating results and cash flows. There can be no assurance that any or all of these events, or others that we cannot anticipate at this time, will not have a material adverse effect on our business, financial condition and results of operations.

Our business could be adversely affected by trade tariffs or other trade barriers.

Recently there have been heightened tensions in international economic relations, such as the one between the U.S. and China. Since July 2018, the U.S. government has imposed, and has proposed to impose additional, new or higher tariffs on certain products imported from China to penalize China for what it characterizes as unfair trade practices. China has responded by imposing, and proposing to impose additional, new or higher tariffs on certain products imported from the U.S. In May 2019, the U.S. government announced to increase tariffs to 25%, and China responded by imposing tariffs on certain U.S. goods on a smaller scale, and proposed to impose additional tariffs on U.S. goods. On June 1, 2019, the tariffs announced in May 2019 became in effect on US$60 billion worth of U.S. goods exported to China. On September 1, 2019, as announced, U.S. began implementing tariffs on more than US$125 billion worth of Chinese imports. On September 2, 2019, China lodged a complaint against the U.S. over import tariffs to the World Trade Organization. In December 2019, the U.S. and China reached a limited trade agreement that will roll back existing tariff rates on certain Chinese goods and cancel new levies set to take effect on December 15, 2019 in exchange for Chinese purchases of U.S. farm goods and obtain other concession. However, there can be no assurances that the U.S. or China will not increase tariffs or impose additional tariffs in the future. Although we do not currently export any products to the United States, it is not yet clear what impact these tariffs may have on our business. Although we only provide services, tariffs could potentially impact the business of our suppliers and business partners which may in turn affect our business. In addition, these developments could have a material adverse effect on global economic conditions and the stability of global financial markets. Any of these factors could have a material adverse effect on our business, financial condition and results of operations.

If we are unable to meet our customers' requirements, our reputation and results of operations could suffer.

Our agreements with our customers contain certain guarantees regarding our performance. For hosting services, we guarantee 99.9% uptime for power and 99.9% uptime for network connectivity, failure of which will cause us to provide free service for a following period of time. In 2016, one of our data centers in southern China experienced a network outage for an extended period of time due to supplier-side connectivity issues. As a result, we failed to meet the 99.9% uptime for network connectivity and provided free service for a following period of time to all customers who were affected pursuant to customer contracts. This is a one-time incident and did not have any material impact on our business. If in the future similar incidents were to recur or we are unable to provide customers with quality customer support, we could face customer dissatisfaction, decreased overall demand for our services, and loss of revenue. In addition, inability to meet customer service expectations may damage our reputation and could consequently limit our ability to retain existing customers and attract new customers, which would adversely affect our ability to generate revenue and negatively impact our results of operations.

We rely on customers in the internet industry for most of our revenues.

We derived a majority of our revenues in 2019 from customers in China's internet industry, including online media, e-commerce, live broadcasting, social networking, online game companies, portals, search engines, financial industry and cloud services providers. The business models of some internet companies are relatively new and have not been well proven. Many internet companies base their business prospects on the continued growth of China's internet market, which may not happen as expected.

In addition, our business would suffer if companies in China's internet sector reduce the outsourcing of their data center services. If any of these events happen, we may lose customers or have difficulties in selling our services, which would materially and adversely affect our business and results of operations.

We may require additional capital to meet our future capital needs, which may adversely affect our financial position and result in additional shareholder dilution.

We will require significant capital expenditures to fund our future growth. We may need to raise additional funds through equity or debt financings in the future in order to meet our capital needs mostly in relation to the construction of our self-built data centers and future acquisition opportunities.

In February 2020, we entered into convertible note purchase agreements with a group of investors led by Goldman Sachs Asia Strategic Pte. Ltd. for a total of US$200 million in convertible notes. The convertible notes will mature in five years, bearing interest at the rate of 2% per annum from the issuance date which shall be payable semiannually in arrears in cash. At any time after the issuance, each note is convertible into Class A ordinary shares at the holder's option at a conversion price of US$2 per share, or US$12 per ADS, subject to customary anti-dilution adjustments. Unless previously redeemed or converted, we shall redeem the note on the maturity date at 115% of the then outstanding principal amount plus all accrued but unpaid interest. In addition, if any portion of the outstanding principal amount of the notes has not been converted into our shares by the third anniversary of the note issuance date, the holders have the right to require us to redeem, in whole or in part, the outstanding principal amount of the note at 109% of the principal amount plus all accrued but unpaid interest.

In August 2017, we issued US$200 million in aggregate principal amount of USD-denominated notes due 2020 at a coupon rate of 7.000% per annum, or the Original Notes. In September 2017, we issued US$100 million in aggregate principal amount of USD-denominated notes due 2020 at a coupon rate of 7.000% per annum, or the Notes. The Notes were priced at a slight premium of 100.04, with an effective yield of 6.98%. The Notes constitute a further issuance of, and were consolidated to form a single series with, the Original Notes. The Original Notes and the Notes are collectively referred to as the "2020 Notes". Interest on the 2020 Notes is payable semi-annually in arrears on, or nearest to, August 17 and February 17 in each year, beginning on February 17, 2018. In April 2019, we issued US$300 million in aggregate principal amount of USD-denominated senior notes due 2021 at an interest rate of 7.875% per annum, or the 2021 Notes, and used a portion of the proceeds to purchase, pursuant to a tender offer, US$150,839,000 in principal amount of the 2020 Notes, representing 50.28% of the outstanding principal amount of the 2020 Notes. On August 12, 2019, we repurchased US$18,000,000 in principal amount of 2020 Notes at the par value, with US$131,161,000 of the principal amount of the 2020 Notes remains outstanding as of December 31, 2019. Interest on the 2021 Notes is payable semi-annually in arrears on April 15 and October 15 in each year, beginning on October 15, 2019. Both the 2020 Notes and the 2021 Notes have restrictive covenants relating to financial ratios as well as our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. Such covenants restrict our abilities to declare dividends or incur or guarantee additional indebtedness, among other things. See "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources" for more detailed information on restrictive covenants of the 2020 Notes.

In January 2015, we issued (i) 39,087,125 Class A and 18,250,268 Class B ordinary shares to King Venture Holdings Limited, or Kingsoft, for an aggregate cash consideration of US$172 million; (ii) 6,142,410 Class A and 10,524,257 Class B ordinary shares to Xiaomi Ventures Limited, or Xiaomi, for an aggregate cash consideration of US$50 million; and (iii) 24,668,022 Class A ordinary shares (in the form of 4,111,337 ADSs) to Esta, for an aggregate cash consideration of US$74 million.

In May 2016, we issued 31,996,874 Class A and 111,053,390 Class B ordinary shares to Tus-Holdings Co., Ltd., or Tus-Holdings, for an aggregate cash consideration of US$388 million.

If we raise additional funds through further issuances of equity or equity-linked securities, our existing shareholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences, and privileges senior to those of holders of our ADSs or ordinary shares.

Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our debt.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive to our current shareholding structure. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

As of December 31, 2019, our total consolidated indebtedness and other liabilities representing total bank borrowings, bonds payable, accounts and notes payable and accrued expenses and other payables were RMB4,600.4 million (US$660.8 million). Failure to servicing our debt would constitute an event of default under the terms of the bonds, which would have a material adverse effect on our financial condition and results of operations. Furthermore, if our bond rating is downgraded or we incur any change of control event, our financial condition or results of operations would be adversely and materially affected as well.

Our substantial level of indebtedness could adversely affect our ability to raise additional capital to fund our operations, expose us to interest rate risk to the extent of our variable rate debt, and if we are unable to comply with the restrictions and covenants contained in our debt agreements, an event of default could occur under the terms of such agreements, which could cause repayment of such debt to be accelerated.

We have substantial indebtedness. Based on our current expansion plans, we expect to continue to finance our operations partially through the incurrence of debt. Our indebtedness could, among other consequences:

- make it more difficult for us to satisfy our obligations under our indebtedness, exposing us to the risk of default, which, in turn, would negatively affect our ability to operate as a going concern;
- require us to dedicate a substantial portion of our cash flows from operations to interest and principal payments on our indebtedness, reducing the availability of our cash flows for other purposes, such as capital expenditures, acquisitions and working capital;
- limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate;
- increase our vulnerability to general adverse economic and industry conditions;
- place us at a disadvantage compared to our competitors that have less debt;
- expose us to fluctuations in the interest rate environment because the interest rates on borrowings under our project financing agreements are variable;
- increase our cost of borrowing;
- limit our ability to borrow additional funds; and
- require us to sell assets to raise funds, if needed, for working capital, capital expenditures, acquisitions or other purposes.

As a result of covenants and restrictions, we are limited in how we conduct our business, and we may be unable to raise additional debt or equity financing to compete effectively or to take advantage of new business opportunities. Our current or future borrowings could increase the level of financial risk to us and, to the extent that the interest rates are not fixed and rise, or that borrowings are refinanced at higher rates, our available cash flow and results of operations could be adversely affected.

If we are unable to comply with the restrictions and covenants in our current or future debt and other agreements, there could be a default under the terms of these agreements. In the event of a default under these agreements, the holders of the debt could terminate their commitments to lend to us, accelerate the debt and declare all amounts borrowed due and payable or terminate the agreements, whichever the case may be.

Furthermore, some of our debt agreements may contain cross-acceleration or cross-default provisions. As a result, our default under one debt agreement may cause the acceleration of debt or result in a default under our other debt agreements. If any of these events occur, we cannot assure you that our assets and cash flow would be sufficient to repay in full all of our indebtedness, or that we would be able to find alternative financing. Even if we could obtain alternative financing, we cannot assure you that it would be on terms that are favorable or acceptable to us.

Increased power costs and limited availability of electrical resources could adversely affect our results of operations.

We are a large consumer of power and costs of power account for a significant portion of our overall costs for both our self-built data centers and partnered data centers. We may not be able to pass on increased power costs to our customers, which could harm our results of operations.

Power and cooling requirements at our data centers are also increasing as a result of the increasing power demands of today's servers. Since we rely on third parties to provide our data centers with power, our data centers could have a limited or inadequate access to power. Our customers' demand for power may also exceed the power capacity in our older data centers, which may limit our ability to fully utilize these data centers. This could adversely affect our relationships with our customers, which could harm our business and have an adverse effect on our results of operations.

If we are unable to manage our growth effectively, our financial results could suffer.

The growth of our business and our service offerings may strain our operating and financial resources. Furthermore, we intend to continue expanding our overall business, customer base, headcount, and operations. Managing a geographically dispersed workforce requires substantial management effort and significant additional investment in our operating and financial system capabilities and controls. If our information systems are unable to support the demands placed on them by our growth, we may need to implement new systems, which would be disruptive to our business. We may also initiate similar network upgrade in the future if required by our operations. We may be unable to manage our expenses effectively in the future due to the expenses associated with these expansions and such expansions or upgrade may cause disruption of services to our customers, which may negatively impact our net revenues and operating expenses. If we fail to improve our operational systems or to expand our customer service capabilities to keep pace with the growth of our business, we could experience customer dissatisfaction, cost inefficiencies, and lost revenue opportunities, which may materially and adversely affect our results of operations.

If we are unable to successfully identify and analyze changing market trends and adjust our growth strategies accordingly in a timely and cost-effective manner, our results of operations could be adversely affected.

As China's internet infrastructure market remains at its early stage, especially compared to those in more advanced economies, we generally operate in a more complex business environment with changing market dynamics. On one hand, the imbalance between material growth in internet traffic and the relative limited supply of high quality internet infrastructure services drives strong demand for not only data center services, but also complementary value-added services in adjacent markets, including interconnectivity services, network transmission services and cloud services among others. On the other hand, the potential changes in competitive landscape and regulations in an otherwise highly regulated market continues to present ambiguities and challenges. Therefore, we need to evaluate, on a continuously basis, the changing market dynamics and from time to time make adjustments to our growth strategies and operations accordingly. Any material changes to our strategies and operations, including adjustments to business models, new business areas and acquisitions, are evaluated financially, strategically and operationally by the management and approved by our board of directors. In 2017, after thorough evaluation by the management and approval by the board, we completed the disposal of our managed network services business segment, including CDN services, hosting area network services, route optimization and last-mile broadband businesses, as these businesses were loss-making due to the intense market competition. However, if we fail to capture new growth opportunities, or become unsuccessful in modifying our strategies and operations to adapt to these changing market conditions in a timely and cost-effective manner, our results of operations could be materially and adversely affected.

In addition, we have and may continue to expand in new business areas that we believe either strengthen our competitive position or will improve our future growth rates. Some of these new business areas require substantial upfront investments, which may precede anticipated generation of revenues. For example, as large-scale cloud service providers have increasing demands for customized data centers, we have started to provide managed wholesale services for them since 2019. If we fail to successfully manage the progress of these new growth initiatives, or if changing market conditions prove to work against our proposed business plans, or if we fail to compete effectively with other market players, we may not be able to attract new customers and generate general revenues and profits as anticipated, which may materially and adversely affect our business expansion.

If we are unable to adapt to evolving technologies and customer demands in a timely and cost-effective manner, our ability to sustain and grow our business may suffer.

To be successful, we must adapt to our rapidly changing market by continually improving the performance, features, and reliability of our services and modifying our business strategies accordingly. We could also incur substantial costs if we need to modify our services or infrastructure in order to adapt to these changes. We may not be able to timely adapt to changing technologies, if at all. Our ability to sustain and grow our business would suffer if we fail to respond to these changes in a timely and cost-effective manner. New technologies or industry standards have the potential to replace or provide lower cost alternatives to our data center services. The adoption of such new technologies or industry standards could render some or all of our services obsolete or unmarketable. We cannot guarantee that we will be able to identify the emergence of all of these new service alternatives successfully, modify our services accordingly, or develop and bring new products and services to market in a timely and cost-effective manner to address these changes. If and when we do identify the emergence of new service alternatives and introduce new products and services to market, those new products and services may need to be made available at lower price points than our then-current services. Failure to provide services to compete with new technologies or the obsolescence of our services could lead us to lose current and potential customers or could cause us to incur substantial costs, which would harm our results of operations and financial condition. Our introduction of new alternative products and services that have lower price points than current offerings may result in our existing customers switching to the lower cost products, which could reduce our revenues and have a material adverse effect of our results of operations.

We have expanded to the cloud services market for a short period of time and failure to successfully grow our cloud service business will have a material and adverse effect on our growth, results of operations and business prospects.

Through our strategic partnership with Microsoft, we started providing public cloud service in 2013 and hybrid cloud service in 2014. We further expanded to provide private cloud and hybrid services through our partnership with IBM in 2014. In October 2016, we launched IBM cloud services which are now generally available in China. In 2019, our partnership with IBM expired. Cloud services are a new and emerging market in China and we have limited experience in this market. Our success in the cloud service business is subject to various risks and uncertainties, including:

- our short history in the cloud services market;
- increase of our personnel mobility in the aggressive talent market competition;
- the unprecedented market development and our possible lack of ability to keep up with the market development;
- information security restrictions imposed by the MIIT;
- continuous effort to adapt to various standards applicable to the cloud market, with the national cloud standard still in process of being formulated;
- our possible overestimation of the market demand and development, which leads to our overinvestment in the new business;
- the possibility of a difficult relationship with our major partners, such as Microsoft, including being unable to extend our cooperation agreements;
- the possible slow acceptance of cloud service in China and our failure to implement new business strategies;
- competition from other market players, both domestic and abroad; and
- new risks associated with the cloud services yet to be fully understood by the industry and market.

If we are unable to effectively manage these risks, we may not be able to successfully operate in the cloud services market and achieve the expected growth.

In addition, the expansion into the cloud services market has resulted in a change to our business, including, among others, the change of our customer base. The number of enterprise and government entity customers has increased with our expansion into the cloud services market. Our lack of experience in dealing with enterprise and government entity customers may pose new challenges for us. We may not be able to manage our business growth strategy as planned and our results of operations and business prospects may be materially and adversely affected.

Any negative publicity and allegations against us may adversely affect our brand, public image and reputation, which may harm our ability to attract and retain users and business partners and result in material adverse impact on our business, results of operations and prospects.

Negative publicity and allegations about us, our products and services, our financial results or our market position in general, including by short sellers or investment research firms, regardless of their veracity, may adversely damage our brand, public image and reputation, harm our ability to attract and retain users and result in material adverse impact on our share price, business, results of operations and prospects. For example, on September 10, 2014, Trinity Research Group, or Trinity, a short seller that was allegedly formed in 2014, issued a report alleging that we operate through a Ponzi scheme and have reported fraudulent financials and operating metrics. On September 17, 2014, Trinity issued a second report. The trading price of our ADSs declined and two shareholder class action lawsuits were filed against us and some of our directors and senior executive officers. Although through two separate and comprehensive rebuttal reports, we have rejected all the allegations set out in the Trinity reports, and such class action lawsuits have been settled in 2018, our share price fluctuated after such negative publicity, and we may be involved in similar class action lawsuits in the future. Such negative publicity may have adversely damaged our brand, public image and reputation, which may result in an adverse impact on our results of operations and prospects. See “Item 8.A—Legal Proceedings” for more information on the two shareholder class action lawsuits.

Rapid urbanization and changes in zoning and urban planning in China may cause our leased properties to be demolished, removed or otherwise affected.

China is undergoing a rapid urbanization process, and zoning requirements and other governmental mandates with respect to urban planning of a particular area may change from time to time. When there is a change in zoning requirements or other governmental mandates with respect to the areas where our data centers are located, the affected data centers may need to be demolished and removed. As a result, we may have to relocate our data centers to other locations. We have not experienced such demolition and relocation in the past, but we cannot assure you that we will not experience demolitions or interruptions of our data center operations due to zoning or other local regulations. Any such demolition and relocation could cause us to lose primary locations for our data centers and we may not be able to achieve comparable operation results following the relocations. While we may be reimbursed for such demolition and relocation, we cannot assure you that the reimbursement, as determined by the relevant government authorities, will be sufficient to cover our direct and indirect losses. Accordingly, our business, results of operations and financial condition may be materially and adversely affected.

Our business depends substantially on the continuing efforts of our executives, and our business may be severely disrupted if we lose their services.

Our future success heavily depends upon the continued services of our executives and other key employees. In particular, we rely on the expertise and experience of Sheng Chen, our co-founder and executive chairman of the board of directors. We rely on their industry expertise, their experience in our business operations and sales and marketing, and their working relationships with our employees, our other major shareholders, our clients and relevant government authorities. If one or more of our senior executives were unable or unwilling to continue in their present positions, we might not be able to replace them easily or at all. If any of our senior executives joins a competitor or forms a competing company, we may lose clients, suppliers, key professionals and staff members. Each of our executive officers has entered into an employment agreement with us, which contains non-competition provisions. However, if any dispute arises between our executive officers and us, we cannot assure you the extent to which any of these agreements could be enforced in China, where these executive officers reside, in light of the uncertainties with China’s legal system. See “—Risks Related to Doing Business in China—Uncertainties with respect to the PRC legal system could limit legal protections available to you and us.”

If we are unable to recruit or retain qualified personnel, our business could be harmed.

We must continue to identify, hire, train, and retain IT professionals, technical engineers, operations employees, and sales and management personnel who maintain relationships with our customers and who can provide the technical, strategic, and marketing skills required for our company to grow. There is a shortage of qualified personnel in these fields, and we compete with other companies for the limited pool of these personnel. Any failure to recruit and retain necessary technical, managerial, sales, and marketing personnel, including but not limited to members of our executive team, could harm our business and our ability to grow.

The benefits from our partnership with Warburg Pincus may take longer than expected to realize, if at all.

In March 2017, we signed an investment agreement with Warburg Pincus to establish a multi-stage joint venture and build a digital real estate platform in China. The cooperation will allow us to reduce our capital expenditures in the future as Warburg Pincus will take primary responsibilities to build new wholesale data centers. In July 2019, we reached a supplemental agreement with Warburg Pincus to restructure the partnership. Pursuant to the agreed restructuring arrangement, one of the joint ventures has distributed its assets and projects to us and to Princeton Digital Group (PDG), a Warburg Pincus-backed company, on a pro rata basis in principle, respectively. After distribution, we obtained 100% ownership of a project under development in the Shanghai Waigaoqiao Free Trade Zone, as well as a certain amount of cash. In addition, we and Warburg Pincus will (i) adjust the existing holding structure for operating the current projects, and (ii) jointly establish an additional holding vehicle for sourcing and developing new projects in China. There is no guarantee that the joint venture will turn out to be successful, and the benefits from our partnership with Warburg Pincus may take longer than expected to realize, if at all.

The uncertain economic environment may continue to have an adverse impact on our business and financial condition.

The uncertain economic environment could have an adverse effect on our liquidity. While we believe we have a strong customer base, if the current market conditions were to worsen, some of our customers may have difficulty paying us and we may experience increased churn in our customer base and reductions in their commitments to us. For example, we had a long outstanding receivable from a state-owned enterprise client. We made a full allowance for doubtful debt, even though we still have an opportunity to collect a portion of the receivable in the future. Although we believe it to be a one-time expense, if similar circumstances do occur to other customers, we may be required to further increase our allowance for doubtful debt and our results would be negatively impacted. Our sales cycle could also be lengthened if customers slow spending, or delay decision-making, on our products and services, which could adversely affect our revenues growth and our ability to recognize revenue. Finally, we could also experience pricing pressure as a result of economic conditions if our competitors lower prices and attempt to lure away our customers with lower cost solutions. Finally, our ability to access the capital markets may be severely restricted at a time when we would like, or need, to do so which could have an impact on our flexibility to pursue additional expansion opportunities and maintain our desired level of revenue growth in the future.

Our results of operations have fluctuated and may continue to fluctuate, which could make our future results difficult to predict. This may also result in significant volatility in, and otherwise adversely affect, the market for our ADSs.

Our results of operations have fluctuated and may continue to fluctuate due to a variety of factors, including many of the risks described in this section, which are outside of our control. As a result, comparing our results of operations on a period-to-period basis may not be meaningful. You should not rely on our results of operations for any prior periods as an indication of our future operating performance. Fluctuations in our revenue can lead to even greater fluctuations in our results of operations. Our budgeted expense levels depend in part on our expectations of long-term future revenue. Given relatively fixed operating costs related to our personnel and facilities, any substantial adjustment to our expenses to account for lower than expected levels of revenue will be difficult and time consuming. Consequently, if our revenues do not meet projected levels, our operating performance will be negatively affected. Fluctuations in our results of operations could result in significant volatility in, and otherwise adversely affect, the market for our ADSs.

If we fail to maintain an effective system of internal control over financial reporting, we may be unable to accurately report our financial results or prevent fraud, and investor confidence in our company and the market price of our ADSs may be adversely affected.

The SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring most public companies to include a management report on such company's internal control over financial reporting in its annual report, which contains management's assessment of the effectiveness of the company's internal control over financial reporting. In addition, when a company meets the SEC's criteria, an independent registered public accounting firm must report on the effectiveness of the company's internal control over financial reporting.

Our management and independent registered public accounting firm have concluded that our internal control over financial reporting as of December 31, 2019 was effective. However, we cannot assure you that in the future our management or our independent registered public accounting firm will not identify material weaknesses during the Section 404 of the Sarbanes-Oxley Act audit process or for other reasons. In addition, because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. As a result, if we fail to maintain effective internal control over financial reporting or should we be unable to prevent or detect material misstatements due to error or fraud on a timely basis, investors could lose confidence in the reliability of our financial statements, which in turn could harm our business, results of operations and negatively impact the market price of our ADSs, and harm our reputation. Furthermore, we have incurred and expect to continue to incur considerable costs and to use significant management time and other resources in an effort to comply with Section 404 and other requirements of the Sarbanes-Oxley Act.

Compliance with rules and regulations applicable to companies publicly listed in the United States is costly and complex and any failure by us to comply with these requirements on an ongoing basis could negatively affect investor confidence in us and cause the market price of our ADSs to decrease.

In addition to Section 404, the Sarbanes-Oxley Act also mandates, among other things, that companies adopt corporate governance measures, imposes comprehensive reporting and disclosure requirements, sets strict independence and financial expertise standards for audit committee members, and imposes civil and criminal penalties for companies, their chief executive officers, chief financial officers and directors for securities law violations. For example, in response to the Sarbanes-Oxley Act, Nasdaq has adopted additional comprehensive rules and regulations relating to corporate governance. These laws, rules and regulations have increased the scope, complexity and cost of our corporate governance and reporting and disclosure practices. Our current and future compliance efforts will continue to require significant management attention. In addition, our board members, chief executive officer and chief financial officer could face an increased risk of personal liability in connection with the performance of their duties. As a result, we may have difficulty attracting and retaining qualified board members and executive officers to fill critical positions within our company. Any failure by us to comply with these requirements on an ongoing basis could negatively affect investor confidence in us, cause the market price of our ADSs to decrease or even result in the delisting of our ADSs from Nasdaq.

We are subject to China's anti-corruption laws and the U.S. Foreign Corrupt Practices Act. Our failure to comply with these laws could result in penalties, which could harm our reputation and have an adverse effect on our business, results of operations and financial condition.

We are subject to the U.S. Foreign Corrupt Practices Act, or the FCPA, which generally prohibits companies and anyone acting on their behalf from offering or making improper payments or providing benefits to foreign officials for the purpose of obtaining or keeping business, along with various other anti-corruption laws, including China's anti-corruption laws. Our existing policies prohibit any such conduct and we are in the process of implementing additional policies and procedures designed to ensure that we, our employees and intermediaries comply with the FCPA and other anti-corruption laws to which we are subject. There is, however, no assurance that such policies or procedures will work effectively all the time or protect us against liability under the FCPA or other anti-corruption laws for actions taken by our employees and intermediaries with respect to our business or any businesses that we may acquire. We operate in the data center services industry in China and generally purchase our hosting facilities and telecommunications resources from state or government-owned enterprises and sell our services domestically to customers that include state or government-owned enterprises or government ministries, departments and agencies. This puts us in frequent contact with persons who may be considered "foreign officials" under the FCPA, resulting in an elevated risk of potential FCPA violations. If we are found to be not in compliance with the FCPA and other applicable anticorruption laws governing the conduct of business with government entities or officials, we may be subject to criminal and civil penalties and other remedial measures, which could have an adverse impact on our business, financial condition and results of operations. Any investigation of any potential violations of the FCPA or other anti-corruption laws by U.S. or foreign authorities, including Chinese authorities, could adversely impact our reputation, cause us to lose customer sales and access to hosting facilities and telecommunications resources, and lead to other adverse impacts on our business, financial condition and results of operations.

If we fail to maintain a strong brand name, we may lose our existing customers and have difficulties attracting new customers, which may have an adverse effect on our business and results of operation.

We have built a strong brand in Chinese, "世纪互联", among our customers. As our business grows or changes, we plan to continue to focus our efforts to establish a wider recognition of our brand to attract potential customers, and we may also introduce additional brands in relation to our business. We cannot assure you that we will effectively allocate our resources for these activities or succeed in maintaining and broadening our brand recognition among customers. Our major brand names and logos are registered trademarks in China. However, preventing trademark and trade name infringement or misuse could be difficult, costly and time-consuming, particularly in China. There had been incidents in the past where third parties used our brand without our authorization and we had to resort to litigation to protect our intellectual property rights. See "Item 8.A—Legal Proceedings" for our disputes with Shanghai 21Vianet Information Systems Co., Ltd. We may continue to experience similar disputes in the future or otherwise fail to fully protect our brand name, which may have an adverse effect on our business and financial results.

If we fail to protect our intellectual property rights in general, our business may suffer.

We consider our copyrights, trademarks, trade names and internet domain names invaluable to our ability to continue to develop and enhance our brand recognition. Historically, the PRC has afforded less protection to intellectual property rights than the United States. We utilize proprietary know-how and trade secrets and employ various methods to protect such intellectual property. Unauthorized use of our copyrights, trademarks, trade names and domain names may damage our reputation and brand. Preventing copyright, trademark and trade name infringement or misuse could be difficult, costly and time-consuming, particularly in China. The measures we take to protect our copyrights, trademarks and other intellectual property rights are currently based upon a combination of trademark and copyright laws in China and may not be adequate to prevent unauthorized uses. Furthermore, application of laws governing intellectual property rights in China is uncertain and evolving, and could involve substantial risks to us. If we are unable to adequately protect our trademarks, copyrights and other intellectual property rights in the future, we may lose these rights, our brand name may be harmed, and our business may suffer materially. Furthermore, our management's attention may be diverted by violations of our intellectual property rights, and we may be required to enter into costly litigation to protect our proprietary rights against any infringement or violation.

We may face intellectual property infringement claims that could be time-consuming and costly to defend. If we fail to defend ourselves against such claims, we may lose significant intellectual property rights and may be unable to continue providing our existing services.

Our technologies and business methods, including those relating to data center services, may be subject to third-party claims or rights that limit or prevent their use. Companies, organizations or individuals, including our competitors, may hold or obtain patents or other proprietary rights that would prevent, limit or interfere with our ability to make, use or sell our services or develop new services, which could make it more difficult for us to operate our business. Intellectual property registrations or applications by others relating to the type of services that we provide may give rise to potential infringement claims against us. In addition, to the extent that we gain greater visibility and market exposure as a public company, we are likely to face a higher risk of being subject to intellectual property infringement claims from third parties. We expect that infringement claims may further increase as the number of products, services and competitors in our market increases. Further, continued success in this market may provide an impetus to those who might use intellectual property litigation as a tool against us.

It is critical that we use and develop our technology and services without infringing the intellectual property rights of third parties, including but not limited to patents, copyrights, trade secrets and trademarks. Intellectual property litigation is expensive and time-consuming and could divert management's attention from our business. A successful infringement claim against us, whether with or without merit, could, among others things, require us to pay substantial damages, develop non-infringing technology or enter into royalty or license agreements that may not be available on acceptable terms, if at all, and cease making, licensing or using products that have infringed a third party's intellectual property rights. Protracted litigation could also result in existing or potential customers deferring or limiting their purchase or use of our products until resolution of such litigation, or could require us to indemnify our customers against infringement claims in certain instances. Any intellectual property litigation could have a material adverse effect on our business, results of operations or financial condition.

If we fail to defend ourselves against any intellectual property infringement claim, we may lose significant intellectual property rights and may be unable to continue providing our existing services, which could have a material adverse effect on our results of operations and business prospects.

If our customers' proprietary intellectual property or confidential information is misappropriated or disclosed by us or our employees in violation of applicable laws and contractual agreements, we could be exposed to protracted and costly legal proceedings and lose clients.

We and our employees are in some cases provided with access to the proprietary intellectual property and confidential information of our customers, including technology, software products, business policies and plans, trade secrets and personal data. Many of our customer contracts require that we do not engage in the unauthorized use or disclosure of such intellectual property or information and that we will be required to indemnify our customers for any loss they may suffer as a result. We use security technologies and other methods to prevent employees from making unauthorized copies, or engaging in unauthorized use or unauthorized disclosure, of such intellectual property and confidential information. We also require our employees to enter into non-disclosure arrangements to limit access to and distribution of our customers' intellectual property and other confidential information as well as our own. However, the steps taken by us in this regard may not be adequate to safeguard our customers' intellectual property and confidential information. Moreover, most of our customer contracts do not include any limitation on our liability with respect to breaches of our obligation to keep the intellectual property or confidential information we receive from them confidential. In addition, we may not always be aware of intellectual property registrations or applications relating to source codes, software products or other intellectual property belonging to our customers. As a result, if our customers' proprietary rights are misappropriated by us or our employees, our customers may consider us liable for such act and seek damages and compensation from us.

We have granted, and may continue to grant, stock options and other forms of share-based incentive awards, which may result in significant share-based compensation expenses.

As of February 29, 2020, options to purchase 931,254 ordinary shares and 3,271,135 RSUs, have been granted under our 2010 share incentive plan, or the 2010 Plan, and 2014 share incentive plan, or the 2014 Plan. See "Item 6.B—Compensation of Directors and Executive Officers—Share Incentive Plans." For the year ended December 31, 2019, we recorded RMB43.9 million (US$6.3 million) in share-based compensation expenses.

We believe share-based incentive awards enhance our ability to attract and retain key personnel and employees, and we will continue to grant stock options, RSUs and other share-based awards to employees in the future. If our share-based compensation expenses continue to be significant, our results of operations would be materially and adversely affected.

Any share-based shareholder contribution, if and when made by our executive chairman for the benefit of our company, would be required to be recognized as share-based compensation expenses within our results of operations, which would be derived from the estimated fair value of the ordinary share award on the transfer date. Our future results of operations may be materially and adversely affected if a significant amount of share-based compensation is recorded in connection with such future transfers of these ordinary shares.

We may not have adequate insurance coverage to protect us from potential losses.

Our operations are subject to hazards and risks normally associated with daily operations for our data centers. Currently, we maintain insurance policies for our equipment, but we do not maintain any business interruption insurance or third-party liability insurance. The insurance policies for our equipment may only be sufficient to cover a portion of the total value of all equipment in the event that losses occur. Insurance companies in China currently do not offer as extensive an array of insurance products as insurance companies do in more developed economies. The occurrence of any events not covered by our limited insurance coverage may result in interruption of our operations and subject us to significant losses or liabilities. In addition, any losses or liabilities that are not covered by our current insurance policies or are not insured at all may have a material adverse effect on our business, results of operations and financial condition.

We face risks related to natural disasters, health epidemics and other outbreaks, which could significantly disrupt our operations.

We are vulnerable to natural disasters and other calamities. Fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events may give rise to server interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services to our customers. If a nature disaster were to occur in the future that affected Beijing or another city where we have major operations, our operations could be materially and adversely affected due to loss of personnel and damages to property. In addition, a natural disaster affecting a larger, more developed area could also cause an increase in our costs resulting from the efforts to resurvey the affected area. Even if we are not directly affected, such a disaster could affect the operations or financial condition of our customers and suppliers, which could harm our results of operations.

In addition, our business could be materially and adversely affected by public health emergencies, such as the outbreak of avian influenza, severe acute respiratory syndrome (SARS), the influenza A (H1N1) virus, Ebola virus, COVID-19, or other epidemics or outbreaks, since it could require our employees to be quarantined and/or our offices and facilities to be disinfected or even temporarily closed. For example, in early 2020, in response to intensifying efforts to contain the spread of COVID-19, the Chinese government took a number of actions, which included extending the Chinese New Year holiday, quarantining and otherwise treating individuals in China who are infected with COVID-19, asking residents to remain at home and to avoid gathering in public, and other actions. The COVID-19 has also resulted in temporary closure of many corporate offices, retail stores, and manufacturing facilities and factories across China. While the events related to the outbreak of and response to the COVID-19 are expected to be temporary, our business could be adversely impacted by the effects of the COVID-19 or other epidemics. In particular, the construction of new data centers or the expansion of existing data centers might be significantly delayed because of the temporary closure of our construction sites and the shortage of workers due to the travel restrictions in China after the Chinese New Year holiday. If the construction of new data centers or the expansion of existing data centers cannot be completed or delivered on time, we might be unable to meet our customer demand in the existing and new markets as expected, which may adversely and materially affect our business, results of operations and financial conditions. In addition, the business distributions caused by the outbreak of COVID-19 might also adversely and materially affect our customers' business operations and financial conditions, especially for small and medium-sized enterprises, and they might start to encounter cash flow or operating difficulties, which may reduce their demand for our services, increase the accounts receivable turnover days or even increase the default risks. All of these consequences would negatively affect our operating results. In respond to the epidemic, we also made remote working arrangement and suspended our offline customer acquisition activities and business travels to ensure the safety and health of our employees. All of the above measures reduce our business operation capacity and negatively affect our operating results. The extent to which the outbreak of COVID-19 impacts our results of operations will depend on the future developments of the outbreak, including new information concerning the global severity of, new regulations and policies adopted to and actions taken to contain the outbreak, which are highly uncertain and unpredictable. Any prolonged disruption of our businesses or those of our customers or business partners could negatively impact our results of operations and financial condition. In addition, our results of operations could be adversely affected to the extent that any of these epidemics and outbreaks harms the Chinese or global economy in general. For example, any economic slowdown in China due to the outbreak of COVID-19 may have a negative impact on our capital expenditures, which may further result in insufficient funds for our future expansion or growth and decreases in our revenues, and our business, results of operations and financial conditions may be adversely and materially affected.

Our independent registered public accounting firm, like other independent registered public accounting firms operating in China, is not permitted to be subject to inspection by the Public Company Accounting Oversight Board and, as such, you are deprived of the benefits of such inspection.

Our independent registered public accounting firm that issues the audit reports included in our annual reports filed with the U.S. Securities and Exchange Commission, or SEC, as auditors of companies that are traded publicly in the United States and a firm registered with the U.S. Public Company Accounting Oversight Board (United States), or the PCAOB, is required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and professional standards. Because our auditors are located in the People's Republic of China, a jurisdiction where the PCAOB is currently unable to conduct inspections without the approval of the Chinese authorities, our auditors, like other independent registered public accounting firms operating in China, are currently not inspected by the PCAOB. In May 2013, PCAOB announced that it had entered into a Memorandum of Understanding on Enforcement Cooperation with the China Securities Regulatory Commission, or the CSRC, and the Ministry of Finance, which establishes a cooperative framework between the parties for the production and exchange of audit documents relevant to investigations undertaken by PCAOB, the CSRC, or the Ministry of Finance in the United States and the PRC, respectively. PCAOB continues to be in discussions with the CSRC and the Ministry of Finance to permit joint inspections in the PRC of audit firms that are registered with PCAOB and audit Chinese companies that trade on U.S. exchanges. On December 7, 2018, the SEC and the PCAOB issued a joint statement highlighting continued challenges faced by the U.S. regulators in their oversight of financial statement audits of U.S.-listed companies with significant operations in China. The joint statement reflects a heightened interest in an issue that has vexed U.S. regulators in recent years. However, it remains unclear what further actions the SEC and PCAOB will take to address the problem.

Inspections of other firms that the PCAOB has conducted outside China have identified deficiencies in those firms' audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. The inability of the PCAOB to conduct inspections of auditors in China makes it more difficult to evaluate the effectiveness of our auditor's audit procedures or quality control procedures as compared to auditors outside of China that are subject to PCAOB inspections. Investors may lose confidence in our reported financial information and procedures and the quality of our financial statements, which may have a material adverse effect on our ADS price.

As part of a continued regulatory focus in the United States on access to audit and other information currently protected by national law, in particular China's, in June 2019, a bipartisan group of lawmakers introduced bills in both houses of the U.S. Congress, which if passed, would require the SEC to maintain a list of issuers for which PCAOB is not able to inspect or investigate an auditor report issued by a foreign public accounting firm. The proposed Ensuring Quality Information and Transparency for Abroad-Based Listings on our Exchanges ("EQUITABLE") Act prescribes increased disclosure requirements for these issuers and, beginning in 2025, the delisting from U.S. national securities exchanges such as the NASDAQ Global Market of issuers included on the SEC's list for three consecutive years. Enactment of this legislation or other efforts to increase U.S. regulatory access to audit information could cause investor uncertainty for affected issuers, including us, and the market price of our ADSs and ordinary shares could be adversely affected. It is unclear if this proposed legislation will be enacted. Furthermore, there has been recent deliberations within the U.S. government regarding potentially limiting or restricting China-based companies from accessing U.S. capital markets. If any such policies were to materialize, the resulting legislation, if it were to apply to us, would likely have a material adverse impact on our business and the price of our ADSs and ordinary shares.

Proceedings instituted recently by the SEC against five PRC-based accounting firms, including our independent registered public accounting firm, could result in our financial statements being determined to not be in compliance with the requirements of the Exchange Act.

In late 2012, the SEC commenced administrative proceedings under Rule 102(e) of its Rules of Practice and also under the Sarbanes-Oxley Act of 2002 against the Chinese affiliates of the "big four" accounting firms, (including our auditors) and also against Dahua (the former BDO affiliate in China). The Rule 102(e) proceedings initiated by the SEC relate to these firms' inability to produce documents, including audit work papers, in response to the request of the SEC pursuant to Section 106 of the Sarbanes-Oxley Act of 2002, as the auditors located in the PRC are not in a position lawfully to produce documents directly to the SEC because of restrictions under PRC law and specific directives issued by the China Securities Regulatory Commission. The issues raised by the proceedings are not specific to our auditors or to us, but affect equally all audit firms based in China and all China-based businesses with securities listed in the United States.

In January 2014, the administrative judge reached an initial decision that the "big four" accounting firms should be barred from practicing before the Commission for six months. The "big four" accounting firms appealed the initial administrative law decision to the SEC in February 2014. In February 2015, each of the "big four" accounting firms agreed to a censure and to pay a fine to the SEC to settle the dispute and avoid suspension of their ability to practice before the SEC. The settlement requires the firms to follow detailed procedures to seek to provide the SEC with access to Chinese firms' audit documents via China Securities Regulatory Commission. If the firms do not follow these procedures, the SEC could impose penalties such as suspensions, or it could restart the administrative proceedings.

In the event that the SEC restarts the administrative proceedings, depending upon the final outcome, listed companies in the United States with major PRC operations may find it difficult or impossible to retain auditors in respect of their operations in the PRC, which could result in financial statements being determined to not be in compliance with the requirements of the Securities Exchange Act of 1934, or Exchange Act, including possible delisting. Moreover, any negative news about the proceedings against these audit firms may cause investor uncertainty regarding China-based, United States-listed companies and the market price of our ADSs may be adversely affected.

If our independent registered public accounting firm were denied, even temporarily, the ability to practice before the SEC and we were unable to timely find another registered public accounting firm to audit and issue an opinion on our financial statements, our financial statements could be determined not to be in compliance with the requirements of the Exchange Act. Such a determination could ultimately lead to delisting of our ordinary shares from the Nasdaq Global Select Market or deregistration from the SEC, or both, which would substantially reduce or effectively terminate the trading of our ADSs in the United States.

Risks Related to Our Corporate Structure

If the PRC government finds that the arrangements that establish the structure for operating our business do not comply with PRC government restrictions on foreign investment in the telecommunications business or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations.

The PRC government regulates telecommunications-related businesses through strict business licensing requirements and other government regulations. These laws and regulations also include limitations on foreign ownership of PRC companies that engage in telecommunications-related businesses. Specifically, foreign investors are not allowed to own more than a 50% equity interest in any PRC company engaging in value-added telecommunications businesses (except for e-commerce, domestic multi-party communications services, information storage and re-transmission services, and call center services), and the major foreign investor of a telecommunication business in China must also have experience and a sound track record in providing value-added telecommunications services overseas. See "Item 4. Information on the Company—B. Business Overview—Regulations—Regulations on Foreign Investment in Telecommunications Enterprises."

Because we are a Cayman Islands company, we are classified as a foreign enterprise under PRC laws and regulations, and our wholly-owned PRC subsidiaries, 21Vianet Data Center Co., Ltd., or 21Vianet China, Joytone Infotech Co., Ltd., or SZ Zhuoaiyi, and Abitcool (China) Broadband Inc., or aBitCool DG, are foreign-invested enterprises, or FIEs. To comply with PRC laws and regulations, we conduct our business in China through contractual arrangements with our variable interest entities and their shareholders. These contractual arrangements provide us with effective control over our variable interest entities, and enable us to receive substantially all of the economic benefits of our consolidated affiliated entities in consideration for the services provided by our wholly-owned PRC subsidiaries, and have an exclusive option to purchase all of the equity interest in our variable interest entities when permissible under PRC laws. For a description of these contractual arrangements, see "Item 7.B—Related Party Transactions—Contractual Arrangements with Our Variable Interest Entities and Their Shareholders."

The MIIT issued a circular in July 2006 requiring foreign investors to set up an FIE and obtain a value-added telecommunications business operating license, or the VAT License, in order to conduct any value-added telecommunications business in China. Pursuant to this circular, a domestic license holder is prohibited from leasing, transferring or selling the license to foreign investors in any form, and from providing any assistance, including resources, sites or facilities, to foreign investors that conduct value-added telecommunications business in China illegally. Furthermore, the relevant trademarks and domain names that are used in the value-added telecommunications business must be owned by the local license holder or its shareholder. The circular further requires each license holder to have the necessary facilities for its approved business operations and to maintain such facilities in the regions covered by its license. In addition, all value-added telecommunications service providers are required to maintain network and information security in accordance with the standards set forth under relevant PRC regulations. Companies in violation of the circular will be ordered by relevant authorities to take remedial actions within a specific period and licenses may be withdrawn if such remedial actions cannot be completed within the specific period. As of the date of this annual report, we have not been notified by relevant authorities regarding any violation of the circular when conducting our value-added telecommunications business.

We believe that we comply with the current applicable PRC laws and regulations. Han Kun Law Offices, our PRC legal counsel, based on its understanding of the relevant laws and regulations, is of the opinion that each of the contracts composing the contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders is valid, legally binding and enforceable upon each party of such agreements under PRC laws and regulations, and will not result in any violation of PRC laws or regulations currently in effect. However, as there are substantial uncertainties regarding the interpretation and application of PRC laws and regulations, including the Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the M&A Rules, the telecommunications circular described above and the Telecommunications Regulations of the People's Republic of China, or the Telecom Regulations, and the relevant regulatory measures concerning the telecommunications industry, therefore, we cannot assure you that the PRC government that regulate providers of data center service and other telecommunication services and other participants in the telecommunications industry would agree that our corporate structure or any of the above contractual arrangements comply with PRC licensing, registration or other regulatory requirements, with existing policies or with requirements or policies that may be adopted in the future. PRC laws and regulations governing the validity of these contractual arrangements are uncertain and the relevant government authorities have broad discretion in interpreting these laws and regulations.

If our corporate and contractual structure is deemed by the MIIT, or other regulators having competent authority, to be illegal, either in whole or in part, we may lose control of our consolidated affiliated entities and have to modify such structure to comply with regulatory requirements. However, we cannot assure you that we can achieve this without material disruption to our business. Further, if our corporate and contractual structure is found to be in violation of any existing or future PRC laws or regulations, the relevant regulatory authorities would have broad discretion in dealing with such violations, including:

- revoking our business and operating licenses;
- levying fines on us;
- confiscating any of our income that they deem to be obtained through illegal operations;
- shutting down a portion or all of our networks and servers;
- discontinuing or restricting our operations in China;
- imposing conditions or requirements with which we may not be able to comply;
- requiring us to restructure our corporate and contractual structure;
- restricting or prohibiting our use of the proceeds from overseas offering to finance our PRC affiliated entities' business and operations; and
- taking other regulatory or enforcement actions that could be harmful to our business.

Furthermore, in connection with litigation, arbitration or other judicial or dispute resolution proceedings, assets under the name of any of record holder of equity interest in our variable interest entities, including such equity interest, may be put under court custody. As a consequence, we cannot be certain that the equity interest will be disposed pursuant to the contractual arrangement or ownership by the record holder of the equity interest. In addition, new PRC laws, rules and regulations may be introduced to impose additional requirements that may be applicable to our corporate structure and contractual arrangements. Occurrence of any of these events could materially and adversely affect our business, financial condition and results of operations. In addition, if the imposition of any of these penalties or requirement to restructure our corporate structure causes us to lose the rights to direct the activities of our variable interest entities or our right to receive their economic benefits, we would no longer be able to consolidate such variable interest entities. However, we do not believe that such actions would result in the liquidation or dissolution of our company, our wholly-owned subsidiaries in China or our variable interest entities or their subsidiaries. For the years ended December 31, 2017, 2018 and 2019, our consolidated affiliated entities contributed most of our total net revenues.

Our contractual arrangements with our variable interest entities may result in adverse tax consequences to us.

We could face material and adverse tax consequences if the PRC tax authorities determine that our contractual arrangements with our variable interest entities were not made on an arm's length basis and may adjust our income and expenses for PRC tax purposes by requiring a transfer pricing adjustment. A transfer pricing adjustment could adversely affect us by (i) resulting in a reduction of expense deductions recorded by our VIEs for PRC tax purposes, which could in turn increase their tax liabilities without reducing their respective tax expenses, which could further result in late payment fees and other penalties to our variable interest entities for underpaid taxes; or (ii) limiting the ability of our variable interest entities to obtain or maintain preferential tax treatments and other financial incentives.

We rely on contractual arrangements with our variable interest entities and their shareholders for our China operations, which may not be as effective as direct ownership in providing operational control.

We rely on contractual arrangements with our variable interest entities and their shareholders to operate our business in China. For a description of these contractual arrangements, see "Item 7.B—Related Party Transactions—Contractual Arrangements with Our Variable Interest Entities and Their Shareholders." Most of our revenues are attributed to our consolidated affiliated entities. These contractual arrangements may not be as effective as direct ownership in providing us with control over our variable interest entities. If our variable interest entities or their shareholders fail to perform their respective obligations under these contractual arrangements, our recourse to the assets held by our consolidated affiliated entities is indirect and we may have to incur substantial costs and expend significant resources to enforce such arrangements in reliance on legal remedies under PRC law. These remedies may not always be effective, particularly in light of uncertainties in the PRC legal system.

All of these contractual arrangements are governed by PRC law and provide for the resolution of disputes through arbitration in the PRC. Accordingly, these contracts would be interpreted in accordance with PRC laws and any disputes would be resolved in accordance with PRC legal procedures. The legal environment in the PRC is not as developed as in other jurisdictions, such as the United States. As a result, uncertainties in the PRC legal system could limit our ability to enforce these contractual arrangements. In the event that we are unable to enforce these contractual arrangements, or if we suffer significant time delays or other obstacles in the process of enforcing these contractual arrangements, it would be very difficult to exert effective control over our variable interest entities, and our ability to conduct our business and our financial conditions and results of operation may be materially and adversely affected. See "—Risks Related to Doing Business in China—Uncertainties with respect to the PRC legal system could limit legal protections available to you and us."

The shareholders of our variable interest entities may have potential conflicts of interest with us, which may materially and adversely affect our business and financial condition.

We conduct our operations in China through contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders and we rely on the shareholders of our variable interest entities to abide by the obligations under such contractual arrangements. In particular, 21Vianet Technology is 70% owned by Mr. Sheng Chen, our executive chairman and 30% owned by Mr. Jun Zhang, our co-founder. Mr. Sheng Chen and Mr. Jun Zhang are also the ultimate shareholders of our company. The interests of Mr. Sheng Chen and Mr. Jun Zhang as the shareholders of 21Vianet Technology may differ from the interests of our company as a whole, as what is in the best interests of 21Vianet Technology may not be in the best interests of our company. We cannot assure that when conflicts of interest arise, any or all of these individuals will act in the best interests of our company or that conflicts of interest will be resolved in our favor. In addition, these individuals may breach or cause our variable interest entities and their subsidiaries to breach or refuse to renew the existing contractual arrangements with us.

Currently, we do not have arrangements to address potential conflicts of interest the shareholders of 21Vianet Technology may encounter, on one hand, and as a beneficial owner of our company, on the other hand; provided that we could, at all times, exercise our option under the optional share purchase agreement to cause them to transfer all of their equity ownership in 21Vianet Technology to a PRC entity or individual designated by us as permitted by the then applicable PRC laws. In addition, if such conflicts of interest arise, we could also, in the capacity of attorney-in-fact of the then existing shareholders of 21Vianet Technology as provided under the power of attorney, directly appoint new directors of 21Vianet Technology. We rely on the shareholders of our variable interest entities to comply with the laws of China, which protect contracts and provide that directors and executive officers owe a duty of loyalty to our company and require them to avoid conflicts of interest and not to take advantage of their positions for personal gains, and the laws of the Cayman Islands, which provide that directors have a duty of care and a duty of loyalty to act honestly in good faith with a view to our best interests. However, the legal frameworks of China and Cayman Islands do not provide guidance on resolving conflicts in the event of a conflict with another corporate governance regime. If we cannot resolve any conflicts of interest or disputes between us and the shareholders of our variable interest entities, we would have to rely on legal proceedings, which could result in disruption of our business and subject us to substantial uncertainty as to the outcome of any such legal proceedings.

Risks Related to Doing Business in China

Adverse changes in political and economic policies of the PRC government could have a material adverse effect on the overall economic growth of China, which could reduce the demand for our services and adversely affect our competitive position.

Most of our operations are conducted in China and most of our sales are made in China. Accordingly, our business, financial condition, results of operations and prospects are affected significantly by economic, political and legal developments in China. The PRC economy differs from the economies of most developed countries in many respects, including the amount of government involvement, the level of development, the growth rate, the control of foreign exchange and allocation of resources. While the PRC economy has grown significantly over the past several decades, the growth has been uneven across different periods, regions and among various economic sectors of China. We cannot assure you that the PRC economy will continue to grow, or that if there is growth, such growth will be steady and uniform, or that if there is a slowdown, such a slowdown will not have a negative effect on our business.

The PRC government exercises significant control over China's economic growth through various measures, such as allocation of resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Some of these measures benefit the overall PRC economy, but may also have a negative effect on us. For example, our financial condition and results of operations may be adversely affected by governmental control over capital investments or changes in tax regulations that are applicable to us.

In addition, it is unclear whether PRC economic policies will be effective in maintaining stable economic growth in the future. Any slowdown in China's economic growth could lead to reduced demand for our solutions, which could in turn materially and adversely affect our business, financial condition and results of operations.

Uncertainties with respect to the PRC legal system could limit legal protections available to you and us.

We conduct most of our business through our PRC subsidiaries and consolidated affiliated entities in China. Our operations in China are governed by PRC laws and regulations. Our PRC subsidiaries are FIEs and are subject to laws and regulations applicable to foreign investment in China and, in particular, laws applicable to FIEs.

The PRC legal system is a civil law system based on written statutes. Unlike the common law system, prior court decisions may be cited for reference but are not binding.

Since late 1970s, the PRC government has been developing a comprehensive system of laws and regulations governing economic matters in general. The overall effect of legislation over the past several decades has significantly enhanced the protections afforded to various forms of foreign investments in China. However, China has not developed a fully integrated legal system, and recently enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. In particular, because these laws and regulations are relatively new, and because of the limited volume of published decisions and their nonbinding nature, the interpretation and enforcement of these laws and regulations involve uncertainties. In addition, the PRC legal system is based in part on government policies and internal rules, some of which may not be published on a timely basis or at all, and some of which may have a retroactive effect. As a result, we may not be aware of our violation of these policies and rules until sometime after the violation. Any administrative and court proceedings in China may be protracted, resulting in substantial costs and diversion of resources and management attention. However, since PRC administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we enjoy than in more developed legal systems. These uncertainties may also impede our ability to enforce the contracts we have entered into. As a result, these uncertainties could materially and adversely affect our business and results of operations.

Uncertainties exist with respect to the interpretation and implementation of the newly enacted PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.

On January 1, 2020, the Foreign Investment Law, as well as the Regulations for Implementation of the Foreign Investment Law of the People's Republic of China, or the Implementation Regulations, came into effect and replaced the trio of existing laws regulating foreign investment in China, namely, the Sino-foreign Equity Joint Venture Enterprise Law, the Sino-foreign Cooperative Joint Venture Enterprise Law and the Wholly Foreign-invested Enterprise Law, together with their implementation rules and ancillary regulations.

The Foreign Investment Law and the Implementation Regulations embody an expected PRC regulatory trend to rationalize its foreign investment regulatory regime in line with prevailing international practice and the legislative efforts to unify the corporate legal requirements for both foreign and domestic investments. However, since they are relatively new, uncertainties still exist in relation to their interpretation and implementation. For instance, under the Foreign Investment Law, "foreign investment" refers to the investment activities directly or indirectly conducted by foreign individuals, enterprises or other entities in China. Though it does not explicitly classify contractual arrangements as a form of foreign investment, there is no assurance that foreign investment via contractual arrangement would not be interpreted as a type of indirect foreign investment activities under the definition in the future. In addition, the definition contains a catch-all provision which includes investments made by foreign investors through means stipulated in laws or administrative regulations or other methods prescribed by the State Council. Therefore, it still leaves leeway for future laws, administrative regulations or provisions promulgated by the Stale Council to provide for contractual arrangements as a form of foreign investment. In any of these cases, it will be uncertain whether our contractual arrangements will be deemed to be in violation of the market access requirements for foreign investment under the PRC laws and regulations. The "variable interest entity" structure, or VIE structure, has been adopted by many PRC-based companies, including us, to obtain necessary licenses and permits in the industries that are currently subject to foreign investment restrictions in China. See "—Risks Related to Our Corporate Structure" and Item 4.C "—Organizational Structure."

Furthermore, if future laws, administrative regulations or provisions prescribed by the State Council mandate further actions to be taken by companies with respect to existing contractual arrangements, we may face substantial uncertainties as to whether we can complete such actions in a timely manner, or at all. Failure to take timely and appropriate measures to cope with any of these or similar regulatory compliance challenges could materially and adversely affect our current corporate structure, corporate governance and business operations.

We may rely on dividends paid by our operating subsidiaries to fund cash and financing requirements, and limitations on the ability of our operating subsidiaries to make payments to us could have a material adverse effect on our ability to conduct our business and fund our operations.

We are a holding company and conduct our business primarily through our operating subsidiaries and our consolidated affiliated entities, most of which are limited liability companies established in China. We may rely on dividends paid by our subsidiaries for our cash needs, including the funds necessary to pay dividends and other cash distributions to our shareholders, to service any debt we may incur and to pay our operating expenses. The payment of dividends by entities organized in China is subject to limitations. In particular, regulations in China currently permit payment of dividends only out of accumulated profits as determined in accordance with the PRC accounting standards and regulations. Our PRC subsidiaries are also required to set aside at least 10% of their after-tax profit based on PRC accounting standards each year to their statutory reserves until the accumulative amount of such reserves reaches 50% of their registered capital. These reserves are not distributable as cash dividends. Furthermore, any portion of its after-tax profits that a subsidiary has allocated to its staff welfare and bonus fund at the discretion of its board of directors is also not distributable as cash dividends. Moreover, if our operating subsidiaries incur any debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other distributions to us. Any limitation on the ability of our operating subsidiaries, including in particular 21Vianet China, to distribute dividends and other distributions to us could materially and adversely limit our ability to make investments or acquisitions that could be beneficial to our businesses, pay dividends or otherwise fund and conduct our business.

If we fail to acquire, obtain or maintain applicable telecommunications licenses, or are deemed by relevant governmental authorities to be operating without full compliance with the laws and regulations, our business would be materially and adversely affected.

Pursuant to the Telecommunications Regulations promulgated by the PRC State Council in September 2000 and amended in July 2014 and February 2016, respectively, telecommunications businesses are divided into two categories, namely, (i) “basic telecommunications businesses,” which refers to businesses that provide public network infrastructure, public data transmission and basic voice communications services, and (ii) “value-added telecommunications businesses,” which refer to businesses that provide telecommunications and information services through the public network infrastructure. If the value-added telecommunications service covers two or more provinces, autonomous regions or municipalities, such service must be approved by the MIIT and the service provider must obtain a Cross-Regional Value Added Telecommunications Business Operation License, or the Cross-Regional VAT License.

Pursuant to the Cross-Regional VAT License issued to Beijing 21Vianet Broad Band Data Center Co., Ltd., or 21Vianet Beijing, by the MIIT on January 17, 2012 (which was most recently updated on August 26, 2019) with a term effective until January 23, 2022, 21Vianet Beijing is permitted to carry out its(i) full data center business under the first category of “value-added telecommunications business” across two province-level municipalities and four cities in China; (ii) data center business (excluding internet resources coordination service) under the first category of “value-added telecommunications business” across two province-level municipalities and 18 cities in China; (iii) VPN services under the first category of “value-added telecommunications business” across China; (iv) internet access service under the first category of “value-added telecommunications business” across 13 province-level municipalities and provinces in China, and internet access service (solely providing services for website users) under the first category of “value-added telecommunications business” across six provinces in China; (v) domestic multi-party communications services under the second category of “value-added telecommunications business” across China; and (vi) domestic data transmission services through fixed network under the second category of “basic telecommunications business” across China. In addition, 21Vianet Beijing recently has been permitted to conduct data center business (excluding internet resources coordination service) under the first category of “value-added telecommunications business” in Zhengzhou and Wuhan in China, but we have not received the updated license as the relevant renewal process of the MIIT has been delayed due to the outbreak of COVID-19.

Pursuant to the Cross-Regional VAT License issued to BJ iJoy by the MIIT on October 23, 2019 with a term effective until May 6, 2024, BJ iJoy is permitted to carry out its (i) data center business (excluding internet resources coordination service) under the first category of “value-added telecommunications business” across two province-level municipalities and one city in China; (ii) VPN services under the first category of “value-added telecommunications business” across three province-level municipalities and provinces in China; (iii) internet access service under the first category of “value-added telecommunications business” across three province-level municipalities and provinces in China; and (iv) information service business (excluding internet information service) under the second category of “value-added telecommunications business” across China. In addition, pursuant to the VAT License issued to BJ iJoy by Beijing Communications Administration on November 20, 2019 with a term effective until October 8, 2023, BJ iJoy is permitted to carry out the information service business (limited to internet information service) under the second category of “value-added telecommunications business”.

Pursuant to the Cross-Regional VAT License issued to 21Vianet Technology by the MIIT on December 3, 2019 with a term effective until June 20, 2023, 21Vianet Technology is permitted to carry out its internet access service under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China. In addition, Shanghai Xiangyun 21Vianet Technology Co., Ltd, or SH 21Vianet, a wholly-owned subsidiary of 21Vianet Technology, has obtained a VAT License issued by Shanghai Communications Administration on July 1, 2019 with a term effective until March 31, 2023, which allows it to provide internet access service (providing services for website users and internet platforms) under the first category of "value-added telecommunications business" in Shanghai.

Pursuant to the Cross-Regional VAT License issued to Jiangsu 21Vianet Data Center Co., Ltd., or JS 21Vianet, by the MIIT on November 4, 2019 with a term effective until November 4, 2024, JS 21Vianet is permitted to carry out its (i) data center business (excluding internet resources coordination service) under the first category of "value-added telecommunications business" in Shanghai, Nanjing and Suzhou; and (ii) internet access service under the first category of "value-added telecommunications business" across two province-level municipalities and provinces in China.

Pursuant to the Cross-Regional VAT License issued to Shenzhen Diyixian Telecommunication Co., Ltd., or SZ DYX, by the MIIT on September 18, 2013 (which was updated on July 17, 2019) with a term effective until June 4, 2023, SZ DYX is permitted to carry out (i) VPN services under the first category of "value-added telecommunications business" in China; (ii) call center business under the second category of "value-added telecommunications business" across China; (iii) data center business under the first category of "value-added telecommunications business", which covers the services in Beijing, Shanghai and Shenzhen; (iv) data center business (solely providing internet resources coordination service) under the first category of "value-added telecommunications business", which covers the services in six cities in China; (v) internet access service under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China; and (vi) internet access service (solely providing services for website users) under the first category of "value-added telecommunications business" across 28 province-level municipalities and provinces in China.

Pursuant to the VAT License issued to BJ Yilong by Beijing Communications Administration on November 27, 2018 with a term effective until September 9, 2020, BJ Yilong is permitted to carry out its information service business (excluding internet information service) under the second category of "value-added telecommunications business" in Beijing. In addition, pursuant to the VAT License issued to BJ Yilong by Beijing Communications Administration on November 27, 2018 with a term effective until September 24, 2020, BJ Yilong is permitted to carry out the information service business (limited to internet information service) under the second category of "value-added telecommunications business".

Pursuant to the VAT License issued to Shanghai Blue Cloud Technology Co., Ltd., or SH Blue Cloud, by Shanghai Communications Administration on October 20, 2017 (which was updated on October 25, 2019 to revise the categories of permitted business) with a term effective until October 20, 2022, SH Blue Cloud is permitted to carry out (i) information service business (limited to internet information service) under the second category of "value-added telecommunications business"; (ii) online data processing and transaction processing service (solely providing for e-commerce services) under the second category of "value-added telecommunications business"; and (iii) internet domain name resolution service under the second category of "value-added telecommunications business" in Shanghai. In addition, SH Blue Cloud obtained the Cross-Regional VAT License issued by the MIIT on January 21, 2020 with a term effective until January 21, 2025, pursuant to which SH Blue Cloud is permitted to carry out (i) data center business under the first category of "value-added telecommunications business" in Beijing and Shanghai; (ii) CDN service under the first category of "value-added telecommunications business" in Beijing and Shanghai; (iii) VPN services under first category of "value-added telecommunications business" in Beijing and Shanghai; and (iv) internet access service under the first category of "value-added telecommunications business" in Beijing and Shanghai.

We have been continuously developing our hosting service to better serve our customers, and as a result, we introduce new technologies and services from time to time to support and improve our current business. However, we cannot assure you that PRC governmental authorities will continue to deem our hosting service and any of our newly developed technologies, network and services used in our business as a type of value-added telecommunications business covered under the Cross-Regional VAT License issued to 21Vianet Beijing, BJ iJoy, 21Vianet Technology, JS 21Vianet, SH Blue Cloud and SZ DYX, and the VAT License issued to BJ Yilong, SH 21Vianet and SH Blue Cloud. Furthermore, we cannot rule out the possibility that PRC legislators or governmental authorities will promulgate any new laws or regulations or update the current and existing laws and regulations which may clearly define or categorize our hosting service and any of our newly developed technologies, network and services used in our business as a type of basic telecommunication business, which is not covered by our VAT Licenses. As we expand our networks across China, it is also possible that the MIIT, in the future, may deem our operations to have exceeded the terms of our existing licenses. Further, we cannot assure you that 21Vianet Beijing, BJ iJoy, 21Vianet Technology, JS 21Vianet, SH Blue Cloud, SZ DYX, SH 21Vianet and BJ Yilong will be able to successfully renew their value added telecommunications business operating licenses upon their expiration, or maintain their annual inspection, nor can we ensure that we will be able to obtain any other licenses necessary for us to carry out our business, or that our existing licenses will continue to cover all aspects of our operations upon their renewal.

MIIT initiated a periodical pilot scheme for broadband access business by issuing the Notice on Liberalizing the Broadband Access Market to Private Capital on December 25, 2014, or the Broadband Notice, pursuant to which, the qualified private sector enterprises are encouraged, but not required, to apply to participate in the pilot scheme in broadband access business and the pilot scheme lasts for 3 years commencing on March 1, 2015. From 2015 to 2017, MIIT issued a series of notices in succession to expand the pilot scheme to all cities in nine provinces and several designated cities in other provinces. On June 19, 2018, MIIT issued the Notice on Deepening the Pilot Scheme in Broadband Access Business to extend the effective period of the pilot scheme to December 31, 2020 and further expand the pilot scheme to all cities in fourteen provinces and several designated cities in other provinces. As of the date of this annual report, we are qualified to provide broadband access services in Beijing.

We believe the pilot scheme represents the current administration's continuous efforts in carrying out the recent policies of the PRC State Council and MIIT regarding encouraging private sectors to further participate in the telecommunication industry. The Broadband Notice specifically mentioned that the broadband access business is a basic telecommunication business. The pilot scheme, to some extent, reflects a legislative trend to welcome private enterprises (in comparison to the state-owned enterprise) to participate in basic telecommunication businesses in the future. Nevertheless, new laws, regulations or government interpretations may also be promulgated from time to time to regulate the hosting service or any of our related technology or services, which may require us to obtain additional, or expand existing, operating licenses or permits. Any of these factors could result in our disqualification from carrying out our current business, causing significant disruption to our business operations which may materially and adversely affect our business, financial condition and results of operations. We will be closely monitoring the developments of relevant laws and regulations.

Furthermore, the MIIT has strengthened its oversight on the Internet access service market in recent years, which is underscored by the Circular on Clearing Up and Regulating the Internet Access Service Market issued by the MIIT in January 2017 and the Circular on Deepening the Work of Clearing Up and Regulating the Internet Access Service Market issued by the MIIT in April 2018. According to these two circulars, the regulator has launched a series of inspections and rectifications to regulate the market, which will last until March 31, 2019. For example, in February 2018, MIIT issued an internal notice, or the MIIT Internal Notice, pursuant to which telecommunication authorities will carry out a special enforcement campaign to inspect the operations of certain licensed telecommunications operators. In particular, the authorities will pay special attention to any improper operational activities, such as unauthorized establishment of transmission network, unlicensed operation of cross-border business and improper sublease of broadband resources. According to MIIT Internal Notice, basic telecommunication service providers should exercise extra prudence when considering providing additional network resources to the enterprises under inspection. If the enterprise is found to be engaged in non-compliant operations, it may be subject to various penalties, including suspension of network access, suspension of approving its application for new operation permit until rectification being completed, being publicized as an operator with discredit record or non-compliance record, enhanced oversight of the authority and limitation on new telecommunication business, depending on the seriousness of the violations and the rectification result. The MIIT Internal Notice mandates that the foregoing inspection and scrutiny to be completed by September 30, 2018. According to the MIIT Internal Notice, 47 industry players are subject to the special inspection, including two of our consolidated affiliated entities, 21Vianet Beijing and SZ DYX. After the MIIT Internal Notice was issued, we closely communicated with the in-charge authority to clarify the inspection requirements of the authority and cooperate with them to review our business practices and compliance status. As of the date of this annual report, we have not received any further investigation notice or rectification order in connection with the MIIT Internal Notice from the government authorities. Nevertheless, we cannot assure you that the government authorities will not conduct similar inspections from time to time in the future and may determine that we are not in full compliance with the regulatory requirements, especially the authority's enhanced regulation on cross-border VPN business. If we are found to violate any operation requirements, we may be imposed on any of the administrative penalties mentioned in the MIIT Internal Notice, which may result in a material and adverse effect on our ability to conduct our operations and our financial conditions.

In addition, the MIIT and other relevant regulatory authorities recently published a series of new regulations, policies and controls with respect to the construction or development of new data centers, and rebuilding or expansion of existing data centers. For example, on January 21, 2019, MIIT, National Government Office Administration and National Energy Administration jointly published the Guidance on Promotion of Green Data Center Construction, pursuant to which the authorities encourage data centers to adhere to certain average levels of energy conservation and aim to reach several goals including, among others, maintaining the power usage effectiveness (PUE) of newly constructed large and extra-large data centers at or below 1.4 from the year 2022 onward. There are similar policies and restrictions governing the construction and expansion of data centers in some large cities, such as Beijing and Shanghai. On September 6, 2018, the General Office of the People's Government of Beijing Municipality, or the GOPGB, issued the Beijing Municipality's Catalogue for the Prohibition and Restriction of Newly Increased Industries (2018 Edition), or the 2018 Catalogue, which is a revised edition of the catalogue GOPGB issued in 2015. The 2018 Catalogue prohibits new construction or expansion within Beijing's municipal districts of (i) data centers which are involved in providing Internet data services or information processing and storage support services, except for cloud computing data centers with PUE lower than 1.4, and (ii) call centers. Furthermore, new construction or expansion of data centers which are involved in providing Internet data services or information processing and storage support services with PUE lower than 1.4 is also prohibited within the boundaries of Beijing's Dongcheng District, Xicheng District, Chaoyang District, Haidian District, Fengtai District, Shijingshan District and Tongzhou New Town. On January 2, 2019, Shanghai Municipal Commission of Economy and Information and Shanghai Municipal Development and Reform Commission jointly published the Guidance on Strengthening the Coordinated Construction of the Internet Data Center in Shanghai Municipality, pursuant to which, authorities encourage to effectively control the construction scale and energy consumption gross of Internet data centers and aim to reach several goals including, among others, the PUE of newly constructed Internet data center shall be strictly controlled below 1.3, and the PUE of reconstructed Internet data center shall be strictly controlled below 1.4, from the year 2020 onward. Pursuant to the Notice on Selection of Proposed Newly Constructed Internet Data Center Projects in Shanghai in 2020 issued by Shanghai Municipal Commission of Economy and Information on March 25, 2020, the overall scale of newly constructed internet data center projects in Shanghai in 2020 will be limited up to 30,000 racks, the total energy consumption of which will be capped at the amount equivalent to approximately 250,000 tons of standard coal.

Under the New PRC Enterprise Income Tax Law, we may be classified as a "resident enterprise" of China. Such classification could result in unfavorable tax consequences to us and our non-PRC holders of shares and ADSs.

Pursuant to the PRC Enterprise Income Tax Law, or the EIT Law, as recently amended on December 29, 2018, and its implementation rules, which became effective on January 1, 2008 and most recently amended on April 23, 2019, an enterprise established outside of China with "de facto management bodies" within China is considered a "resident enterprise," meaning that it can be treated in a manner similar to a Chinese enterprise for enterprise income tax, or EIT, purposes. Under the implementation rules of the EIT Law, the term "de facto management body" is defined as the management body that exercises full and substantial control and overall management over the business, productions, personnel, accounts and properties of an enterprise. On April 22, 2009, the State Administration of Taxation issued the Notice Regarding the Determination of Chinese-Controlled Offshore Incorporated Enterprises as PRC Tax Resident Enterprises on the Basis of De Facto Management Bodies, or Circular 82, which is amended and supplemented by the Announcement Regarding the Determination of PRC Tax Resident Enterprises on the Basis of De Facto Management Bodies issued by the State Administration of Taxation on January 29, 2014. Circular 82 and its amendments sets out certain specific criteria and process for determining whether the "de facto management body" of a Chinese-controlled offshore incorporated enterprise is located in China.

We do not believe that we are a "resident enterprise" for PRC EIT purposes. However, the tax resident status of an enterprise is subject to determination by the PRC tax authorities and uncertainties remain with respect to the interpretation of the term "de facto management body". If the PRC tax authorities determine that we are a "resident enterprise" for PRC EIT purposes, a number of unfavorable PRC tax consequences could follow: (i) we may be subject to EIT at a rate of 25% on our worldwide taxable income as well as PRC EIT reporting obligations; (ii) a 10% (or a lower rate under an applicable tax treaty, if any) withholding tax may be imposed on dividends we pay to non-PRC enterprise holders (20% for non-PRC individual holders) of our shares and ADSs; and (iii) a 10% PRC tax may apply to gains realized by non-PRC enterprise holders (20% for non-PRC individual holders) of our shares and ADSs from transferring our shares or ADSs, if such income is considered PRC-source income.

Similarly, such unfavorable tax consequences could apply to our Hong Kong, Cayman and BVI subsidiaries, if either of them is deemed to be a "resident enterprise" by the PRC tax authorities. Notwithstanding the foregoing provisions, the EIT Law also provides that the dividends paid between "qualified resident enterprises" are exempt from EIT. If our Hong Kong, Cayman and BVI subsidiaries are deemed "resident enterprises" for PRC EIT purposes, the dividends they receive from their PRC subsidiaries, including 21Vianet China, may constitute dividends between "qualified resident enterprises" and therefore qualify for tax exemption. However, the definition of "qualified resident enterprise" is unclear and the relevant PRC government authorities have not yet issued guidance with respect to the processing of outbound remittances to entities that are treated as resident enterprises for PRC EIT purposes. Even if such dividends qualify as "tax-exempt income," we cannot guarantee that such dividends will not be subject to any withholding tax.

We and our non-tax resident investors face uncertainty with respect to indirect transfers of equity interests in PRC resident enterprises by their non-PRC holding companies.

On February 3, 2015, the State Administration of Tax issued the Notice on Certain Corporate Income Tax Matters on Indirect Transfer of Properties by Non-Tax Resident Enterprises, or Circular 7. Circular 7 extends its tax jurisdiction to not only indirect transfers but also transactions involving transfer of other taxable assets, through the offshore transfer of a foreign intermediate holding company. Circular 7 also brings challenges to both the foreign transferor and transferee (or other person who is obligated to pay for the transfer) of the taxable assets. Where a non-tax resident enterprise conducts an "indirect transfer" by transferring the taxable assets indirectly by disposing of the equity interests of an overseas holding company, the non-tax resident enterprise being the transferor, or the transferee, or the PRC entity which directly owned the taxable assets may report to the relevant tax authority such indirect transfer. Using a "substance over form" principle, the PRC tax authority may re-characterize such indirect transfer as a direct transfer of the equity interests in the PRC tax resident enterprise and other properties in China. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax, and the transferee or other person who is obligated to pay for the transfer is obligated to withhold the applicable taxes, currently at a rate of up to 10% for the transfer of equity interests in a PRC resident enterprise. Nevertheless, Circular 7 has introduced safe harbors for internal group restructurings and the purchase and sale of equity through a public securities market.

On October 17, 2017, the State Administration of Tax issued the Announcement of the State Administration of Taxation on Issues Concerning the Withholding of Non-resident Enterprise Income Tax at Source, or SAT Bulletin 37, which came into effect on December 1, 2017 and was amended on June 15, 2018. The SAT Bulletin 37 further clarifies the practice and procedure of the withholding of non-tax resident enterprise income tax. Pursuant to Circular 7 and SAT Bulletin 37, both the transferor and the transferee may be subject to penalties under PRC tax laws if the transferee fails to withhold the taxes and the transferor fails to pay the taxes. However, as these rules and notices are relatively new and there is a lack of clear statutory interpretation, we face uncertainties on the reporting and consequences on future private equity financing transactions, share exchange or other transactions involving the transfer of shares in our company by investors that are non-PRC resident enterprises, or sale or purchase of shares in other non-PRC resident companies or other taxable assets by us. Our Cayman Islands holding company and other non-PRC resident enterprises in our group may be subject to filing obligations or may be taxed if our Cayman Islands holding company and other non-PRC resident enterprises in our group are transferors in such transactions, and may be subject to withholding obligations if our Cayman Islands holding company and other non-PRC resident enterprises in our group are transferees in such transactions. For the transfer of shares in our Cayman Islands holding company by investors that are non-PRC resident enterprises, our PRC subsidiaries may be requested to assist in the filing under Circular 7 and/or SAT Bulletin 37. As a result, we may be required to expend valuable resources to comply with these rules and notices or to request the relevant transferors from whom we purchase taxable assets to comply, or to establish that our Cayman Islands holding company and other non-tax resident enterprises in our group should not be taxed under Circular 7 and/or SAT Bulletin 37, which may have a material adverse effect on our financial condition and results of operations. There is no assurance that the tax authorities will not apply Circular 7 and/or SAT Bulletin 37 to our offshore restructuring transactions where non-PRC resident investors were involved if any of such transactions were determined by the tax authorities to lack reasonable commercial purpose. As a result, we and our non-PRC resident investors may be at risk of being taxed under Circular 7 and/or SAT Bulletin 37 and may be required to comply with or to establish that we should not be taxed under Circular 7 and/or SAT Bulletin 37, which may have a material adverse effect on our financial condition and results of operations or such non-PRC resident investors' investments in us. We have conducted acquisition transactions in the past and may conduct additional acquisition transactions in the future. We cannot assure you that the PRC tax authorities will not, at their discretion, adjust any capital gains and impose tax return filing obligations on us or require us to provide assistance for the investigation of PRC tax authorities with respect thereto. Heightened scrutiny over acquisition transactions by the PRC tax authorities may have a negative impact on potential acquisitions we may pursue in the future.

Discontinuation of any of the preferential tax treatments available to us or imposition of any additional taxes could adversely affect our financial condition and results of operations.

The EIT Law and its implementation rules unified the previously-existing separate income tax laws for domestic enterprises and FIEs and adopted a unified 25% EIT rate applicable to all resident enterprises in China, except for certain entities established prior to March 16, 2007 that are eligible for their existing preferential tax incentives, adjusted by certain transitional phase-out rules promulgated by the State Council on December 26, 2007. In addition, certain enterprises may enjoy a preferential EIT rate of 15% under the EIT Law if they qualify as High and New Technology Enterprise, or HNTE, subject to various qualification criteria.

A number of our PRC subsidiaries and consolidated affiliated entities, including 21Vianet Beijing, SH Blue Cloud, and SZ DYX are entitled to enjoy a preferential tax rate of 15% due to their qualification as HNTE. The qualification as an HNTE is subject to annual administrative evaluation and a three-year review by the relevant authorities in China. If 21Vianet Beijing, SH Blue Cloud and SZ DYX fail to maintain or renew their HNTE status, their applicable EIT rate may be increased to 25%, which could have a material adverse effect on our financial condition and results of operations.

In April 2011, Xi'an Sub, a subsidiary located in Shaanxi Province, was qualified for a preferential tax rate of 15% and started to apply this rate from then on. The preferential tax rate is awarded to companies that are located in West Regions of China which operate in certain encouraged industries. This qualification will need to be assessed on an annual basis. For the years ended December 31, 2017, 2018 and 2019, the tax rate assessed for Xi'an Sub was 25%, 15% and 15%, respectively.

For the year ended December 31, 2019, our other PRC subsidiaries would be subject to an EIT rate of 25%, unless they are qualified as Small Scale and Low Profit Enterprises which would be entitled to exempt fifty percent (50%) of their income from tax and enjoy a reduced EIT rate of 20%.

The M&A Rules establish complex procedures for some acquisitions of Chinese companies by foreign investors, which could make it difficult for us to pursue growth through acquisitions in China.

The M&A Rules and other recently adopted regulations and rules concerning mergers and acquisitions established additional procedures and requirements that could make merger and acquisition activities by foreign investors more time consuming and complex. In addition, the Implementing Rules Concerning Security Review on the Mergers and Acquisitions by Foreign Investors of Domestic Enterprises, issued by the MOC in August 2011, specify that mergers and acquisitions by foreign investors involved in "an industry related to national security" are subject to strict review by the MOC, and prohibit any activities attempting to bypass such security review, including by structuring the transaction through a proxy or contractual control arrangement. We believe that our business is not in an industry related to national security, but we cannot preclude the possibility that the MOC or other government agencies may publish explanations contrary to our understanding or broaden the scope of such security reviews in the future, in which case our future acquisitions in the PRC, including those by way of entering into contractual control arrangements with target entities, may be closely scrutinized or prohibited. Moreover, the Anti-Monopoly Law requires that the MOC be notified in advance of any concentration of undertaking if certain filing thresholds are triggered. Part of our growth strategy includes acquiring complementary businesses or assets in China. Complying with the requirements of the laws and regulations mentioned above and other PRC regulations to complete such transactions could be time-consuming, and any required approval processes, including obtaining approval from the MOC, may delay or inhibit our ability to complete such transactions, which could affect our ability to expand our business or maintain our market share. If any of our acquisitions were subject to the M&A Rule and were found not to be in compliance with the requirements of the M&A Rule in the future, relevant PRC regulatory agencies may impose fines and penalties on our operations in the PRC, limit our operating privileges in the PRC, or take other actions that could have a material adverse effect on our business, financial condition, results of operations, reputation and prospects.

PRC regulation of loans and direct investment by offshore holding companies to PRC entities may delay or prevent us from using the proceeds from our overseas offerings to make loans or additional capital contributions to our PRC subsidiaries or consolidated affiliated entities, which could materially and adversely affect our liquidity and our ability to fund and expand our business.

In utilizing the proceeds we received from our overseas offerings or in other financing activities, as an offshore holding company, we may make loans to our PRC subsidiaries or our consolidated affiliated entities in the PRC, or we may make additional capital contributions to our PRC subsidiaries or consolidated affiliated entities. Any loans to our PRC subsidiaries or our consolidated affiliated entities in the PRC are subject to PRC regulations. For example, loans by us to our PRC subsidiaries, which are FIEs, to finance their activities cannot exceed a statutory cap and must be filed with the State Administration of Foreign Exchange, or SAFE, through the online filing system of SAFE after the loan agreement is signed and no later than three business days prior to the borrower withdraws any amount.

We may also decide to finance our PRC subsidiaries for operations in China by means of capital contributions. These capital contributions must be approved by or filed with the MOC or its local counterpart. We cannot assure you that we will be able to obtain these government approvals on a timely basis, if at all, with respect to future capital contributions by us to our subsidiaries. If we fail to receive such approvals, our ability to use the proceeds from our overseas offerings and to capitalize our PRC operations may be negatively affected, which could adversely affect our liquidity and our ability to fund and expand our business.

Governmental control of currency conversion may limit our ability to receive and utilize our revenues effectively.

We earn most of our revenues and incur most of our expenses in Renminbi. However, Renminbi is not freely convertible at present.

The PRC government continues to regulate conversion between Renminbi and foreign currencies, despite the significant reduction in its control in recent years over trade transactions involving import and export of goods and services as well as other frequent routine foreign exchange transactions. These transactions are known as current account items. However, remittance of Renminbi by foreign investors into the PRC for the purposes of capital account items, such as capital contributions, is generally permitted upon obtaining specific approvals from, or completing specific registrations or filings with, the relevant authorities on a case-by-case basis and is subject to a strict monitoring system. Regulations in the PRC on the remittance of Renminbi into the PRC for settlement of capital account items are developing gradually. Currently, our PRC subsidiaries may purchase foreign currencies for settlement of current account transactions, including payments of dividends to us, without the approval of the SAFE. However, foreign exchange transactions by our PRC subsidiaries under the capital account continue to be subject to significant foreign exchange controls and require the approval of or need to register or file with PRC governmental authorities, including the SAFE. In particular, if our PRC subsidiaries borrow foreign currency loans from us or other foreign lenders, these loans must be filed with the SAFE after the loan agreement is signed and at least three business days before the borrower draws any amount from the foreign loan, and the accumulative amount of foreign currency loans borrowed by a PRC subsidiary may not exceed a statutory upper limit. If we finance our PRC subsidiaries by means of additional capital contributions, these capital contributions must be approved by or filed with the MOC or their respective local counterparts. Any existing and future restrictions on currency exchange may affect the ability of our PRC subsidiaries or affiliated entities to obtain foreign currencies, limit our ability to meet our foreign currency obligations or otherwise materially and adversely affect our business.

In March 2015, SAFE promulgated the Circular on Reforming the Administration Approach Regarding the Foreign Exchange Capital Settlement of Foreign-invested Enterprises, or SAFE Circular No. 19, which was most recently amended on December 30, 2019. SAFE Circular No. 19 provides that, among other things, a foreign-invested enterprise may convert up to 100% of the foreign currency in its capital account into RMB on a discretionary basis according to the actual needs. On June 9, 2016, SAFE further issued the Circular of the State Administration of Foreign Exchange on Reforming and Regulating Policies on the Control over Foreign Exchange Settlement of Capital Accounts, or SAFE Circular No. 16, to further expand and strengthen such discretionary conversion reform under SAFE Circular No. 19. SAFE Circular No. 16 provides an integrated standard for conversion of foreign exchange under capital account items on a discretionary basis which applies to all enterprises registered in the PRC. Pursuant to SAFE Circular No. 16, in addition to foreign currency capital, the discretionary conversion policy expands to foreign currency debts borrowed by an enterprise (except financial institutions) and repatriated funds raised through overseas listing. In addition, SAFE Circular No. 16 has narrowed the scope of purposes for which an enterprise must not use the RMB funds so converted, which include, among others, (i) payment for expenditure beyond its business scope or otherwise as prohibited by the applicable laws and regulations; (ii) investment in securities or other financial products other than banks' principal-secured products; (iii) provision of loans to non-affiliated enterprises, except where it is expressly permitted in the business scope of the enterprise; and (iv) construction or purchase of non-self-used real properties, except for the real estate developer. On October 23, 2019, the SAFE issued the Circular on Further Advancing the Facilitation of Cross Border Trade and Investment, or SAFE Circular 28. SAFE Circular 28 provides, among others, that the foreign-invested enterprises can use RMB converted from foreign currency denominated capital for equity investment in China, provided that the equity investments are genuine and in compliance with the applicable foreign investment-related laws and regulations.

Fluctuation in exchange rates could have a material adverse effect on our results of operations and the value of your investment.

The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. The Renminbi has fluctuated against the U.S. dollar, at times significantly and unpredictably. The value of Renminbi against the U.S. dollar and other currencies is affected by changes in China's political and economic conditions and by China's foreign exchange policies, among other things. We cannot assure you that Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between Renminbi and the U.S. dollar in the future.

As our costs and expenses are mostly denominated in RMB, any appreciation of the RMB against the U.S. dollar would increase our costs in U.S. dollar terms. In addition, as our operating subsidiaries and VIEs in China receive revenues in RMB, any significant depreciation of the RMB against the U.S. dollar may have a material and adverse effect on our revenues in U.S. dollar terms and financial condition, and the value of, and any dividends payable on, our ordinary shares. For example, to the extent that we need to convert U.S. dollars into Renminbi for capital expenditures and working capital and other business purposes, such as the proceeds from our 2017 Bonds and 2020 Notes, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the Renminbi amount we would receive from the conversion. Conversely, if we decide to convert Renminbi into U.S. dollars for the purpose of making payments for dividends on our ordinary shares or ADSs, strategic acquisitions or investments or other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollar amount available to us. These and other effects on our financial data resulting from fluctuations in the value of the RMB against the U.S. dollar could have a material and adverse effect on the market price of our ADSs and your investment. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk—Foreign Exchange Risk."

Very limited hedging options are available in China to reduce our exposure to exchange rate fluctuations. To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedges may be limited and we may not be able to adequately hedge our exposure or at all. In addition, our currency exchange losses may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currency. As a result, fluctuations in exchange rates may have a material adverse effect on your investment.

PRC regulations relating to the establishment of offshore special purpose vehicles by PRC residents may subject our PRC resident beneficial owners to personal liability and limit our ability to acquire PRC companies, to inject capital into our PRC subsidiaries, limit our PRC subsidiaries' ability to distribute profits to us, or otherwise materially and adversely affect us.

In October 2005, SAFE issued the Circular on the Relevant Issues in the Foreign Exchange Control over Financing and Return Investment Through Special Purpose Companies by Residents Inside China, or Circular 75, which is now replaced by the Circular on Relevant Issues Concerning Foreign Exchange Control on Domestic Residents' Offshore Investment and Financing and Roundtrip Investment through Special Purpose Vehicles, or Circular 37, issued by SAFE on July 4, 2014. According to Circular 37, PRC residents are required to register with local SAFE branches in connection with their direct establishment or indirect control of an offshore entity for the purposes of overseas investment and financing, with such PRC residents' legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in Circular 37 as a "special purpose vehicle." The term "control" under Circular 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. Circular 37 further requires amendment to the registration in the event of any changes with respect to the basic information of the special purpose vehicle, such as changes in a PRC resident individual shareholder, name or operation period; or any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event. If the shareholders of the offshore holding company who are PRC residents do not complete their registration with the local SAFE branches, the PRC subsidiaries may be prohibited from distributing their profits and proceeds from any reduction in capital, share transfer or liquidation to the offshore company, and the offshore company may be restricted in its ability to contribute additional capital to its PRC subsidiaries. Moreover, failure to comply with SAFE registration and amendment requirements described above could result in liability under PRC law for evasion of applicable foreign exchange restrictions. On February 13, 2015, SAFE promulgated a Notice on Further Simplifying and Improving Foreign Exchange Administration Policy on Direct Investment, or SAFE Notice 13, which became effective on June 1, 2015. SAFE Notice 13 has delegated to the qualified banks the authority to register all PRC residents' investment in "special purpose vehicle" pursuant to the Circular 37, except that those PRC residents who have failed to comply with Circular 37 will remain to fall into the jurisdiction of the local SAFE branches and must make their supplementary registration application with the local SAFE branches.

Our current PRC resident beneficial owners, including our co-founders Sheng Chen and Jun Zhang, have filed the foreign exchange registration in connection with their respective overseas shareholding in our company in accordance with the Circular 37 on June 10, 2014. We cannot assure you when our co-founders can successfully complete their registrations. We have also requested other PRC residents who we know hold direct or indirect interest in our company to make the necessary applications, filings and amendments as required under Circular 37 and other related rules. We attempt to comply, and attempt to ensure that these PRC residents holding direct or indirect interest in our company comply, with the relevant requirements, and those persons holding direct or indirect interests in our securities whose identities and addresses we know and who are subject to Circular 37 and the relevant SAFE regulations have conducted the registration procedures prescribed by Circular 37 and will update such registration. However, we may not be informed of the identities of all the PRC residents holding direct or indirect interest in our company, and we cannot provide any assurances that these PRC residents will comply with our request to make or obtain any applicable registrations or comply with other requirements required by Circular 37 or the relevant SAFE regulations. The failure or inability of PRC residents, including our co-founders, to make any required registrations or comply with other requirements under Circular 37 and the relevant SAFE regulations may subject such PRC residents or our PRC subsidiaries to fines and legal sanctions and may also limit our ability to contribute additional capital into or provide loans to our PRC subsidiaries and our consolidated affiliated entities, limit our PRC subsidiaries' ability to pay dividends or otherwise distribute profits to us, or otherwise materially and adversely affect us.

Failure to comply with the registration requirements for employee share option plans may subject our equity incentive plan participants who are PRC residents or us to fines and other legal or administrative sanctions.

Since 2007, SAFE has implemented rules requiring PRC residents who participate in employee stock option plans of overseas publicly listed companies to register with SAFE or its local office and complete certain other procedures. Effective on February 15, 2012, SAFE promulgated the Circular on the Relevant Issues Concerning Foreign Exchange Administration for Domestic Individuals Participating in an Employees Share Incentive Plan of an Overseas-Listed Company, or SAFE Notice 7. Under SAFE Notice 7, PRC residents who participate in a share incentive plan of an overseas publicly listed company are required to register with SAFE and complete certain other procedures. PRC residents include directors, supervisors, management and employees of PRC domestic companies specified in the Administrative Regulations of the People's Republic of China on Foreign Exchange, regardless of nationality. SAFE Notice 7 further requires that an agent should also be designated to handle matters in connection with the exercise or sale of share options granted under the share incentive plan to participants. We and the PRC residents to whom we have granted stock options are subject to SAFE Notice 7. If we or our PRC optionees fail to comply with these regulations, we or our PRC optionees may be subject to fines and other legal or administrative sanctions.

Risks Related to our ADSs

The market price of our ADSs has fluctuated and may continue to be volatile.

The trading prices of our ADSs are likely to be volatile and could fluctuate widely due to factors beyond our control. This may happen because of broad market and industry factors, such as the performance and fluctuation in the market prices or the underperformance or declining financial results of other companies based in China that have listed their securities in the United States in recent years. The securities of some of these companies have experienced significant volatility since their initial public offerings, including, in some cases, substantial price declines in the trading prices of their securities. The trading performances of other Chinese companies' securities after their offerings may affect the attitudes of investors toward Chinese companies listed in the United States, which consequently may impact the trading performance of our ADSs, regardless of our actual operating performance. The recent ongoing administrative proceedings brought by SEC against five accounting firms in China, alleging that they refused to hand over documents to the SEC for ongoing investigations into certain China-based companies, occurs at a time when accounting scandals have eroded investor appetite for China-based companies. Any other negative news or perceptions about inadequate corporate governance practices or fraudulent accounting, corporate structure or matters of the Chinese companies may also negatively affect the attitudes of investors towards Chinese companies in general, including us, regardless of whether we have conducted any inappropriate activities. In addition, securities markets may from time to time experience significant price and volume fluctuations that are not related to our operating performance, which may have a material and adverse effect on the market price of our ADSs.

In addition, the market price for our ADSs has fluctuated since we first listed our ADSs on the Nasdaq Global Select Market on April 21, 2011. In 2019, the trading prices of our ADSs have ranged from US$6.31 to US$11.00 per ADS, and the last reported closing price on April 1, 2020 was US$13.45 per ADS. The market price for our ADSs may be highly volatile and subject to wide fluctuations in response to factors including the following:

- actual or anticipated fluctuations in our quarterly results of operations and changes or revisions of our expected results;
- changes in financial estimates or recommendations by securities analysts;
- delays in the release of quarterly and annual results of operations or the filing of key documents and reports required by to filed by the U.S. securities laws;
- conditions in the internet industry in China;
- changes in the performance or market valuations of other companies that provide hosting and managed network services;

- fluctuations of exchange rates between the Renminbi and the U.S. dollar or other foreign currencies;
- announcements by us or our competitors of new products and service offerings, significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- detrimental negative publicity about us, our competitors or our industry;
- negative short seller allegations against us;
- additions or departures of executive officers;
- sales or perceived potential sales of additional ordinary shares or ADSs;
- litigation or administrative investigations; and
- general economic or political conditions in China.

Our triple-class voting structure will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A ordinary shares and ADSs may view as beneficial.

We have a triple-class voting structure such that our ordinary shares consist of Class A ordinary shares, Class B ordinary shares and Class C ordinary shares. In respect of matters requiring the votes of shareholders, holders of Class A ordinary shares are entitled to one vote per share, while (i) holders of Class B ordinary shares are entitled to ten votes per share and (ii) holders of Class C ordinary shares are entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares:

- any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited;
- entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and
- any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares.

Each Class B ordinary share and each Class C ordinary share is convertible into one Class A ordinary share at any time by the holder thereof, while neither Class A ordinary shares nor Class C ordinary shares are convertible into Class B ordinary shares or preferred shares under any circumstances, neither Class A ordinary shares nor Class B ordinary shares are convertible into Class C ordinary shares or preferred shares under any circumstances. Upon any transfer of Class B ordinary shares or Class C ordinary shares by a holder thereof to any person or entity which is not an affiliate of such holder, such Class B ordinary shares or Class C ordinary shares shall be automatically and immediately converted into the equal number of Class A ordinary shares.

Due to the disparate voting powers attached to these three classes, holders of our Class B ordinary shares or Class C ordinary shares have significant voting power over matters requiring shareholders' approval. This concentrated control will limit your ability to influence corporate matters and could discourage others from pursuing any potential merger, takeover or other change of control transactions that holders of Class A ordinary shares and ADSs may view as beneficial.

Future sales of a substantial number of our ADSs in the public market, or the perception that these sales could occur, could cause the price of our ADSs to decline.

In the future, we may issue additional ordinary shares or ADSs to raise capital, and our existing shareholders could sell substantial amounts of ADSs, including those issued upon the exercise of outstanding options, in the public market. We cannot predict the size of any future issuance of ordinary shares or ADSs or the effect that future sales of our ordinary shares or ADSs would have on the market price of our ADSs. Any future sales of a substantial number of our ADSs in the public market, or the perception that these sales could occur, could cause the trading price of our ADSs to decline and impair our ability to raise capital through the sale of additional equity securities.

You may not have the same voting rights as the holders of our ordinary shares and may not receive voting materials in time to be able to exercise your right to vote.

Except as described in this annual report and in the deposit agreement, holders of our ADSs are not able to exercise voting rights attaching to the Class A ordinary shares evidenced by our ADSs on an individual basis.

Holders of our ADSs will appoint the depositary or its nominee as their representative to exercise the voting rights attaching to the underlying Class A ordinary shares represented by the ADSs. Otherwise, you will not be able to exercise your right to vote unless you withdraw the underlying Class A ordinary shares represented by the ADSs. However, you may not know of the meeting sufficiently in advance to withdraw the ordinary shares. If we ask for instructions from ADS holders, the depositary will notify you of the upcoming vote and arrange to deliver our voting materials to you. We cannot assure you that you will receive voting materials in time to instruct the depositary to vote, and it is possible that you, including persons who hold their ADSs through brokers, dealers or other third parties, will not have the opportunity to exercise a right to vote. The deposit agreement provides that if the depositary does not timely receive valid voting instructions from the ADS holders, then the depositary will, with certain limited exceptions, give a discretionary proxy to a person designated by us to vote such shares.

We are exempt from certain corporate governance requirements of Nasdaq and we intend to rely on certain exemptions.

Certain corporate governance practices in the Cayman Islands, which is our home country, are considerably different than the standards applied to U.S. domestic issuers. Nasdaq Marketplace Rules provide that foreign private issuers are exempt from certain corporate governance requirements of Nasdaq and may follow their home country practices, subject to certain exceptions and requirements to the extent that such exemptions would be contrary to U.S. federal securities laws and regulations. We currently follow our home country practice that: (i) does not require us to solicit proxy and hold meetings of our shareholders every year, (ii) does not restrict a company's transactions with directors, requiring only that directors exercise a duty of care and owe certain fiduciary duties to the companies for which they serve, (iii) does not require us to obtain shareholder approval for issuing additional securities exceeding 20% of our outstanding ordinary shares, and (iv) does not require us to seek shareholders' approval for amending our share incentive plan. As a result, our investors may not be provided with the benefits of certain corporate governance requirements of Nasdaq.

We may be classified as a passive foreign investment company for United States federal income tax purposes, which could result in adverse U.S. federal income tax consequences to U.S. holders of our ADSs or Class A ordinary shares.

Based on the market price of our ADSs and Class A ordinary shares, the value of our assets, and the composition of our assets and income, we believe that we were not a passive foreign investment company (a "PFIC") for U.S. federal income tax purposes for our taxable year ended December 31, 2019 and we do not expect to be a PFIC for the current year or for the foreseeable future. Nevertheless, the application of the PFIC rules is subject to ambiguity in several respects and, in addition, we must make a separate determination each year as to whether we are a PFIC (after the close of each taxable year). Accordingly, we cannot assure you that we will not be a PFIC for our current taxable year or for any future taxable year.

A non-U.S. corporation, such as our company, will be considered a PFIC for U.S. federal income tax purposes for any taxable year if either (i) 75% or more of its gross income for such year consists of certain types of "passive" income or (ii) 50% or more of the value of its assets (determined on the basis of a quarterly average) during such year produce or are held for the production of passive income (the "asset test"). While we do not anticipate being a PFIC, changes in the nature of our income or assets or the value of our assets may cause us to become a PFIC for the current or any subsequent taxable year. Under circumstances where revenues from activities that produce passive income significantly increase relative to our revenues from activities that produce non-passive income or where we determine not to deploy significant amounts of cash for active purposes, our risk of becoming classified as a PFIC may substantially increase.

Although the law in this regard is not entirely clear, we treat our variable interest entities as being owned by us for U.S. federal income tax purposes because we control their management decisions and we are entitled to substantially all of their economic benefits and, as a result, we consolidate their results of operations in our consolidated U.S. GAAP financial statements. If it were determined, however, that we are not the owner of our variable interest entities for United States federal income tax purposes, we would likely be treated as a PFIC for our taxable year ended December 31, 2019 and for subsequent taxable years.

If we were to be or become a PFIC, a U.S. Holder (as defined in "Item 10.E. Additional Information—Taxation—U.S. Federal Income Tax Considerations—General") may incur significantly increased U.S. income tax on gain recognized on the sale or other disposition of the ADSs or Class A ordinary shares and on the receipt of distributions on the ADSs or Class A ordinary shares to the extent such gain or distribution is treated as an "excess distribution" under the U.S. federal income tax rules. For more information, see "Item 10.E. Additional Information—Taxation—U.S. Federal Income Tax Considerations—Passive Foreign Investment Company Considerations."

You may not be able to participate in rights offerings, may experience dilution of your holdings and you may not receive certain distributions on Class A ordinary shares if it is impractical to make them available to you.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. Under the deposit agreement for the ADSs, the depositary will not offer those rights to ADS holders unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the Securities Act or exempt from registration under the Securities Act with respect to all holders of ADSs. We are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to cause such a registration statement to be declared effective. In addition, we may not be able to take advantage of any exemptions from registration under the Securities Act. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution in their holdings as a result.

In addition, the depositary of our ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on our ordinary shares or other deposited securities after deducting its fees and expenses. You will receive these distributions in proportion to the number of Class A ordinary shares your ADSs represent. However, the depositary may, at its discretion, decide that it is unlawful or impractical to make a distribution available to any holders of ADSs. For example, the depositary may determine that it is not practicable to distribute certain property through the mail, or that the value of certain distributions may be less than the cost of mailing them. In these cases, the depositary may decide not to distribute such property and you will not receive such distribution.

You may be subject to limitations on transfer of your ADSs.

Your ADSs represented by the ADRs are transferable on the books of the depositary. However, the depositary may close its transfer books at any time or from time to time when it deems expedient in connection with the performance of its duties. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any time if we or the depositary deem it advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

You may face difficulties in protecting your interests, and your ability to protect your rights through the U.S. federal courts may be limited, because we are incorporated under Cayman Islands law, conduct most of our operations in China and a majority of our officers and directors reside outside the United States.

We are incorporated in the Cayman Islands and substantially all of our assets are located outside of the United States. We conduct most of our operations in China through our wholly-owned subsidiaries in China. The majority of our officers and directors reside outside the United States and a substantial portion of the assets of those persons are located outside of the United States. As a result, it may be difficult for you to bring an action against us or against these individuals in the Cayman Islands or in China in the event that you believe that your rights have been infringed under U.S. securities laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands and of China may render you unable to enforce a judgment against our assets or the assets of our directors and officers. In addition, there is uncertainty as to whether the courts of the Cayman Islands or the PRC would recognize or enforce judgments of U.S. courts against us or our directors and officers predicated upon the civil liability provisions of the securities laws of the United States or any state, and it is uncertain whether such Cayman Islands or PRC courts would be competent to hear original actions brought in the Cayman Islands or the PRC against us or our directors and officers predicated upon the securities laws of the United States or any state, on the ground that such provisions are penal in nature.

Our corporate affairs are governed by our memorandum and articles of association and by the Companies Law (2020 Revision) of the Cayman Islands and common law of the Cayman Islands. The rights of shareholders to take legal action against our directors and us, actions by minority shareholders and the fiduciary duties of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as from English common law, which has persuasive, but not binding, authority on a court in the Cayman Islands. The rights of our shareholders and the fiduciary duties of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedents in the United States. In particular, the Cayman Islands has a less developed body of securities laws as compared to the United States, and provides significantly less protection to investors. In addition, Cayman Islands companies may not have standing to initiate a shareholder derivative action before the federal courts of the United States.

As a result of all of the above, our public shareholders may have more difficulty in protecting their interests through actions against our management, directors or major shareholders than they would as shareholders of a public company of the United States.

Our memorandum and articles of association contain anti-takeover provisions that could adversely affect the rights of holders of our ordinary shares and ADSs.

Our memorandum and articles of association contain certain provisions that could limit the ability of others to acquire control of our company, including our triple-class voting structure, and a provision that grants authority to our board of directors to establish from time to time one or more series of preferred shares without action by our shareholders and to determine, with respect to any series of preferred shares, the terms and rights of that series. These provisions could have the effect of depriving our shareholders of the opportunity to sell their shares at a premium over the prevailing market price by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transactions.

We have incurred increased costs as a result of being a public company.

As a public company, we have incurred significant accounting, legal and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, as well as new rules subsequently implemented by the SEC and the Nasdaq Global Select Market, have detailed requirements concerning corporate governance practices of public companies including Section 404 of the Sarbanes-Oxley Act relating to internal controls over financial reporting. These new rules and regulations have increased our director and officer liability insurance, accounting, legal and financial reporting compliance costs and have made certain corporate activities more time-consuming and costly. Therefore, we have incurred additional costs associated with our public company reporting requirements, and we cannot predict or estimate the amount of additional costs we may further incur or the timing of such costs.

If securities or industry analysts do not actively follow our business, or if they publish unfavorable research about our business, our ADS price and trading volume could decline.

The trading market for our ADS depends in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who covers us downgrades our ADSs or publishes unfavorable research about our business, our ADS price would likely decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our ADSs could decrease, which could cause our ADS price and trading volume to decline.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

We commenced our operations in 1999, and through a series of corporate restructurings, set up a holding company, AsiaCloud Inc., or AsiaCloud, in October 2009 under the laws of the Cayman Islands. AsiaCloud was formerly a wholly-owned subsidiary of aBitCool Inc., or aBitCool, a company incorporated under the laws of the Cayman Islands. In October 2010, AsiaCloud effected a restructuring whereby AsiaCloud repurchased all its outstanding shares held by aBitCool and issued ordinary shares and preferred shares to the same shareholders of aBitCool. In connection with the restructuring, AsiaCloud subsequently changed its name to 21Vianet Group, Inc.

Due to certain restrictions under the PRC laws on foreign ownership of entities engaged in data center and telecommunications value-added services, we conduct our operations in China through contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders. As a result of these contractual arrangements, we control our variable interest entities and have consolidated the financial information of our consolidated affiliated entities in our consolidated financial statements in accordance with U.S. GAAP. We control: (i) 100% of the equity interests in 21Vianet Technology through our subsidiary, 21Vianet China, which was incorporated in October 2002; (ii) 100% of the equity interests of BJ iJoy following completion of our acquisition of 100% equity interests in iJoy in April 2013; and (iii) 100% of the equity interests of WiFire Network through our subsidiary, aBitCool DG, which was incorporated in June 2014.

On April 21, 2011, our ADSs began trading on the Nasdaq Global Select Market under the ticker symbol “VNET.” We issued and sold a total of 14,950,000 ADSs, representing 89,700,000 Class A ordinary shares, at an initial offering price of US$15.00 per ADS.

From time to time, we have acquired companies that are complementary to our business, as well as made alternative investments and entered into strategic partnerships or alliances as we see fit, we have also divested part of our business as part of our efforts to adjust our business development strategy. For example, we are Microsoft’s local partner for all of its three major cloud offerings: Microsoft Azure, Office 365, and Dynamics 365. We had also been IBM’s local partner for its cloud services (previously known as Bluemix) until December 2019. In March 2017, we entered into an investment agreement with Warburg Pincus to establish a multi-stage joint venture and build a digital real estate platform in China, with an aim to form additional joint ventures to jointly develop IDC projects, and we reached agreements to restructure our partnership with Warburg Pincus in July 2019. In September 2017, we transferred 66.67% of the equity interest in six wholly-owned subsidiaries engaged in the CDN, hosting area network services and route optimization business, or WiFire Entities, for a nominal consideration of RMB1 for each of the WiFire Entities to Beijing TUS Yuanchuang Technology Development Co., Ltd., a wholly-owned subsidiary of Tus-Holdings. Upon completion of such transfer, Tus-Holdings and us hold 66.7% and 33.3% equity interest in each of the WiFire Entities, respectively. WiFire Entities have been deconsolidated from our consolidated financial statements since then. In October 2019, we signed a memorandum of understanding with Alibaba to deploy IDC services in support of Alibaba’s expansion throughout Eastern China.

On June 10, 2015, our board of directors received a preliminary non-binding offer from Mr. Sheng Chen, Kingsoft Corporation Limited and Tsinghua Unigroup International Co., Ltd. (together with Mr. Sheng Chen and Kingsoft Corporation Limited, the “Buyer Group”) to acquire all of our outstanding ordinary shares not already owned by the Buyer Group for US$23.00 in cash per ADS. On June 16, 2015, our board of directors formed the Special Committee to review and evaluate the proposal. On June 30, 2016, our board of directors received a letter from the Buyer Group, stating that the Buyer Group would withdraw the non-binding going private proposal with immediate effect.

In May 2016, we issued 31,996,874 Class A and 111,053,390 Class B ordinary shares to Tus-Holdings Co., Ltd., or Tus-Holdings, for an aggregate cash consideration of US$388 million. Upon the completion of this transaction, Tus-Holdings, through its affiliated investment vehicle, hold approximately 21.4% of our then total share capital, representing approximately 51.0% of the total voting power of us.

In October 2019, we issued 60,000 newly created Class C ordinary shares to Personal Group Limited, a British Virgin Islands company wholly owned by Mr. Sheng Chen, the executive chairman of our board of directors, at a price of US$1.35 per share, which is equal to the volume weighted average price of the Company's ADSs for the 30 trading days up to and including October 11, 2019, adjusted by the ADS-to-share ratio. This issuance of the newly created Class C ordinary shares is an initiative by us to enhance our ability to execute business strategies over the long term under the leadership of our board and senior management. Class C ordinary shares entitle the holders thereof the same rights as Class A ordinary shares except for veto right on certain corporate matters and conversion right.

Our principal executive offices are located at Guanjie Building, Southeast 1st Floor, 10# Jiuxianqiao East Road, Chaoyang District, Beijing, 100016, the People's Republic of China. Our telephone number at this address is +86 (10) 8456-2121. Our registered office in the Cayman Islands is located at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands. Our agent for service of process in the U.S. is Law Debenture Corporate Services Inc., located at 400 Madison Avenue, 4th Floor, New York, New York 10017.

See Item 4.C, "Organizational Structure" for a diagram illustrating our corporate structure as of the dated of this annual report.

SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC on *www.sec.gov*. You can also find information on our website *https://ir.21vianet.com/.*

B. Business Overview

Overview

We are a leading carrier-neutral and cloud-neutral internet data center services provider in China. We host our customers' servers and networking equipment and provide interconnectivity to improve the performance, availability and security of their internet infrastructure. We also provide complementary value-added services, such as cloud services and VPN services. We started offering public cloud services in 2013, private cloud and hybrid services in 2014 and partnered with numerous cloud service providers to support our comprehensive cloud-neutral platform. We believe that the scale of our data center and networking assets as well as our carrier-neutrality position us well to capture opportunities and become a leader in the rapidly emerging market for cloud computing infrastructure services in China.

Our infrastructure consists of our high-quality data centers and an extensive data transmission network. We operate 26 self-built data centers and 51 partnered data centers located in over 20 cities, including substantially all of China's major internet hubs with 36,291 cabinets under management that house 190,260 servers as of December 31, 2019. We adopt a distributed deployment method when choosing locations for our partnered data centers based on the specific requests of our customers, demands in different cities and our strategy for POP establishment; therefore, the locations and number of our partnered data centers are subject to change from to time. Our data transmission network includes 165 POPs, which are access points from one place to the rest of the internet. Most of our data centers and our POPs are connected across China.

As a carrier-neutral internet infrastructure services provider, our infrastructure is interconnected with the networks operated by all China's telecommunications carriers, major non-carriers and local internet service providers. The interconnectivity enables each of our data centers to function as a network access point for our customer's data traffic. In addition, we believe that our proprietary smart routing technology allows us to automatically select an optimized route to direct our customers' data traffic to ensure fast and reliable data transmission. We believe this advanced interconnectivity within and beyond our network distinguishes ourselves from our competitors and provides an effective solution to address our customers' needs that arise from inadequate public internet infrastructure and network interconnectivity in China. As a result, businesses are increasingly relying upon internet infrastructure services providers and in particular, carrier-neutral internet infrastructure services providers, to enhance and optimize key elements of their IT and network infrastructure. Furthermore, we provide public cloud services and private and hybrid cloud services and VPN services, which strengthens our capability to provide quality services and meet customer demand in our ecosystem.

We serve a diversified and loyal base of customers, depending on the different types of services provided by us, our customers include (i) enterprise customers for our hosting and related services, spanning many different industries and ranging from internet companies to government entities, from blue-chip enterprises to small- to mid-sized enterprises and (ii) individual customers that signed for the Windows Azure, Office 365 and Dynamics 365 services. Our average monthly hosting churn rate, based on our core internet data center (IDC) business, was 0.5%, 0.3% and 0.5% in 2017, 2018 and 2019, respectively. Our average monthly recurring revenue from our top 20 customers has increased from RMB96.4 million in 2017 to RMB105.9 million in 2018 and to RMB110.3 million (US$15.8 million) in 2019.

We used to provide managed network services to enable customers to deliver data across the internet in a faster and more reliable manner through our data transmission network. In 2017, we completed the disposal of the managed network services business segment, including CDN services, hosting area network services, route optimization business and last-mile broadband business, in order to focus more on expanding our core IDC business and capturing the growing demand in this market. Following completion of the disposal, we have transferred all of our equity interests in Aipu Group and continue to hold 33.3% equity interests in the WiFire Entities.

Our Service Offerings

We primarily generate revenues from providing hosting and related services. We provide hosting and related services to house servers and networking equipment in our data centers and connect them through our data transmission network. We also provide cloud services and VPN services as part of our hosting and related services business.

Our hosting and related services include the following:

- *Managed Hosting Services*, including managed retail services and managed wholesale services. Managed retail services includes (i) colocation services that dedicate data center space to house our customers' servers and networking equipment and provide tailored server administration services, (ii) interconnectivity services that allow customers to connect their servers with each other, internet backbones in China and other networks through our Border Gateway Protocol, or BGP, network, or our single-line, dual-line or multiple-line networks, and (iii) value-added services, including hybrid IT services, firewall services, server load balancing, data backup and recovery, data center management, server management, and backup server services. Managed wholesale services allow customers to use new data center sites that we construct and deliver to them based on their required standards;

- *Cloud Services* that allow businesses to run their applications over the internet using our IT infrastructure rather than having the infrastructure on their own premises; and

- *VPN Services*, or virtual private network services that extend customers' private networks by setting up secure and dedicated connections through the public internet.

Our data centers host the servers of our customers and meet their needs to deploy computing, network, storage and IT infrastructure. Our hosting and related services are scalable, allowing our customers to purchase space and power and upgrade connectivity and services as their requirements evolve. In addition, our customers benefit from our data centers' wide range of physical security features, including sensitive smoke detection systems, fire suppression systems, secured access, around-the-clock video camera surveillance and security breach alarms. Our data centers are fully-redundant and feature resilient power supplies, energy efficient design, connection with multiple network providers and 24/7 on-site support provided by our skilled engineers. As a result, we are able to guarantee 99.9% uptime for power in our service level agreements.

We believe another main reason customers choose our services is our access to multiple carriers and service providers and the availability of multiple-provider bandwidth. By securing multiple suppliers for connectivity and using redundant hardware, we are able to guarantee 99.9% internet connectivity uptime.

Managed Hosting Services

We have been providing managed retail services since our inception and further expanded to managed wholesale services in 2019.

Managed Retail Services. Our managed retail services includes colocation services, interconnectivity services, and value-added services:

- *Colocation Services* allow customers to lease partial or entire cabinets for their servers. Our customers have full control over their server(s) housed in our data centers. Depending on customer needs, we provide different levels of tailored server administration services, including operating system support and assistance with updates, server monitoring, server backup and restoration, server security evaluation, firewall services, and disaster recovery. Our customers' servers are housed in our data centers providing redundant power sources and heating, ventilating and air conditioning systems. Our colocation services relieve customers from the daily pressures of IT infrastructure maintenance so that they can focus on their core businesses. Customers have the option to either place their servers and equipment in standard cabinets dedicated for their private use, or in cabinets shared with other customers. They can customize their cabinet space for their servers, network connections and equipment. Customers can elect to buy the hardware that they place within their cabinets from their chosen suppliers. In addition, customers can also lease power-enabled blank space, where they can place their own cabinets in our data centers or use our services to build their customized cabinet space.

- *Interconnectivity Services* are provided by us in the following ways:

  - Border Gateway Protocol (BGP) Network Services. We provide network services that use BGP routing protocol and policies, which allows the internet to become a decentralized system and thereby reduces traffic congestion and data transmission time;

  - Single-Line and Dual-Line Network Services. China Telecom and China Unicom are the two major telecommunication carriers in China. Some customers may choose to connect their servers only to one carrier while others choose to connect their servers to both China Telecom and China Unicom. Dual-line network provides more stable internet access and ensures better business continuity; and

  - Multiple-Line Network Services. As a carrier-neutral service provider, our data centers are connected to all carrier and non-carrier networks in China. Customers then may choose to connect their servers to multiple networks at the same time. Our interconnectivity services connect our customers with each other, connect our data centers with China's telecommunication carriers backbone network and other networks. We provide cross-connection services to the customers of our data center. Upon the request of the customers, we utilize single or multi-mode fiber to create links between the customers directly and privately.

- *Value-Added Services* are provided by us in the following ways:

  - Hybrid IT Services. Our hybrid IT services provide customers with a complete package of infrastructure service offerings, conveniently bundled to expedite the customer's process to launch their applications and products to the extent possible. In conjunction with our infrastructure as a service (IAAS) platform, hybrid IT services combine colocation, servers, connectivity, storage and customer service to save IT infrastructure installation time, and provide a complete, reliable, and secured environment for customer's IT demands. As more customers move their IT resources to the cloud, our cloud-neutral platform will enable our hybrid IT services to provide both private and public cloud services as well as their inter-linked connections;

- Private and Hybrid Cloud Services. We expanded our services to provide private cloud and hybrid services through our partnership with IBM in 2014. In October 2016, IBM cloud services (previously known as Bluemix) were made generally available in China through the collaboration with us. Our partnership with IBM expired in December 2019; and

- Other Value-Added Services. To complement our hosting services and enhance our customers' experiences, we also provide other value-added services, including firewall services, server load balancing, data backup and recovery, data center management, server management, and backup server services. In addition, we also provide customers with traffic charts and analysis, gateway monitoring for servers, domain name system setup, defense mechanism against distributed denial of service (DDOS) attacks, basic setting of switches and routers, and virus protections.

Managed Wholesale Services. Our managed wholesale services provide customers with new data center sites constructed and developed by us based on their required standards. Our customers for managed wholesale services are generally large-scale technology companies with increasing demands for customized data centers. Contracts we entered into with customers for managed wholesale services generally have terms of over eight years. Based on the specific requirements of our customers, we source properties for new data center sites by acquiring or leasing greenfield sites or existing industrial buildings from third parties, and then design and, through cooperation with developers, contractors, and suppliers, build out the facility to our advanced design and high technical specifications.

Cloud Services

We started providing public cloud services in 2013. Our public cloud services are currently provided through our cooperation with Microsoft. In particular, we provide: (i) infrastructure as a service, or IAAS, (ii) platform as a service, or PAAS, and (iii) software as a service, or SAAS, to our enterprise and individual customers on the public cloud. Windows Azure service provides our customers with a one-stop shop to purchase a portion of the pooled computing resources, control the applications uploaded to the virtual servers and/or access to the applications run by various operators on the cloud infrastructure, and pay on an on-demand basis. Through Office365 services, we provide our customers with not only the complete Office applications, but also business-class email, file sharing and HD video conferencing, all working together and connected in the public cloud so that customers can have access to everything they need to run their business from anywhere.

VPN Services

We offer virtual private network services, or VPN services, primarily through Dermot Holdings Limited and its subsidiaries, or Dermot Entities, which we acquired in August 2014. Dermot Entities offer customer best-in-class, enterprise-grade network services in numerous cities throughout Greater China and the wider Asia-Pacific region. Dermot Entities provide enterprise network solutions including Multiprotocol Label Switching (MPLS) and Software-Defined WAN (SD-WAN), internet access and network security solutions and are starting to add Cloud & SAAS solutions into the product portfolio. With over 70 POPs across Asia, we provide fully managed network enabling connectivity to more than 700 cities in the region and covering over 20,000 MPLS network customer sites. We are among the first official members of the China Cross-border Data Telecommunications Industry Alliance for being recognized as legally compliant by China's Communications Administration. Additionally, we have been appointed as one of the SD-WAN Services Standard Drafting Units of China Communications Standards Association ("CCSA"). We are also among the first ICT service providers in Greater China to obtain several ISO international certifications including ISO/IEC 27001:2013, ISO/IEC 20000-1:2018, and ISO 9001:2015 for information security, IT service management, and quality management, respectively.

Our Infrastructure

Our infrastructure, which consists of our data centers and data transmission network, is the foundation upon which we provide services to our customers. As of December 31, 2019, we operate 26 self-built data centers and 51 partnered data centers located in over 20 cities, including all of China's major internet hubs, with 36,291 cabinets under management that house 190,260 servers. Our extensive network, consisting of 165 POPs, is a "high-speed internet railway" that connects our data centers with each other and links them to China's telecommunication backbones.

Our Data Centers

We operate two types of data centers: self-built and partnered. We define "self-built" data centers as those with our owned cabinets, and data center equipment housed in buildings we owned, leased from third parties, or we purchased from third parties. We define "partnered" data centers as the data center space and cabinets we leased from China Telecom, China Unicom and other third parties through agreements. As of December 31, 2019, we operate 26 self-built data centers housing 32,047 cabinets and 51 partnered data centers housing 4,244 cabinets.

The table below sets forth the number of data centers and cabinets under our management and the number of servers housed in our data centers as of December 31, 2017, 2018 and 2019.

	As of December 31,		
	2017	2018	2019
Data Centers	57	58	77
Cabinets			
Self-built	23,823	25,711	32,047
Partnered	5,257	4,943	4,244
Total	29,080	30,654	36,291
Servers	163,187	180,177	190,260

Our data centers are located in over 20 cities as of the date of this annual report. Our nationwide network of data centers not only enables us to serve customers in extended geographic areas, but also establishes a national data transmission network that sets up connections among carriers and service providers in various locations.

We build and operate our data centers in compliance with high industry standards in order to provide our customers with secure and reliable environments that are necessary for optimal internet interconnectivity. Our data centers generally feature:

- *Resilient Power*—Redundant, high-capacity and stable power supplies, backed by uninterruptible power supply, or UPS, high-performance batteries and diesel generators;
- *Physical Security*—Round-the-clock monitoring by on-site personnel, which includes verification of all persons entering the building, security barriers, video camera surveillance and security breach alarms;
- *Controlled Access*—Access to the buildings, data floors and individual areas designated for particular customers via individually-programmed access cards and visual identification;
- *Fire Detection and Suppression*—Sensitive smoke detectors linked to building management systems provide early detection to help avoid fire, loss and business disruption. These are complemented by an environmentally-friendly gas-based or water mist fire suppression system to put out fires;
- *Air Conditioning*—To ensure optimal performance and avoid equipment failure, all data center floors are managed to make sure that customers' equipment is maintained at a controlled temperature and humidity;
- *24/7 Support*—We staff our data centers with capable and experienced service teams and we believe we were the first data center service provider in China to offer 24/7 customer service.

These features minimize chances of interruption to the servers housed in our data centers and ensure the business continuity of our customers. In addition, we believe we were the first data center service provider in China to receive both the ISO 9002 quality system certification by the American Registrar Accreditation Board and a certification by the United Kingdom Accreditation Service.

Our Network

Our network transmits data and directs internet traffic, forming an internet highway system that is linked to the networks of major carriers, non-carriers and ISPs and enhances communications among our data centers, our customers and end users located throughout China and around the world. Our data centers are connected with redundant connections with an estimated capacity of 1,239 gigabits per second to nearly all locations. As of December 31, 2019, our network connects 165 POPs throughout China.

The table below sets forth the number of our POPs and our network service capacity as of the periods ended December 31, 2017, 2018 and 2019.

	As of and for the years ended December 31,		
	2017	2018	2019
Number of POPs	476	172	165
Estimated Network Service Capacity*	1,032	1,151	1,239

** By gigabits per second*

Our network also features numerous interfaces with four telecommunication carriers in China, which are China Telecom, China Unicom, China Mobile and China Education Network. Our network is not only connected to the headquarters of each carrier, but also with their local networks throughout China.

Due to our high-quality data center infrastructure, extensive data transmission network and proprietary smart routing technologies, we are able to deliver high-performance hosting and related services that can effectively meet our customers' business needs, improve interconnectivity among service providers and end users, and effectively address the issue of inadequate network interconnectivity in China.

Customers and Customer Support

Our Customers

We serve a diversified and loyal base of customers, depending on the different types of services provided by us, our customers include (i) enterprise customers for our hosting and related services, spanning many different industries and ranging from internet companies to government entities, from blue-chip enterprises to small- to mid-sized enterprises and (ii) individual customers that signed for the Windows Azure, Office 365 and Dynamics 365 services.

Given the breadth of our customer base, the single largest customer accounted for less than 12% of our total net revenues in any of the past three years. Revenue from our top five customers accounted for approximately 22% of our total net revenues in 2019.

As of December 31, 2019, we had over 5,000 enterprise customers for our hosting and related services, among which 19 were local subsidiaries of a telecommunication carrier in China. Because we negotiate with, maintain and support each of these entities of telecommunication carriers as a separate customer due to the fact that each of them has a separate decision-making authority and services procurement budget, we count each of them as a separate customer. None of these telecommunication carrier customers on a stand-alone basis contributed more than 3% of our revenues in any given year but in the aggregate, they contributed 2%, 4% and 4% of our total revenues, respectively, in 2017, 2018 and 2019, respectively.

We have a loyal customer base, as evidenced by our low churn rate. Our average monthly hosting churn rate, based on our core IDC business, was 0.5%, 0.3% and 0.5% in 2017, 2018 and 2019, respectively. Our average monthly recurring revenue from our top 20 customers were RMB96.4 million, RMB105.9 million and RMB110.3 million (US$15.8 million) in 2017, 2018 and 2019, respectively.

Our experience in serving market leaders in various sectors also provides us with industry knowledge, operational expertise and credibility that we can leverage in cross-selling additional services to our existing and potential customers.

The following table sets forth some of the industries we serve and the representative customers in each industry.

Search Engine/ Portal	Rich Media	eCommerce	Social Networking	Financial Industry	Azure and Office 365 customers	Enterprise VPN
Damai	iQIYI	Meituan	Lvmama	9fgroup.com	DongFeng-Renault	iKang
Fang	Chineseall	Zhaogang	Qunar	lianlianmoney	Cfwin	Shuttle
Baixing	Mgtv	Jiuxian	Renren	BANK OF XI'AN	Yungoal	Ryosan
58	Kuwo	Kongfz	Jiayuan	QINNONG BANK	Pactera	Cheetah Mobiles

Our Customer Support

We devote significant resources to provide customers support and services through our dedicated customer service team. We offer service level agreements on most of our services to our customers. Such agreements set the expectations on service level between our customers and us and drive our internal process to meet or exceed the customer's expectations. We believe we were the first data center service provider in China to offer 24/7 customer services. Our network operation center is staffed with skilled engineers trained in network diagnostics and engineering. We require our staff to respond to calls or request from customers within 15 minutes. For major customers, we have a dedicated team to offer specialized services tailored to their specific needs. Areas of customer support include design and improvement of our customers' IT infrastructure and network optimization.

Our customers may directly contact the customer service team to seek assistance or inquire about the status of a reported incident. The team actively follows up with our operations team to ensure that the problems are addressed in an effective and timely manner. Each of our customers is assigned a service manager who is responsible for ensuring that all our services are performed in a satisfactory manner.

Research and Development

Our strong research and development capabilities support and enhance our service offerings. We have an experienced research and development team and devote significant resources to our research and development efforts, focusing on improving customer experience, increasing operational efficiency and bringing innovative solutions to the market quickly.

Consistent with our strong innovation culture, we devote significant resources to the research and development of our proprietary smart technology and cloud computing infrastructure service technologies. Our research and development efforts have yielded 70 patents, 45 patent applications and 72 software copyright registrations, all in China and related to different aspects of internet infrastructure services. We intend to continue to devote a significant amount of time and resources to carry out our research and development efforts.

Technology and Intellectual Property

We use our proprietary smart routing technology to optimize network connectivity and overcome the inherent inadequacies in China's telecommunication and internet infrastructure. Our smart routing technology continually monitors and analyzes the performance of all available routes and identifies the most appropriate pathway in real-time. In planning for and finding the optimized routing plan, our smart routing technology takes into consideration speed (latency), performance, route stability and pocket losses and dynamically responds with intelligent route adjustments in order to ensure that data is traveling along the fastest and most reliable route.

We rely on a combination of copyright, patent, trademark, trade secret and other intellectual property laws, nondisclosure agreements and other protective measures to protect our intellectual property rights. We generally control access to and use of our proprietary software and other confidential information through the use of internal and external controls, including physical and electronic security, contractual protections, and intellectual property law. We have implemented a strict security and information technology management system, including the prohibition of copying and transferring of codes. We educate our staff on the need to, and require them to, comply with such security procedures. We also promote protection through contractual prohibitions, such as requiring our employees to enter into confidentiality and non-compete agreements.

Sales and Marketing

We actively market our portfolio of services and solutions through our direct sales force. Our sales and marketing team is primarily based in Beijing, Shanghai, Shenzhen, Guangzhou, Hangzhou, Xi'an, Hong Kong and Taiwan. We also have dedicated teams for our key customers and provide them service offerings specially tailored to their needs. We up-sell and cross-sell our broad portfolio of services and solutions to our existing customer base. In addition, in an effort to better anticipate and respond to our customers' needs, we require and foster the collaboration between our sales team and research and development team to develop additional services and solutions that meet the customers' needs.

Our strong brand recognition has been an important driving force for our sales. To strengthen our brand, we focus our marketing efforts on sponsoring seminars, conferences and special events to raise our profile with potential customers. Additionally, we collaborate with equipment suppliers, software developers, internet solution providers and other companies to market our services. We have a special marketing team responsible for generating demand for our services and solutions and work with our other teams to secure new customers.

Competition

We face competition from a wide range of data center service providers and other value-added service providers, including:

- *Carriers*. We face competition from state-owned telecommunication carriers, including China Telecom and China Unicom. According to IDC, carriers occupied 67.1% of the data center services market in 2018. In addition, both carriers operate their own networks. Competition is primarily focused on pricing, quality of services and geographic coverage. We believe we are well-positioned to compete with major carriers. Unlike China Telecom and China Unicom, which construct data centers primarily to help sell bandwidth, we provide connectivity to multiple networks in each of our carrier-neutral data centers, providing superior choice and performance. Our private network provides enhanced connectivity among different networks. In comparison, data centers operated by China Telecom and China Unicom generally provide access only to their own network and are often constrained by their networks' coverage. Due to inadequate interconnectivity among China's carriers' networks and among the same carrier's networks in different provinces, interconnectivity bottlenecks remain a major problem, contributing to slow transmission speeds across services and applications.

- *Carrier-neutral service providers*. We face competition from other carrier-neutral service providers, such as SINNET and GDS. Competition is primarily focused on pricing and the quality and breadth of service offerings. We distinguish ourselves by our superior interconnectivity, extensive data transmission network, large number of high-quality data centers, and superior operations, maintenance and other customer services. Due to the unique nature of data center services, where relocation of customer servers and equipment is operationally difficult, customers are highly selective in choosing their data center service provider. Our strong brand, superior reputation and extensive operating experience and expertise remain the key differentiator in attracting and retaining our customers.

- *In-house data centers*. Businesses may choose to house and maintain their own IT hardware, such as Baidu and Alibaba, and other large enterprises, particularly in the financial services sector. Due to their in-house capabilities, these customers may outsource fewer services to other third-party data center services providers including us, if at all. However, we believe our data centers, coupled with our superior network services, offer a unique combination of hosting services that would make us attractive to businesses with in-house data centers.

- *Cloud service providers*. Cloud services are a new and emerging market and therefore, we face competition from various market players who have entered into or plan to enter into the new market. While we compete with domestic Chinese cloud service providers, such as AWS and AliCloud, we offer Windows Azure, Office 365 and Dynamics 365, operated by 21Vianet. We believe our partnerships with Microsoft will make us attractive to potential customers, especially enterprise and government entity customers that have a strong demand for cloud services.

- *Other valued-added service providers*. We face competition from other value-added telecommunications service providers including VPN service providers, such as Citic Telecom CPC. As one of the leading service providers in each one of these value-added service markets, we believe our offerings not only complement our core hosting services, but also position us to capture additional growth opportunities.

In addition, some companies may prefer to locate their core data centers in Hong Kong or other areas outside of the PRC partly due to concern of the PRC governmental control over the internet. We do not currently compete with data center service providers located in Hong Kong and overseas, but we may compete with them if we expand our service offerings beyond China. We believe that there are currently no foreign competitors with a significant presence in the data center services market in China, partly due to the regulatory barriers in China's telecommunications sector. As China represents a potentially lucrative market for foreign competitors, some foreign providers may seek to enter the Chinese market. We believe we have accumulated a deep understanding of the requirements of China's data center market through our extensive operational experience and have developed a comprehensive suite of services and solutions tailored to the unique characteristics of the internet market in China. As we expand our service offerings, such as cloud services, we expect to face more competitions in those areas as well.

Regulations

This section sets forth a summary of the most significant regulations or requirements that affect our business activities in China or our shareholders' rights to receive dividends and other distributions from us.

As China's internet and telecommunication industry is evolving, new laws and regulations may be adopted from time to time that will require us to obtain additional licenses and permits in addition to those that we currently have, and to address new issues that arise from time to time. As a result, substantial uncertainties exist regarding the interpretation and implementation of current and future Chinese laws and regulations applicable to the data center services industry. See "Risk Factors—Risks Related to Doing Business in China."

Regulations on Foreign Investment

On January 1, 2020, the Foreign Investment Law, as well as the Regulations for Implementation of the Foreign Investment Law, or the Implementation Regulations, came into effective, which replaced the trio of prior laws regulating foreign investment in China, namely, the Sino-foreign Equity Joint Venture Enterprise Law, the Sino-foreign Cooperative Joint Venture Enterprise Law and the Wholly Foreign-invested Enterprise Law, together with their implementation rules and ancillary regulations, and became the principal regulations governing foreign investment in China,.

According to the Foreign Investment Law, "foreign investment" refer to investment activities directly or indirectly conducted by one or more natural persons, business entities, or otherwise organizations of a foreign country (collectively referred to as "foreign investor") within China, and the investment activities include the following situations: (i) a foreign investor, individually or collectively with other investors, establishes a foreign-invested enterprise within China; (ii) a foreign investor acquires stock shares, equity shares, shares in assets, or other like rights and interests of an enterprise within China; (iii) a foreign investor, individually or collectively with other investors, invests in a new project within China; and (iv) investments in other means as provided by laws, administrative regulations, or the State Council. According to the Foreign Investment Law, the State Council will publish or approve to publish a catalogue for special administrative measures, or the "negative list." The Foreign Investment Law grants national treatment to foreign invested entities, except for those foreign invested entities that operate in industries deemed to be either "restricted" or "prohibited" in the "negative list". The Foreign Investment Law provides that foreign invested entities operating in foreign restricted or prohibited industries will require market entry clearance and other approvals from relevant PRC governmental authorities. Furthermore, the Foreign Investment Law provides that foreign invested enterprises established according to the existing laws regulating foreign investment may maintain their structure and corporate governance within five years after January 1, 2020.

The Implementation Regulations further provides, among other, that (i) if a foreign-invested enterprise incorporated prior to January 1, 2020 fails to adjust its corporate governance structure and other matters to be in compliance with the Companies Law of the PRC or the Partnership Enterprises Law of the PRC, as the case may be, and complete registration for amendments before January 1, 2025, the relevant governmental authority may no longer accept any other registration matters of such foreign-invested enterprise; and (ii) as for any foreign-invested enterprise incorporated prior to January 1, 2020, the provisions regarding equity interest transfer and distribution of profits, as agreed in its joint venture contracts, may remain effective and binding after its adjustment of corporate governance structure and other matters in accordance with the Companies Law of the PRC or the Partnership Enterprises Law of the PRC, as the case may be.

Regulations on Value-Added Telecommunications Business and Data Center Services

Among all of the applicable laws and regulations, the Telecommunications Regulations implemented on September 25, 2000, as amended on July 29, 2014 and February 6, 2016, is the primary governing law, and sets out the general framework for the provision of telecommunication services by domestic PRC companies. Under the Telecom Regulations, telecommunications service providers are required to procure operating licenses prior to their commencement of operations. The Telecom Regulations distinguish "basic telecommunications services" from "value-added telecommunications services." Value-added telecommunications services are defined as telecommunications and information services provided through public networks. A "Catalog of Telecommunications Business" or the Catalog, was issued as an attachment to the Telecom Regulations to categorize telecommunications services as either basic or value-added. Pursuant to the currently effective Catalog, which was most recently amended in June 2019, value-added telecommunications services are divided into type I value-added telecommunications services (i.e. services "mainly based on facilities and resources") and type II value-added telecommunications services (i.e. services "mainly based on public platforms") and they will be regulated accordingly. For example, value-added telecommunications services (e.g. internet data center services, content distribution network services, domestic internet protocol virtual private network services, and internet access services) which are primarily provided to enterprise users, closely attached to basic infrastructure and telecom resources, and have significant importance to national information security and public order, are categorized as type I value-added telecommunications services. Value-added telecommunications services (e.g. online data processing and transaction processing services and information services), which are mainly provided to the general public, have significant economic benefits, and are closely related to consumer rights and privacy protection are categorized as type II value-added telecommunications services.

Pursuant to the Telecom Regulations, value-added telecommunications services covering two or more provinces, autonomous regions, and/or municipalities directly administered by the central government shall be approved by the MIIT, and the providers of such cross-regional value-added telecommunications services are required to obtain the Cross-Regional VAT licenses. Value-added telecommunications services covering certain area within one province, autonomous region, and/or municipality directly administered by the central government shall be approved by the local telecommunications administration authority of such region and the providers of such value-added telecommunications services are required to obtain the VAT licenses. Pursuant to the Administrative Measures for Telecommunications Business Operating Licenses effective on July 3, 2017 and as amended from time to time, promulgated by the MIIT, Cross-Regional VAT licenses shall be approved and issued by the MIIT with five-year terms.

21Vianet Beijing holds a Cross-Regional VAT license issued by the MIIT on January 17, 2012 (which was most recently updated on August 26, 2019) with a term effective until January 23, 2022. It is permitted to carry out its (i) full data center business under the first category of "value-added telecommunications business" across two province-level municipalities and four cities in China; (ii) data center business (excluding internet resources coordination service) under the first category of "value-added telecommunications business" across two province-level municipalities and 18 cities in China; (iii) VPN services under the first category of "value-added telecommunications business" across China; (iv) internet access service under the first category of "value-added telecommunications business" across 13 province-level municipalities and provinces in China, and internet access service (solely providing services for website users) under the first category of "value-added telecommunications business" across six provinces in China; (v) domestic multi-party communications services under the second category of "value-added telecommunications business" across China; and (vi) domestic data transmission services through fixed network under the second category of "basic telecommunications business" across China. In addition, 21Vianet Beijing recently has been permitted to conduct data center business (excluding internet resources coordination service) under the first category of "value-added telecommunications business" in Zhengzhou and Wuhan in China, but we have not received the updated license as the renewal process of the MIIT has been delayed due to the outbreak of COVID-19.

BJ iJoy holds a Cross-Regional VAT License issued by the MIIT on October 23, 2019 with a term effective until May 6, 2024. It is permitted to carry out its (i) data center business (excluding internet resources coordination service) under the first category of "value-added telecommunications business" across two province-level municipalities and one city in China; (ii) VPN services under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China; (iii) internet access service under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China; and (iv) information service business (excluding internet information service) under the second category of "value-added telecommunications business" across China. In addition, pursuant to the VAT License issued to BJ iJoy by Beijing Communications Administration on November 20, 2019 with a term effective until October 8, 2023, BJ iJoy is permitted to carry out the information service business (limited to internet information service) under the second category of "value-added telecommunications business".

21Vianet Technology holds a Cross-Regional VAT License issued by the MIIT on December 3, 2019 with a term effective until June 20, 2023. It is permitted to carry out its internet access service under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China.

SH 21Vianet, a wholly-owned subsidiary of 21Vianet Technology, holds a VAT License issued by Shanghai Communications Administration on July 1, 2019 with a term effective until March 31, 2023. It is permitted to provide internet access service (providing services for website users and internet platforms) under the first category of "value-added telecommunications business" in Shanghai.

JS 21Vianet holds a Cross-Regional VAT License issued by the MIIT on November 4, 2019 with a term effective until November 4, 2024. It is permitted to carry out its (i) data center business (excluding internet resources coordination service) under the first category of "value-added telecommunications business" in Shanghai, Nanjing and Suzhou; and (ii) internet access service under the first category of "value-added telecommunications business" across two province-level municipalities and provinces in China.

SZ DYX holds a Cross-Regional VAT License issued by the MIIT on September 18, 2013 (which was updated on July 17, 2019) with a term effective until June 4, 2023. It is permitted to carry out (i) VPN services under the first category of "value-added telecommunications business" in China; (ii) call center business under the second category of "value-added telecommunications business" across China; (iii) data center business under the first category of "value-added telecommunications business" in Beijing, Shanghai and Shenzhen; (iv) data center business (solely internet resources coordination service) under the first category of "value-added telecommunications business", which covers the services in six cities in China; (v) internet access service under the first category of "value-added telecommunications business" across three province-level municipalities and provinces in China; and (vi) internet access service (solely providing services for website users) under the first category of "value-added telecommunications business" across 28 province-level municipalities and provinces in China.

BJ Yilong holds a VAT License issued by Beijing Communications Administration on November 27, 2018 with a term effective until September 9, 2020. It is permitted to carry out its information service business (excluding internet information service) under the second category of "value-added telecommunications business" in Beijing. In addition, pursuant to the VAT License issued to BJ Yilong by Beijing Communications Administration on November 27, 2018 with a term effective until September 24, 2020, BJ Yilong is permitted to carry out the information service business (limited to internet information service) under the second category of "value-added telecommunications business".

SH Blue Cloud holds a VAT License issued by Shanghai Communications Administration on October 20, 2017 (which was updated on October 25, 2019 to revise the categories of permitted business) with a term effective until October 20, 2022. It is permitted to carry out (i) information service business (limited to internet information service) under the second category of "value-added telecommunications business"; (ii) online data processing and transaction processing service (solely providing for e-commerce services) under the second category of "value-added telecommunications business"; and (iii) internet domain name resolution service under the second category of "value-added telecommunications business" in Shanghai. In addition, SH Blue Cloud obtained the Cross-Regional VAT License issued by the MIIT on January 21, 2020 with a term effective until January 21, 2025, pursuant to which SH Blue Cloud is permitted to carry out (i) data center business under the first category of "value-added telecommunications business" in Beijing and Shanghai; (ii) CDN service under the first category of "value-added telecommunications business" in Beijing and Shanghai; (iii) VPN services under first category of "value-added telecommunications business" in Beijing and Shanghai; and (iv) internet access service under the first category of "value-added telecommunications business" in Beijing and Shanghai.

MIIT initiated a periodical pilot scheme for broadband access business by issuing the Notice on Liberalizing the Broadband Access Market to Private Capital on December 25, 2014, or the Broadband Notice, pursuant to which, the qualified private sector enterprises are encouraged, but not required, to apply to participate in the pilot scheme in broadband access business and the pilot scheme lasts for 3 years commencing on March 1, 2015. From 2015 to 2017, MIIT issued a series of notices in succession to expand the pilot scheme to all cities in nine provinces and several designated cities in other provinces. MIIT issued the Notice on Deepening the Pilot Scheme in Broadband Access Business on June 19, 2018 to extend the effective period of the pilot scheme to December 31, 2020 and further expand the pilot scheme to all cities in fourteen provinces and several designated cities in other provinces. As of the date of this annual report, we are qualified to provide broadband access services in Beijing.

In addition, the MIIT and other relevant regulatory authorities recently published a series of new regulations, policies with respect to the construction, development and expansion of new and existing data centers. For example, on January 21, 2019, MIIT, National Government Office Administration and National Energy Administration jointly published the Guidance on Promotion of Green Data Center Construction, pursuant to which authorities encourage data centers to adhere to certain average levels of energy conservation and aim to reach several goals including, among others, maintaining the power usage effectiveness (PUE) of newly constructed large and extra-large data centers at or below 1.4 from the year 2022 onward. On September 6, 2018, the General Office of the People's Government of Beijing Municipality, or the GOPGB, issued the Beijing Municipality's Catalogue for the Prohibition and Restriction of Newly Increased Industries (2018 Edition), or the 2018 Catalogue, which is a revised edition of the catalogue GOPGB issued in 2015. The 2018 Catalogue prohibits new construction or expansion within Beijing's certain areas of (i) data centers which are involved in providing Internet data services or information processing and storage support services, except for cloud computing data centers with PUE lower than 1.4, and (ii) call centers. Furthermore, new construction or expansion of data centers which are involved in providing Internet data services or information processing and storage support services with PUE lower than 1.4 is also prohibited within the boundaries of Beijing's Dongcheng District, Xicheng District, Chaoyang District, Haidian District, Fengtai District, Shijingshan District and Tongzhou New Town. On January 2, 2019, Shanghai Municipal Commission of Economy and Information and Shanghai Municipal Development and Reform Commission jointly published the Guidance on Strengthening the Coordinated Construction of the Internet Data Center in Shanghai Municipality, pursuant to which, authorities encourage to effectively control the construction scale and energy consumption gross of Internet data centers and aim to reach several goals including, among others, the PUE of newly constructed Internet data center shall be strictly controlled below 1.3, and the PUE of reconstructed Internet data center shall be strictly controlled below 1.4, from the year 2020 onward. Pursuant to the Notice on Selection of Proposed Newly Constructed Internet Data Center Projects in Shanghai in 2020 issued by Shanghai Municipal Commission of Economy and Information on March 25, 2020, the overall scale of newly constructed internet data center projects in Shanghai in 2020 will be limited up to 30,000 racks, the total energy consumption of which will be capped at the amount equivalent to approximately 250,000 tons of standard coal.

Regulations on Foreign Investment in Telecommunications Enterprises

The PRC government imposes limitations on the foreign ownership of PRC companies that engage in telecommunications-related business. Under the Administrative Rules for Foreign Investments in Telecommunications Enterprises, or the Foreign Investment Telecommunications Rules, issued by the PRC State Council on December 11, 2001 and effective on January 1, 2002, which was further amended on February 6, 2016, a foreign investor is currently prohibited from owning more than 50% of the equity interest in a PRC company that engages in value-added telecommunications business, and the major foreign investor of a telecommunication business in China must also have experience and a sound track record in providing value-added telecommunications services overseas. Although the Guidance Catalog of Industries for Foreign Investment, as amended in 2017, and the Special Administrative Measures (Negative List) for Foreign Investment Access issued in 2019 allow a foreign investor to own more than 50% of the total equity interest in e-commerce business, domestic multi-party communications services, information storage and re-transmission services, and call center services, other requirements provided by the Foreign Investment Telecommunications Rules (such as the track record and experience requirement for a major foreign investor) still apply. Foreign investors that meet these requirements must obtain approvals from the MIIT, which retain considerable discretion in granting approvals. In addition, in February 2019, the State Council published its approval of Fully Promoting the Comprehensive Pilot Program for Expanding the Opening Up of Service Industry in Beijing, pursuant to which Beijing will lift foreign ownership limits on internet access service industry (only the service of providing users with internet access) in certain pilot zones in Beijing. Nevertheless, since this approval is recently published and the local authorities in Beijing has not promulgated any implementing rules or guidelines as of the date of this annual report, it remains uncertain as to the interpretation and implementation of this new policy in many aspects, such as whether the abovementioned requirements provided by the Foreign Investment Telecommunications Rules for a major foreign investor and the MIIT approval will still apply in Beijing.

The Circular on Strengthening the Administration of Foreign Investment in and Operation of Value-Added Telecommunications Business issued by the MIIT on July 13, 2006, among others, requires a foreign investor to set up an FIE and obtain an operating permit in order to carry out any value-added telecommunications business in China. Under this circular, a domestic value-added telecommunications service operator that holds a VAT license is prohibited from leasing, transferring or selling such license to foreign investors, and from providing any assistance in the form of resources, sites or facilities to foreign investors that conduct value-added telecommunications business illegally in China. Furthermore, the relevant trademarks and domain names that are used in the value-added telecommunications business of domestic operators must be owned by such domestic operators or their shareholders. The circular further requires each VAT license holder to have the necessary facilities for its approved business operations and to maintain such facilities in the regions covered by its VAT license. In addition, all value-added telecommunications service operators are required to maintain network and information security in accordance with the standards set forth under relevant PRC regulations.

We conduct our businesses in China primarily through contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders. In the opinion of Han Kun Law Offices, our PRC legal counsel, each of the contracts under the contractual arrangements is valid, legally binding and enforceable upon each party of such arrangements under PRC laws and regulations, and will not result in any violation of PRC laws or regulations currently in effect. However, there are substantial uncertainties regarding the interpretation and application of PRC laws and regulations. Accordingly, there can be no assurance that the PRC regulatory authorities may not in the future take a view that is contrary to the above opinion of our PRC legal counsel. If the PRC government finds that the arrangements that establish the structure for operating our business do not comply with PRC law and regulations restricting foreign investment in the telecommunications business, we could be subject to severe penalties.

In addition, the Circular on Strengthening the Administration of Foreign Investment in and Operation of Value-Added Telecommunications Business provides that domestic telecommunications companies that intend to be listed overseas must obtain the approval from the MIIT for such overseas listing. Up to the date of this annual report, the MIIT has not issued any definitive rule concerning whether offerings like ours would be deemed an indirect overseas listing of our PRC affiliates that engage in telecommunications business. If the MIIT subsequently requires that we obtain its approval, it may have a material adverse effect on the trading price of our ADSs.

Regulations on Internet Security

On November 7, 2016, the Standing Committee of the National People's Congress promulgated the Cyber Security Law, which became effective on June 1, 2017. In accordance with the Cyber Security Law, internet operators must comply with applicable laws and regulations and fulfill their obligations to safeguard network security in conducting business and providing services. Internet operators must take technical and other necessary measures as required by laws and regulations to safeguard the operation of networks, respond to network security effectively, prevent illegal and criminal activities, and maintain the integrity, confidentiality and usability of network data. In addition, the Cyber Security Law requires internet operators to formulate contingency plans for cyber security incidents, and initiate relevant contingency plans, take corresponding remedial measures and report to the competent departments upon occurrence of any incident endangering cyber security.

In September 2016, the General Office of MIIT issued a Trial Administrative Measures on the Use and Operation Maintenance of Internet Information Security Management System, which, among others, regulates the operation and maintenance of the information security management system established or rend by an operator of telecommunication business such as IDC, ISP or CDN service. Pursuant to these administrative measures, the relevant telecommunication operator is obligated to monitor the information transmitted through its internet information security management system and take timely measures to deal with information that is prohibited to be published or transmitted. Moreover, it must preserve access log record with the internet information security management system according to relevant laws and industry standards, and provide the record for examination upon request from the authorities. It must also take necessary measures to maintain and safeguard the normal operation of its internet information security management system.

In November 2017, MIIT promulgated the Circular on Regulating the Use of Domain Names for Internet Information Services, which became effective on January 1, 2018. Pursuant to this circular, the ISP service provider must verify the identity of each internet information service provider. If the internet information service provider fails to provide its true and accurate identity information, the ISP service provider is prohibited from providing ISP services to it. In addition, the ISP service provider is required to regularly check the status of domain names used by the internet information service providers, and if relevant domain name is invalid and the real identity information of the user is absent, it should cease providing ISP services.

Regulations on Foreign Exchange Registration of Overseas Investment by PRC Residents

According to Circular 37, PRC residents are required to register with local SAFE branches in connection with their direct establishment or indirect control of an offshore entity for the purposes of overseas investment and financing, with such PRC residents' legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in Circular 37 as a "special purpose vehicle." The term "control" under Circular 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. Circular 37 further requires amendment to the registration in the event of any changes with respect to the basic information of the special purpose vehicle, such as changes in a PRC resident individual shareholder, name or operation period; or any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event. If the shareholders of the offshore holding company who are PRC residents do not complete their registration with the local SAFE branches, the PRC subsidiaries may be prohibited from distributing their profits and proceeds from any reduction in capital, share transfer or liquidation to the offshore company, and the offshore company may be restricted in its ability to contribute additional capital to its PRC subsidiaries. Moreover, failure to comply with SAFE registration and amendment requirements described above could result in liability under PRC law for evasion of applicable foreign exchange restrictions. On February 13, 2015, SAFE promulgated the SAFE Notice 13, which took effect on June 1, 2015. SAFE Notice 13 has delegated to the qualified banks the authority to register all PRC residents' investment in "special purpose vehicle" pursuant to the Circular 37, except that those PRC residents who have failed to comply with Circular 37 will remain to fall into the jurisdiction of the local SAFE branches and must make their supplementary registration application with the local SAFE branches.

See "Risk Factors—Risks Related to Doing Business in China—PRC regulations relating to the establishment of offshore special purpose vehicles by PRC residents may subject our PRC resident beneficial owners to personal liability and limit our ability to acquire PRC companies, to inject capital into our PRC subsidiaries, limit our PRC subsidiaries' ability to distribute profits to us, or otherwise materially and adversely affect us."

Regulations on Employee Stock Option Granted by Listed Companies

On December 25, 2006, the People's Bank of China, issued the Administration Measures on Individual Foreign Exchange Control, which became effective on February 1, 2007 and its Implementation Rules was issued by SAFE on January 5, 2007 and was amended on May 29, 2016. Under these regulations, all foreign exchange matters involved in employee share ownership plans, share option plans and other equity incentive plans participated by PRC individuals shall be transacted upon the approval from the SAFE or its authorized branch.

On February 15, 2012, the SAFE promulgated SAFE Notice 7, replacing the Application Procedure of Foreign Exchange Administration for PRC Residents Participating in Employee Stock Holding Plan or Stock Option Plan of Overseas-Listed Company promulgated in March 2007. SAFE Notice 7 is applicable to domestic directors, supervisors, senior management and other employees of an overseas-listed domestic company, PRC subsidiaries or branches of an overseas-listed company and any PRC entities which are directly or indirectly controlled by an overseas-listed company, or Domestic Company, including PRC citizens and foreign citizens who have resided in the PRC for one year or more, or PRC Residents. Under SAFE Notice 7, PRC Residents who participate in a share incentive plan of an overseas publicly listed company are required, through the Domestic Company or a PRC agent, or Domestic Agent, to complete certain procedures and transactional foreign exchange matters under the stock incentive plan upon the examination by, and the approval of, SAFE or its authorized local counterparts; the Domestic Agent is required to register relevant information of the stock incentive plan with the authorized local counterparts of SAFE within three business days of each quarter and is also required to complete foreign exchange cancellation procedures within twenty business days after termination of the stock incentive plan.

On July 16, 2010, our board of directors adopted our 2010 Plan which was subsequently amended on January 14, 2011 and July 6, 2012. On May 29, 2014, we adopted our 2014 Plan on our annual general meeting which was subsequently amended on April 1, 2015 by unanimous written approval of our board of directors. Under the 2010 Plan and 2014 Plan, we may issue employee stock options to our qualified employees and directors on a regular basis. We have advised our employees and directors participating in the 2010 Plan and 2014 Plan to handle foreign exchange matters in accordance with SAFE Notice 7. However, we cannot assure you that our PRC individual beneficiary owners and the stock options holders can successfully register with the SAFE in full compliance with SAFE Notice 7. PRC individuals and PRC companies in violation of SAFE Notice 7 will be punished by the SAFE, according to the Regulation of the People's Republic of China on Foreign Exchange Administration, Detailed Rules for the Implementation of the Measures for the Administration of Individual Foreign Exchange and other regulations.

Regulations on Foreign Currency Exchange

Pursuant to applicable PRC regulations on foreign currency exchange, Renminbi is freely convertible only to the extent of current account items, such as trade-related receipts and payments, interest and dividends. Capital account items, such as direct equity investments, loans and repatriation of investment, unless expressly exempted by laws and regulations, require the prior registration at the designated foreign exchange banks for conversion of Renminbi into a foreign currency, such as U.S. dollars. Payments for transactions that take place within the PRC must be made in Renminbi. Domestic companies or individuals can repatriate foreign currency payments received from abroad, or deposit these payments abroad subject to the requirement that such payments shall be repatriated within a certain period of time. Foreign-invested enterprises may retain foreign exchange in accounts with designated foreign exchange banks. Foreign currencies received for current account items can be either retained or sold to financial institutions that have foreign exchange settlement or sales business without prior approval from the SAFE, subject to certain regulations. Foreign exchange income under capital account can be retained or sold to financial institutions that have foreign exchange settlement and sales business, with prior approval from the SAFE, unless otherwise provided.

In addition, in March 2015, SAFE promulgated the Circular on Reforming the Administration Approach Regarding the Foreign Exchange Capital Settlement of Foreign-invested Enterprises, or SAFE Circular No. 19, which was amended on December 30, 2019. SAFE Circular No. 19 provides that, among other things, a foreign-invested enterprise may convert up to 100% of the foreign currency in its capital account into RMB on a discretionary basis according to the actual needs. On June 9, 2016, SAFE further issued the Circular of the State Administration of Foreign Exchange on Reforming and Regulating Policies on the Control over Foreign Exchange Settlement of Capital Accounts, or SAFE Circular No. 16, to further expand and strengthen such discretionary conversion reform under SAFE Circular No. 19. SAFE Circular No. 16 provides an integrated standard for conversion of foreign exchange under capital account items on a discretionary basis which applies to all enterprises registered in the PRC. Pursuant to SAFE Circular No. 16, in addition to foreign currency capital, the discretionary conversion policy expands to foreign currency debts borrowed by an enterprise (except financial institutions) and repatriated funds raised through overseas listing. In addition, SAFE Circular No. 16 has narrowed the scope of purposes for which an enterprise must not use the RMB funds so converted, which include, among others, (i) payment for expenditure beyond its business scope or otherwise as prohibited by the applicable laws and regulations; (ii) investment in securities or other financial products other than banks' principal-secured products; (iii) provision of loans to non-affiliated enterprises, except where it is expressly permitted in the business scope of the enterprise; and (iv) construction or purchase of non-self-used real properties, except for the real estate developer.

In November 2012, SAFE promulgated the Circular of Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment, as most recently amended on December 30, 2019, which substantially amends and simplifies the current foreign exchange procedure. Pursuant to this circular, the opening of various special purpose foreign exchange accounts (e.g. pre-establishment expenses account, foreign exchange capital account, guarantee account), the reinvestment of lawful incomes derived by foreign investors in the PRC (e.g. profit, proceeds of equity transfer, capital reduction, liquidation and early repatriation of investment), and purchase and remittance of foreign exchange as a result of capital reduction, liquidation, early repatriation or share transfer in an FIE no longer require SAFE approval, and multiple capital accounts for the same entity may be opened in different provinces, which was not possible before. In addition, SAFE promulgated the Circular on the Provisions on Foreign Exchange Administration over Domestic Direct Investment by Foreign Investors and the Supporting Documents in May 2013, as most recently amended on December 30, 2019, which specifies that the administration by SAFE or its local branches over direct investment by foreign investors in the PRC shall be conducted by way of registration and banks shall process foreign exchange business relating to the direct investment in the PRC based on the registration information provided by SAFE and its branches.

In addition, SAFE Notice 13 delegates the authority to enforce the foreign exchange registration in connection with the inbound and outbound direct investment under relevant SAFE rules to certain banks and therefore further simplifies the foreign exchange registration procedures for inbound and outbound direct investment.

On October 23, 2019, the SAFE issued the Circular on Further Advancing the Facilitation of Cross Border Trade and Investment, or SAFE Circular 28. SAFE Circular 28 provides, among others, that the foreign-invested enterprises can use RMB converted from foreign currency denominated capital for equity investment in China, provided that the equity investments are genuine and in compliance with the applicable foreign investment-related laws and regulations. In addition, SAFE Circular 28 further provides that qualified enterprises in certain pilot areas may use the capital income from their registered capital, foreign debt or overseas listing for domestic payments, without providing authenticity certifications to the relevant banks in advance for those domestic payments.

Regulations on Dividend Distribution

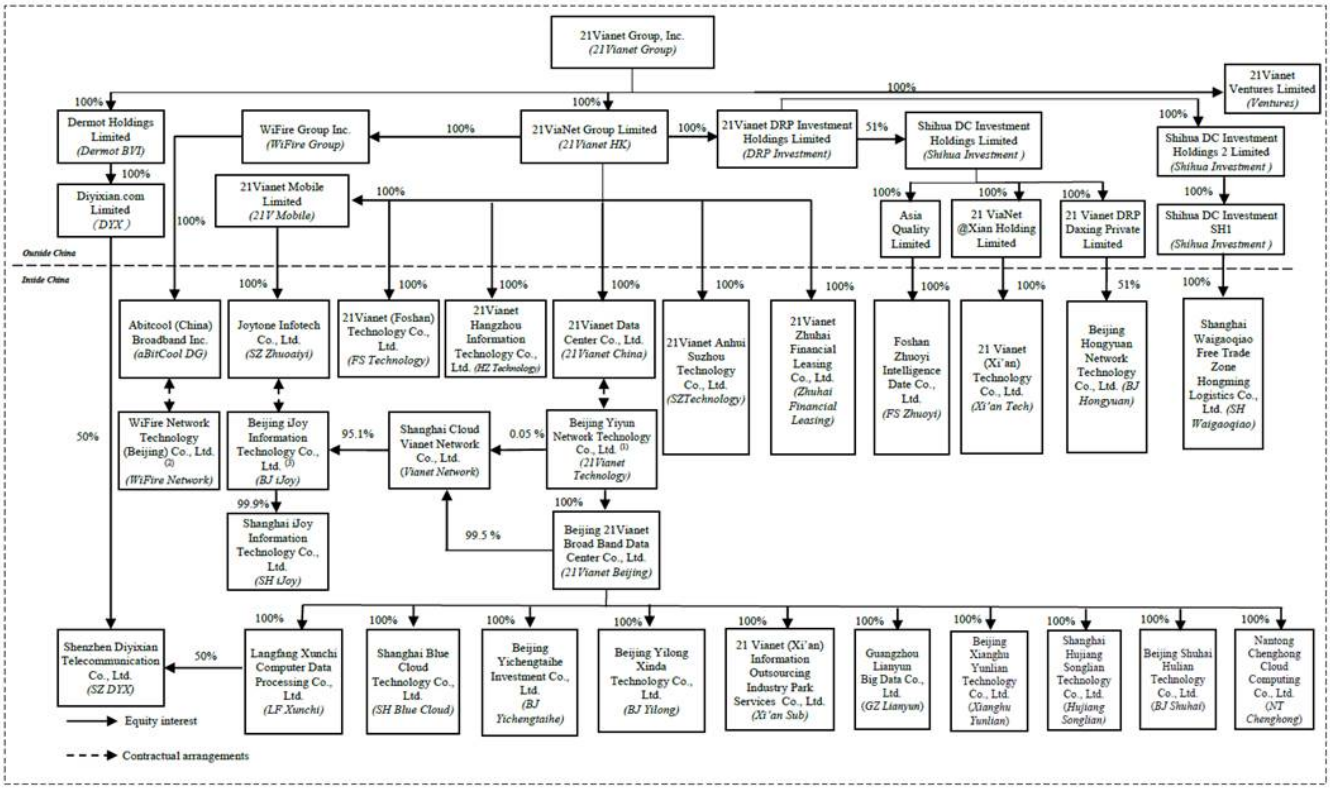
Under applicable PRC laws and regulations, FIEs in China may pay dividends only out of their accumulated profits, if any, determined in accordance with PRC accounting standards and regulations. In addition, FIEs in China are required to allocate at least 10% of their respective accumulated profits each year, if any, to fund statutory reserve funds unless these reserves have reached 50% of the registered capital of the respective enterprises. These reserves are not distributable as cash dividends.

C. Organizational Structure

We commenced operations in 1999, and through a series of corporate restructurings, established a holding company, AsiaCloud, in October 2009 under the laws of the Cayman Islands. AsiaCloud was formerly a wholly-owned subsidiary of aBitCool, a company incorporated under the laws of the Cayman Islands. In October 2010, AsiaCloud effected a repurchase and cancellation of all its outstanding shares held by aBitCool and the issuance of ordinary shares and preferred shares to the shareholders of aBitCool so that they maintained their respective ownership interests in AsiaCloud directly. In connection with the restructuring, AsiaCloud changed its name to 21Vianet Group, Inc.

Due to restrictions under PRC law on foreign ownership of entities engaged in data center and telecommunications value-added services, we conduct our operations in China through contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders. As a result of these contractual arrangements, we control our variable interest entities and have consolidated the financial statements of our consolidated affiliated entities in our consolidated financial statements.

The following diagram illustrates our current corporate structure of our principal operating entities:



Notes:

(1) Mr. Sheng Chen and Mr. Jun Zhang, our co-founders, hold 70% and 30% of the equity interests in 21Vianet Technology, respectively, and are parties to the contractual agreements through which we conduct our operations in China.

(2) Mr. Sheng Chen and Mr. Jun Zhang, our co-founders, hold 95% and 5% of the equity interests in WiFire Network, respectively, and are parties to the contractual agreements through which we conduct our operations in China.

(3) Mr. Yang Peng and Vianet Network hold 4.9% and 95.1% of the equity interests in BJ iJoy, respectively, and are parties to the contractual agreements through which we conduct our operations in China. Vianet Network is ultimately controlled by Mr. Sheng Chen and Mr. Jun Zhang, our co-founders.

Contractual Arrangements with Our Variable Interest Entities and Their Shareholders

PRC laws and regulations currently restrict foreign ownership of telecommunications value-added business. Because we are a Cayman Islands company, we are classified as a foreign enterprise under PRC laws and regulations and our wholly-owned PRC subsidiaries, 21Vianet China, SZ Zhuoaiyi and aBitCool DG, are considered as wholly-owned FIEs. To comply with PRC laws and regulations, we conduct our operations in China through a series of contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders. The shareholders of our variable interest entities are founders, directors, executive officers, employees or shareholders of our company or entities ultimately controlled by our founders. They are also PRC citizens or PRC domestic companies and therefore, our variable interest entities are considered as domestic companies under the PRC laws. For the years ended December 31, 2017, 2018 and 2019, our consolidated affiliated entities contributed most of our total net revenues.

We have relied and expect to continue to rely, on our consolidated affiliated entities to operate our telecommunications value-added business in China as long as PRC laws and regulations do not allow us to directly operate such business in China. Our contractual arrangements with our variable interest entities and their shareholders enable us to:

- exercise effective control over our variable interest entities;
- receive substantially all of the economic benefits of our variable interest entities in consideration for the services provided by our wholly-owned PRC subsidiaries; and
- have an exclusive option to purchase all of the equity interest in our variable interest entities when permissible under PRC laws.

Accordingly, under U.S. GAAP, we consolidate 21Vianet Technology, BJ iJoy and WiFire Network as our "variable interest entities" in our consolidated financial statements.

Our contractual arrangements with our variable interest entities and their shareholders are described in further detail as follows:

Agreements that Provide Us Effective Control

Share Pledge Agreements. On February 23, 2011, 21Vianet China entered into a share pledge agreement with 21Vianet Technology and each of its shareholders. Pursuant to the share pledge agreement, each of the shareholders pledged his shares in 21Vianet Technology to 21Vianet China in order to secure the shareholders' payment obligations under the loan agreement. Each shareholder also agreed not to transfer or create any other security or restriction on the shares of 21Vianet Technology without the prior consent of 21Vianet China. 21Vianet China, at its own discretion, is entitled to acquire each shareholder's equity interests in 21Vianet Technology as permitted by PRC laws. We have registered the pledges of the equity interests in 21Vianet Technology with the local branch of the State Administration for Industry and Commerce, and currently known as State Administration for Market Regulation.

Irrevocable Power of Attorney. Each shareholder of 21Vianet Technology has executed an irrevocable power of attorney. Pursuant to the irrevocable power of attorney, each shareholder appointed 21Vianet China or a person designated by 21Vianet China as his/her attorney-in-fact to attend shareholders' meeting of 21Vianet Technology, exercise all the shareholder's voting rights, including but not limited to, sale transfer, pledge or dispose of his/her equity interests in 21Vianet Technology. The power of attorney remains valid and irrevocable from the date of execution, so long as each shareholder remains the shareholder of 21Vianet Technology. The above irrevocable power of attorney was subsequently assigned to 21Vianet Group, Inc.

Optional Share Purchase Agreements. The optional share purchase agreement is entered into among 21Vianet China, 21Vianet Technology, 21Vianet Beijing and the shareholders of 21Vianet Technology on December 19, 2006. Pursuant to the agreement, the shareholders irrevocably grant 21Vianet China or its designated persons the sole option to acquire from the shareholders or 21Vianet Technology all or any part of the equity interests in 21Vianet Technology and 21Vianet Beijing when permissible under PRC laws. 21Vianet Technology and 21Vianet Beijing made certain covenants to maintain the value of the equity interests, including but not limited to, engage in the ordinary course of business and refrain from making loans and entering into agreements exceeding the value of RMB200,000 with the exception of transactions made in the ordinary course of business. The initial term of 10 years has expired on December 18, 2016. The parties to this agreement have entered into a supplemental agreement on December 19, 2016, pursuant to which the term of this agreement is extended for 10 years and will be automatically renewed at the end of each 10-year term, unless otherwise terminated at the option of 21Vianet China with a 30-day advance written notice.

Agreements that Transfer Economic Benefits from our Variable Interest Entity to Us or Absorb Losses

Loan Agreements and Financial Support Letter. 21Vianet China and the shareholders of 21Vianet Technology entered into a loan agreement on January 28, 2011. Pursuant to the agreements, 21Vianet China has provided interest-free loan facilities of RMB7.0 million and RMB3.0 million, respectively, to the shareholders of 21Vianet Technology, Sheng Chen and Jun Zhang, which was used to provide capital to 21Vianet Technology to develop our data center and telecommunications value-added business and related businesses. There is no fixed term for the loan. To repay the loans, the shareholders of 21Vianet Technology are required to transfer their shares in 21Vianet Technology to 21Vianet China or any entity or person designated by 21Vianet China, as permitted under PRC laws. The shareholders of 21Vianet Technology also undertake not to transfer all or part of their equity interests in 21Vianet Technology to any third party, or to create any encumbrance, without the written permission from 21Vianet China. In addition, we will provide unlimited financial support to 21Vianet Technology for its operations and agreed to forego the right to seek repayment in the event 21Vianet Technology is unable to repay such funding.

Exclusive Technical Consulting and Services Agreements. On July 15, 2003, 21Vianet China and 21Vianet Technology entered into an exclusive service agreement, which was superseded by a new exclusive technical consulting and service agreement entered into among 21Vianet China, 21Vianet Technology and 21Vianet Beijing on December 19, 2006. 21Vianet China agreed to provide 21Vianet Technology and 21Vianet Beijing with exclusive technical consulting and services, including internet technology services and management consulting services. 21Vianet Technology and 21Vianet Beijing agreed to pay an hourly rate of RMB1,000 and the rate is subject to adjustment at the sole discretion of 21Vianet China. 21Vianet Technology and 21Vianet Beijing agreed that they will not accept similar or comparable service arrangements that may replace the services provided by 21Vianet China without prior written consent of 21Vianet China. 21Vianet China is entitled to have sole and exclusive ownership of all rights, title and interests to any and all intellectual property rights arising from the provision of services. The initial term of 10 years has expired on December 18, 2016. The parties to this agreement have entered into a supplemental agreement on December 19, 2016, pursuant to which the term of this agreement is extended for 10 years and will be automatically renewed at the end of each 10-year term, unless otherwise terminated at the option of 21Vianet China with a 30-day advance written notice.

In April 2013, we completed acquisition of 100% equity interests in iJoy Holding Limited, or iJoy BVI, and its subsidiaries (collectively known as “iJoy”). In June 2014, we established aBitCool DG, which controls 100% of the equity interests in WiFire Network through contractual arrangements entered into in July 2014. The key terms of the contractual arrangements in relation to BJ iJoy and WiFire Network are similar to the contractual arrangements in relation to 21Vianet Technology, pursuant to which iJoy BVI and WiFire Group Inc., or WiFire Group, were considered as the primary beneficiaries of BJ iJoy and WiFire Network, respectively.

In the opinion of Han Kun Law Offices, our PRC legal counsel, each of the contracts under the contractual arrangements among us, our wholly-owned PRC subsidiaries, our variable interest entities and their shareholders governed by PRC law is valid, legally binding and enforceable to each party of such agreements under PRC laws and regulations, and will not result in any violation of PRC laws or regulations currently in effect.

We have been advised by our PRC legal counsel, however, that there are substantial uncertainties regarding the interpretation and application of current and future PRC laws and regulations. Accordingly, there can be no assurance that the PRC regulatory authorities, in particular the MIIT, which regulates providers of telecommunications value-added services and other participants in the PRC telecommunications industry, and the MOC, will not in the future take a view that is contrary to the above opinion of our PRC legal counsel. We have been further advised by our PRC legal counsel that if the PRC government finds that the agreements that establish the structure for operating our value-added services in China do not comply with PRC government restrictions on foreign investment in the telecommunications industry, we could be subject to severe penalties including being prohibited from continuing our operations. See “Risk Factors—Risks Related to Our Corporate Structure—If the PRC government finds that the arrangements that establish the structure for operating our business do not comply with PRC government restrictions on foreign investment in the telecommunications business or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations.” In addition, these contractual arrangements may not be as effective in providing us with control over our variable interest entities as would direct ownership of our variable interest entities. See “Risk Factors—Risks Related to Our Corporate Structure—We rely on contractual arrangements with our variable interest entities and their shareholders for our China operations, which may not be as effective as direct ownership in providing operational control.”

D. Property, Plants and Equipment

Our headquarters are located at Guanjie Building Southeast, 1st Floor, 10# Jiuxianqiao East Road, Chaoyang District, Beijing, the People's Republic of China. We lease facilities for our office space in Beijing, Shanghai, Guangzhou, Shenzhen, Xi'an, Ningbo, Foshan, Dongguan, Hangzhou, Suzhou, Hong Kong and Taiwan. Our office leases generally have terms ranging from one to ten years and may be renewed upon expiration of the lease terms. As of December 31, 2019, our offices occupied an aggregate of 29,107 square meters of leased space.

In Beijing, we also lease facilities for our self-built data centers located: (i) in the Chaoyang District, through two lease agreements with Beijing Yinghe Century Land Co., Ltd., four lease agreements with Beijing Seven Star Technology Group Co., Ltd., one lease agreement with Telehouse Beijing BEZ Data Centre, and one lease agreement with China Youth Printing Factory, (ii) in the Beijing Economic and Technological Development Zone, through a lease agreement with Beijing Tengfei Boda Real Estate Development Co., Ltd., (iii) in the Daxing District, through a lease agreement with Beijing Xingguang Tuocheng Investment Co., Ltd., (iv) in the Xiangshan District, through a lease agreement with Beijing Tuspark Harmonious Investment Development Co., Ltd., or Beijing Tuspark, and (v) in the Tongzhou New Town, through a lease with Beijing BOHS Colour Printing Co., Ltd.. These leases provide an aggregate of approximately 119,639 square meters of leased space and host a total of 15,446 cabinets as of December 31, 2019. Each of the two leases with Beijing Yinghe Century Land Co., Ltd. has a term of two years expiring on August 31, 2021. Each of the four leases with Beijing Seven Star Technology Group Co., Ltd. has a term of five years and will expire on January 6, 2022, August 14, 2022, October 4, 2023 and October 15, 2023, respectively. The lease with Telehouse Beijing BEZ Data Center has a term of 10 years expiring on March 31, 2027. The lease may be renewed upon mutually agreed-upon terms before they expire. The lease with China Youth Printing Factory has a term of five years expiring on March 31, 2023, and we have the pre-emptive right to purchase the property upon any change of control circumstance in the property owner. The lease with Beijing Tengfei Boda Real Estate Development Co., Ltd. has a term of ten years expiring on August 31, 2021, subject to our pre-emptive right to renew the lease. The lease with Beijing Xingguang Tuocheng Investment Co., Ltd. has a term of twenty years expiring on February 28, 2033, subject to our pre-emptive right to renew the lease. The lease with Beijing Tuspark has a term of 20 years expiring on September 27, 2038 and will extend for another 20 years upon signing of a renewal agreement prior to 6 months before the expiration of the term. The lease with Beijing BOHS Colour Printing Co., Ltd. has a term of 8 years and 10 months expiring on September 30, 2028 and will automatically extend for another 26 years, and we have the pre-emptive right to purchase the property upon any change of control circumstance in the property owner.

In Shenzhen, we also lease facilities for our self-built data centers located in the Nanshan District, through two lease agreements with Shenzhen Merchants Property Development Co., Ltd., a lease agreement with Shenzhen Toukong Industrial Park Development and Operation Co., Ltd., and three lease agreements with Shenzhen Bay Technology Development Co., Ltd. These leases provide an aggregate of approximately 4,867 square meters of leased space and hosted a total of 770 cabinets as of December 31, 2019. The two leases with Shenzhen Merchants Property Development Co., Ltd. both have a term of 47 months expiring on September 30, 2015, which have been extended to September 30, 2020. The lease with Shenzhen Toukong Industrial Park Development and Operation Co., Ltd. has a term of eight years expiring on November 1, 2022. Two of the three leases with Shenzhen Bay Technology Development Co., Ltd. have a term of six years expiring on December 14, 2021, and the remaining one of the three leases with Shenzhen Bay Technology Development Co., Ltd. expired on February 29, 2020 and we are currently in the process of renewing it for one year with Shenzhen Bay Technology Development Co., Ltd.

In Shanghai, we also lease facilities for our self-built data centers located in the Baoshan District, through a lease agreement with Shanghai Cloud Century Co., Ltd., which provides an aggregate of 12,151 square meters of leases space and hosted a total of 1,412 cabinets as of December 31, 2019. The lease has a term of 20 years expiring on December 5, 2030. We also lease facilities for our self-built data centers located in the Pudong District, through a lease agreement with Shanghai Gosun Data System Co., Ltd., which provides an aggregate of 5,952 square meters of leases space and hosts a total of 1,194 cabinets as of December 31, 2019. The lease has a term of 8 years expiring on August 31, 2026.

In Hangzhou, we also lease facilities for our self-built data centers, offices and research centers located in Hangzhou Economic Development Zone, through a lease agreement with Hangzhou Economic and Development Zone Qiantang Real Estate Development Co., Ltd., which provides an aggregate of 11,020 square meters of leased space and hosted a total of 1,063 cabinets as of December 31, 2019. The lease has a term of twenty years expiring on July 31, 2031, subject to our pre-emptive right to renew the lease.

In Guangzhou, we also lease facilities for our self-built data centers located in Guangzhou Economic and Technological Development Zone, through a lease agreement with Elec & Eltek International Company Limited, which provides an aggregate of 52,264 square meters of leases space and hosted a total of 2,267 cabinets as of December 31, 2019. The lease has a term of 10 years expiring on December 31, 2024, subject to our pre-emptive right to renew the lease.

In Ningbo, we also lease facilities for our self-built data centers located in Ningbo High Tech Zone, through a lease agreement with Ningbo Software and Service Outsourcing Industrial Park Management Service Center, which provides an aggregate of 1,200 square meters of leases space and hosted a total of 276 cabinets as of December 31, 2019. The lease has an initial term of 10 years which expired on December 31, 2019, and has been renewed with another three years expiring on December 31, 2022, subject to our pre-emptive right to renew the lease.

We have also built our own data centers in our self-owned buildings in Beijing, Xi'an, Shanghai, Foshan, Guangzhou, Suzhou, and Sichuan, housing 9,619 cabinets.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report on Form 20-F. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Item 3. Key Information—D. Risk Factors" or in other parts of this annual report on Form 20-F.

A. Operating Results

Overview

We are a leading carrier-neutral and cloud-neutral internet data center services provider in China. We host our customers' servers and networking equipment and provide interconnectivity to improve the performance, availability and security of their internet infrastructure. We also provide complementary value-added services, such as cloud services, VPN services and hybrid IT services. We started offering public cloud services in 2013, private cloud and hybrid services in 2014, and partnered with numerous cloud providers to support our comprehensive cloud-neutral platform. We believe that the scale of our data center and networking assets as well as our carrier-neutrality position us well to capture opportunities and become a leader in the rapidly emerging market for cloud computing infrastructure services in China.

We have benefited from our premium data centers and extensive interconnected nationwide data transmission network, diversified and loyal customer base and our strong focus on customer satisfaction and technological innovation. Going forward, we expect that we will continue to benefit from the growth of China's data center services market. However, we also face risks and uncertainties, including those relating to our integration of acquired businesses, our competition with, and dependency on, China Telecom and China Unicom, our ability to attract new customers and retain existing customers and our ability to control both business costs and costs as a result of being a public company. In particular, we plan to significantly increase the aggregate number of cabinets under management in both of our self-built data centers and partnered data centers.

We used to provide managed network services to enable customers to deliver data across the internet in a faster and more reliable manner through our data transmission network. In 2017, we completed the disposal of the managed network services business segment, including CDN services, hosting area network services, route optimization business and last-mile broadband business, in order to focus more on expanding our core IDC business and capturing the growing demand in this market. Following completion of the disposal, we have transferred all of our equity interests in Aipu Group and continue to hold 33.3% equity interests in the WiFire Entities.

Our total net revenues generated from providing hosting and related services increased from RMB2,975.2 million in 2017 to RMB3,401.0 million in 2018 and further to RMB3,789.0 million (US$544.3 million) in 2019, representing a CAGR of 12.9% from 2017 to 2019. The total number of cabinets under our management increased from 29,080 as of December 31, 2017 to 30,654 as of December 31, 2018 and to 36,291 as of December 31, 2019. Our average monthly recurring net revenues from hosting and related services increased from RMB235.9 million in 2017 to RMB275.4 million in 2018 and further to RMB289.1 (US$41.5 million) in 2019. We recorded a net loss of RMB917.6 million, RMB186.7 million and RMB181.2 million (US$26.0 million) in 2017, 2018 and 2019, respectively, which reflected share-based compensation expenses of RMB47.1 million, RMB59.5 million and RMB43.9 million (US$6.3 million), respectively. Our results of operations also reflect the effects of our acquisitions and dispositions during the respective periods.

Factors Affecting Our Results of Operations

Our business and results of operations are generally affected by the development of China's data center services market. We have benefited from the rapid growth of China's data center services market during the recent years. According to IDC, the total China internet data center services market was US$8.8 billion in 2018, a 34.6% year over year growth rate, and is expected to reach US$24.8 billion in 2023, representing a five-year CAGR of 23.1%. However, any adverse changes in the data center services market in China may harm our business and results of operations.

While our business is generally influenced by factors affecting the data center services market in China, we believe that our results of operations are more directly affected by company-specific factors, including number of cabinets under management and cabinet utilization rate, monthly recurring revenues and churn rate, pricing, growth in complementary markets and optimization of our cost structure.

Number of Cabinets under Management and Cabinet Utilization Rate

Our revenues are directly affected by the number of cabinets under management and the utilization rates of these cabinet spaces. We had 29,080, 30,654 and 36,291 cabinets under management as of December 31, 2017, 2018 and 2019, respectively. Our annualized average monthly cabinet utilization rates were 75.3%, 70.6% and 66.0% in 2017, 2018 and 2019, respectively. We calculate the annualized cabinet utilization rate in a year as the average of the four quarterly cabinet utilization rates in that year, and we calculate quarterly cabinet utilization rate by dividing our weighted average billable cabinets by weighted average cabinet capacity in that quarter. Our quarterly and annualized cabinet utilization rates fluctuate due to the continuous changes in both our weighted average billable cabinets and weighted average cabinet capacity. Our future results of operations and growth prospects will largely depend on our ability to increase the number of cabinets under management while maintaining optimal cabinet utilization rate. With the rapid growth of China's internet industry, demand for cabinet spaces has increased significantly and we do not always have sufficient self-built capacity to meet such demand. It usually takes twelve to eighteen months to build a data center together with cabinets and equipment installed. To meet our customers' immediate demand, we may partner with China Telecom, China Unicom or other parties and lease cabinets from them. Due to the time needed to build data centers and the long-term nature of these investments, if we over-estimate the market demand for cabinets, it will lower our cabinet utilization rate and negatively affect our results of operations.

Monthly Recurring Revenues and Churn Rate

Our average monthly recurring revenues and churn rate directly affect our results of operations. Our business is based on a recurring revenue model of our hosting and related services. We consider these services recurring as our customers are generally billed and revenue recognized on a fixed and recurring basis each month for the duration of their contract, which is generally one to three years in length. Our non-recurring revenues are primarily comprised of fees charged for installation services, additional bandwidth used by customers beyond contracted amount and other value-added services. These services are considered to be non-recurring as they are billed and recognized over the period of the customer service agreement.

We use “monthly recurring revenues” to measure those revenues recognized on a fixed and recurring basis each month. Recurring revenues from hosting and related services have comprised more than 90% of our net revenues from hosting and related services during the past three years. Our average monthly recurring revenues from hosting and related services increased from RMB235.9 million in 2017 to RMB275.4 million in 2018 and further to RMB289.1 million (US$41.5 million) in 2019.

We use “churn rate” to measure the reduction of monthly revenues that are attributable to the termination of customer contracts as a percentage of total monthly recurring revenues of the previous month. Our average monthly hosting churn rate, based on our core IDC business, was 0.5% in 2017, 0.3% in 2018 and 0.5% in 2019.

Pricing

Our results of operations also depend on the price level of our services. Due to the quality of our services and our optimized interconnectivity among carriers and networks, we are generally able to command premium pricing for our services. Nonetheless, because we are generally regarded as a premium data center and network service provider, many customers only place their mission critical servers and equipment in our data centers, but not the bulk of their needs. As we try to acquire more business from new and existing customers, expand into new markets, or try to adapt to changing market conditions, we may need to lower our prices or provide other incentives to compete effectively.

Growth in New and Complementary Markets

Our results of operations also depend on the growth of new business areas that complement our core data center service offerings.

- *Cloud computing services*. Cloud computing services, largely through our partnerships with Microsoft, IBM and others, have contributed to our results of operations for the past three years. Our partnership with IBM expired in December 2019. While our cloud computing platforms are now supporting a significant number of customers, we believe the cloud computing market in China is still in its early stages. Key factors of growth in this market include signing up services from new customers, improving utilization rates of cloud computing resources with existing customers introducing well-developed applications to improve cloud computing adoption rates, and partnering with more cloud providers to offer a comprehensive cloud-neutral platform.

- *Enterprise VPN services*. As one of the largest enterprise VPN service providers in the Asian Pacific region following our acquisition of Dermot Entities in August 2014, we have experienced and expect continued growth in this market to meet customers’ growing demand for enterprise-grade VPN services with secure, dedicated connections. Key growth drivers include adding new customers, increasing the number of connections with existing customers and realizing revenue synergies with our other business groups.

Our Cost Structure

Our ability to maintain and improve our gross margins depends on our ability to effectively manage our cost of revenues, which consist of telecommunications costs and other data center related costs. Telecommunications costs refer to expenses associated with acquiring bandwidth and related resources from carriers for our data centers. Telecommunications costs also cover rentals, utilities and other costs in connection with the cabinets we lease from our partnered data centers. Other costs include utilities and rental expenses for our self-built data centers, payroll, depreciation and amortization of our property and equipment, and other related costs. These costs increase as the number of our cabinets under management increases, likewise as we increase our headcount.

The mix of the self-built data centers and partnered data centers also affects our cost structure. Gross margin for cabinets located in our partnered data centers is generally lower than cabinets located in our self-built data centers. This is because telecommunication carriers who lease cabinet spaces to us for our partnered data centers would demand a profit on top of their costs in connection with the leasing of cabinet spaces to us. We plan to continue to lease data centers from such carriers or purchase data center facilities to meet the immediate market demand while building new or expanding existing data centers in Beijing, Shanghai, Shenzhen, Guangzhou, Yangtze Delta, and the Greater Bay Area. If we cannot effectively manage the market demand and increase the number of cabinets located in self-built data centers relatively to partnered data centers, we may not be able to improve our gross margins.

Key Components of Results of Operations

Starting in 2016, we began reporting our operating results in two operating segments, namely hosting and related services and managed network services. CDN services, which were previously offered as part of our hosting and related services business segment, were moved to our managed network services business segment in the fourth quarter of 2016. Our consolidated statements of operations for the years ended December 31, 2015 and 2016 as presented in this annual report were modified to reflect this new presentation for consistency purposes.

In September 2017, we completed the disposal of the managed network services business segment, including CDN services, hosting area network services, route optimization business and last-mile broadband business, and deconsolidated the financial results related to the managed network services business segment in our consolidated financial statements starting from the fourth quarter of 2017.

Net Revenues

The following table sets forth our revenues by segment, both in an absolute amount and as a percentage of total net revenues, for the periods presented.

	For the Years Ended December 31,						
	2017		2018		2019		
	RMB	%	RMB	%	RMB	USD	%
	(in thousands, except percentages)						
Net revenues:							
Hosting and related services	2,975,178	87.7	3,401,037	100.0	3,788,967	544,251	100.0
Managed network services	417,527	12.3	—	—	—	—	—
Total net revenues	3,392,705	100.0	3,401,037	100.0	3,788,967	544,251	100.0

Hosting and Related Services

We provide retail managed hosting services to house our customers' servers and networking equipment in our data centers, and wholesale managed hosting services to deliver customized data center sites to our customers based on their unique requirements. We also provide interconnectivity services, cloud services, value-added services and VPN services as part of our hosting and related services business. Revenues from our hosting and related services were RMB2,975.2 million, RMB3,401.0 million and RMB3,789.0 million (US$544.3 million) in 2017, 2018 and 2019, respectively, representing 87.7%, 100% and 100% of our total net revenues in the respective periods.

The contracts with our wholesale customers generally have terms ranging from eight to ten years. The contracts with our retail customers generally have terms ranging from one to three years and most of these contracts have an automatic renewal provision. Our customers are generally billed on a monthly basis according to services they used in the previous month.

Managed Network Services

Revenues from our managed network services were RMB417.5 million in 2017. In September 2017, we completed the disposal of the managed network services business segment and deconsolidated the financial results related to managed network services segment since then.

Cost of Revenues

Our cost of revenues primarily consists of telecommunications cost, and other costs. The following table sets forth, for the periods indicated, our cost of revenues, in absolute amounts and as a percentage of our total net revenues:

	For the Years Ended December 31,						
	2017		2018		2019		
	RMB	%	RMB	%	RMB	USD	%
	(in thousands, except percentages)						
Cost of revenues:							
Telecommunications costs	1,533,615	42.5	1,332,280	39.2	1,570,825	225,635	41.5
Others	1,100,680	35.1	1,123,886	33.0	1,278,693	183,673	33.7
Total cost of revenues	2,634,295	77.6	2,456,166	72.2	2,849,518	409,308	75.2

Telecommunications costs refer to expenses incurred in acquiring telecommunication resources from carriers for our data centers, including bandwidth and cabinet leasing costs. Cabinet leasing costs cover rentals, utilities and other costs associated with the cabinets we lease from our partnered data centers. Our other costs of revenues include utilities costs for our self-built data centers, depreciation and amortization, payroll and other compensation costs and other miscellaneous items related to our service offerings.

The following table sets forth, for the periods indicated, our cost of revenues by segment, in absolute amounts and as a percentage of the net revenues of the relevant segment:

	For the Years Ended December 31,						
	2017		2018		2019		
	RMB	%	RMB	%	RMB	USD	%
	(in thousands, except percentages)						
Cost of revenues:							
Hosting and related services	2,130,279	71.6	2,456,166	72.2	2,849,518	409,308	75.2
Managed network services	504,016	120.7	—	—	—	—	—

We expect that our cost of revenues of hosting and related services will continue to increase as our business expands, both organically and as a result of acquisitions.

Operating Expenses

Our operating expenses consist of sales and marketing expenses, general and administrative expenses and research and development expenses. The following table sets forth our operating expenses, both as an absolute amount and as a percentage of total net revenues for the periods indicated.

	For the Years Ended December 31,						
	2017		2018		2019		
	RMB	% Net of Revenues	RMB	% Net of Revenues	RMB	USD	% Net of Revenues
	(in thousands, except percentages)						
Operating expenses:							
Sales and marketing expenses[(1)]	256,682	7.6	172,176	5.1	206,309	29,634	5.4
Research and development expenses[(1)]	149,143	4.4	92,109	2.7	88,792	12,754	2.3
General and administrative expenses[(1)]	519,950	15.3	462,637	13.5	415,277	59,651	11.0
Allowance/(reversal) for doubtful debt	37,427	1.1	(598)	(0.0)	1,557	224	0.0
Changes in the fair value of contingent purchase consideration payable	937	0.0	(13,905)	(0.4)	—	—	—
Impairment of long-lived assets	401,808	11.8	—	—	—	—	—
Impairment of goodwill	766,440	22.6	—	—	—	—	—
Impairment of receivables from equity investees	—	—	—	—	52,142	7,490	1.4
Other operating income	(5,439)	(0.2)	(5,027)	(0.1)	(6,862)	(986)	(0.1)
Total Operating Expenses[(1)]	2,126,948	62.6	707,392	20.8	757,215	108,767	20.0

Note:

(1) Includes share-based compensation expense as follows:

	2017	2018	2019	
	RMB	RMB	RMB	US$
		(in thousands)		
Allocation of share-based compensation expenses:				
Sales and marketing expenses	(681)	2,139	354	51
Research and development expenses	142	1,385	1,177	169
General and administrative expenses	47,945	53,346	40,501	5,817
Total share-based compensation expenses	47,406	56,870	42,032	6,037

Sales and Marketing Expenses

Our sales and marketing expenses primarily consist of compensation and benefit expenses for our sales and marketing staff, including share-based compensation expenses, as well as advertisement and agency service fees. Our sales and marketing expenses also include office-related expenses and business development expenses associated with our sales and marketing activities. To a lesser extent, our sales and marketing expenses include depreciation of equipment used associated with our selling and marketing activities.

Research and Development Expenses

Our research and development expenses primarily include salaries, employee benefits, share-based compensation expenses and other expenses incurred in connection with our technological innovations, such as our proprietary smart routing technology and cloud computing infrastructure service technologies. We anticipate that our research and development expenses will continue to increase as we devote more resources to develop and improve technologies, improve operating efficiencies and enhance our service offerings.

General and Administrative Expenses

Our general and administrative expenses primarily consist of compensation and benefits paid to our management and administrative staff, including share-based compensation expenses, the cost of third-party professional services, and depreciation and amortization of property and equipment used in our administrative activities. Our general and administrative expenses, to a lesser extent, also include office rent, office-related expenses, and expenses associated with training and team building activities. We expect that our other general and administrative expense items, such as salaries paid to our management and administrative staff as well as professional services fees, will increase as we expand our business, both organically and as a result of acquisitions.

Share-Based Compensation Expenses

We recorded share-based compensation expenses in connection with share options and RSUs granted under our 2010 Plan and 2014 Plan. As of February 29, 2020, options to purchase 931,254 ordinary shares and 3,271,135 RSUs have been granted to our employees, directors and consultants. We recorded share-based compensation expenses in the amount of RMB47.4 million, RMB56.9 million and RMB42.0 (US$6.0 million) for the year ended December 31, 2017, 2018 and 2019, respectively, in connection with our share-based incentive grants.

Taxation

The Cayman Islands

The Cayman Islands currently does not levy taxes on individuals or corporations based upon profits, income, gains or appreciation and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to our company levied by the government of the Cayman Islands, except for stamp duties that may be applicable on instruments executed in, or after execution brought within the jurisdiction of, the Cayman Islands. The Cayman Islands is not a party to any double taxation treaties that are applicable to any payments made to or by our company. There are no exchange control regulations or currency restrictions in the Cayman Islands. Additionally, upon payments of dividends by our company to the shareholders, no Cayman Islands withholding tax will be imposed.

The British Virgin Islands

The Company and all dividends, interest, rents, royalties, compensation and other amounts paid by the Company to persons who are not resident in the BVI and any capital gains realized with respect to any shares, debt obligations, or other securities of the Company by persons who are not resident in the BVI are exempt from all provisions of the Income Tax Ordinance in the BVI.

No estate, inheritance, succession or gift tax, rate, duty, levy or other charge is payable by persons who are not resident in the BVI with respect to any shares, debt obligation or other securities of the Company.

All instruments relating to transfers of property to or by the Company and all instruments relating to transactions in respect of the shares, debt obligations or other securities of the Company and all instruments relating to other transactions relating to the business of the Company are exempt from payment of stamp duty in the BVI. This assumes that the Company does not hold an interest in real estate in the BVI.

There are currently no withholding taxes or exchange control regulations in the BVI applicable to the Company or its members.

Hong Kong

Subsidiaries in Hong Kong are subject to Hong Kong profits tax rate of 16.5% for the years ended December 31, 2017, 2018 and 2019. They may be exempted from income tax on their foreign-derived income and there are no withholding taxes in Hong Kong on remittance of dividends.

Taiwan

DYX Taiwan branch is incorporated in Taiwan and is subject to Taiwan profits tax rate of 17%, 20% and 20% for the years ended December 31, 2017, 2018 and 2019, respectively.

The PRC

The Company's PRC subsidiaries are incorporated in the PRC and subject to the statutory rate of 25% on the taxable income in accordance with the Enterprise Income Tax Law, or the EIT Law, which was effective on January 1, 2008 and amended on December 29, 2018, except for certain entities eligible for preferential tax rates.

Dividends, interests, rent or royalties payable by the Company's PRC subsidiaries to any non-PRC resident enterprise and proceeds from any such non-PRC resident enterprise investor's disposition of assets (after deducting the net value of such assets) are subject to a 10% withholding tax, unless the corresponding non-PRC resident enterprise's jurisdiction of incorporation has a tax treaty or arrangement with China that provides a reduced withholding tax rate or an exemption from withholding tax.

21Vianet Beijing was qualified for a High and New Technology Enterprise, or HNTE, since 2008 and is eligible for a 15% preferential tax rate. In October 2014, 21Vianet Beijing obtained a new certificate and renewed the certificate in October 2017, which will expire in October 2020. In accordance with the PRC Income Tax Law, an enterprise awarded with the HNTE certificate may enjoy a reduced EIT rate of 15%. For the years ended December 31, 2017, 2018 and 2019, 21Vianet Beijing enjoyed a preferential tax rate of 15%.

In April 2011, Xi'an Sub, a subsidiary located in Shaanxi Province, was qualified for a preferential tax rate of 15% and started to apply this rate from then on. The preferential tax rate is awarded to companies that are located in West Regions of China which operate in certain encouraged industries. For the years ended December 31, 2017, 2018 and 2019, the tax rate for Xi'an Sub was 25%, 15% and 15%, respectively.

In 2013, BJ iJoy was qualified as a software enterprise, which makes it eligible for exemption of the enterprise income tax for the years ended December 31, 2013 and 2014 and a half-reduced enterprise income tax for the years ended December 31, 2015, 2016 and 2017. For the year ended December 31, 2018 and 2019, BJ iJoy was subject to the statutory rate of 25% for the taxable income.

In October 2015, SH Blue Cloud, a subsidiary located in Shanghai, was qualified for a HNTE and became eligible for a 15% preferential tax rate effective for three consecutive years. The HNTE certificate has been renewed in October 2018, which will expire in October 2021. For the years ended December 31, 2017, 2018 and 2019, SH Blue Cloud enjoyed a preferential tax rate of 15%.

In November 2016, SZ DYX, a subsidiary located in Guangdong Province, was qualified for a HNTE and became eligible for a 15% preferential tax rate effective for three consecutive years. The HNTE certificate has been renewed in November 2019, which will expire in November 2022. For the years ended December 31, 2017, 2018 and 2019, SZ DYX enjoyed a preferential tax rate of 15%.

The EIT Law also provides that enterprises established under the laws of foreign countries or regions and whose "place of effective management" is located within the PRC are considered PRC tax resident enterprises and subject to PRC income tax at the rate of 25% on worldwide income. The definition of "place of effective management" refers to an establishment that exercises, in substance, overall management and control over the production and business, personnel, accounting, properties, etc. of an enterprise. As of December 31, 2019, the administrative practice associated with interpreting and applying the concept of "place of effective management" is unclear. If the Company is deemed as a PRC tax resident, it will be subject to PRC income tax at the rate of 25% on its worldwide income under the EIT Law, meanwhile the dividends it receives from another PRC tax resident company will be exempted from 25% PRC income tax. The Company will continue to monitor changes in the interpretation or guidance of this law.

PRC VAT. In November 2011, the Ministry of Finance and the State Administration of Taxation jointly issued two circulars setting out the details of the pilot value-added tax, or VAT, reform program, which changed the charge of sales tax from business tax to VAT for certain pilot industries. The pilot VAT reform program initially applied only to the pilot industries in Shanghai, and was expanded to eight additional regions, including, among others, Beijing and Guangdong province, in 2012. In August 2013, the program was further expanded nationwide. In May 2016, the program was expanded to cover additional industry sectors such as construction, real estate, finance and consumer services. In November 2017, PRC State Counsel issued State Counsel Order 691 to abolish business tax, and issued the amendment to Interim Regulations of PRC Value Added Taxes, or the VAT Regulation, pursuant to which enterprises and individuals that (i) sell goods or labor services of processing, repair or replacement of goods, (ii) sell services, intangible assets, or immovables, or (iii) import goods within the territory of the PRC are subject to VAT.

Effective from September 2012, all services provided by 21Vianet China and certain services provided by 21Vianet Technology and 21Vianet Beijing were subject to a VAT of 6%.

Effective from June 2014, all value-added telecommunication services provided in mainland China were subject to a VAT of 6% whereas basic telecommunication services are subject to a VAT of 11%. Effective from May 2018, the VAT rate on basic telecommunication services was replaced by a new rate of 10%, and is further replaced by the rate of 9% effective from April 2019. On March 20, 2019, the Ministry of Finance, the State Administration of Taxation and the General Administration of Customs jointly issued the Notice of Strengthening Reform of VAT Policies, or the Announcement No. 39. Pursuant to the Announcement No. 39, the generally applicable VAT rates are simplified to 13%, 9%, 6%, and nil, which became effective on April 1, 2019. In addition, a general VAT taxpayer is allowed to offset its qualified input VAT paid on taxable purchases against the output VAT chargeable on the telecommunication services and modern services provided by it.

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amounts in our consolidated financial statements. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Although actual results have historically been reasonably consistent with management's expectations, actual results may differ from these estimates or our estimates may be affected by different assumptions or conditions.

Some of our accounting policies require higher degrees of judgment than others in their application. When reviewing our consolidated financial statements, you should consider (i) our selection of critical accounting policies, (ii) the judgment and other uncertainties affecting the application of such policies and (iii) the sensitivity of reported results to changes in conditions and assumptions. We consider the policies discussed below to be critical to an understanding of our consolidated financial statements as their application places significant demands on the judgment of our management. We believe the following critical accounting policies are the most significant to the presentation of our financial statements and some of which may require the most difficult, subjective and complex judgments and should be read in conjunction with our consolidated financial statements, the risks and uncertainties described under "Risk Factors" and other disclosures included in this annual report.

Revenue Recognition

We provide hosting and related services including hosting of customers' servers and networking equipment, connecting customers' servers with internet backbones and other value-added services ("Hosting services"), virtual private network services providing encrypted secured connection to public internet ("VPN services") and public cloud service through strategic partnership with Microsoft ("Cloud services").

On January 1, 2018, we adopted ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASC 606"), which supersedes the revenue recognition requirements in ASC Topic 605, *Revenue Recognition* ("ASC 605"), using the modified retrospective transition method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts have not been adjusted and continue to be reported in accordance with historic accounting under ASC 605. The impact of adopting the new revenue standard was not material to consolidated financial statements and there was no adjustment to beginning retained earnings on January 1, 2018.

Under ASC 606, an entity recognizes revenue as it satisfies a performance obligation when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price, including variable consideration, if any; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. We only apply the five-step model to contracts when it is probable that the entity will collect the consideration to which it is entitled in exchange for the goods or services it transfers to the customer.

Once a contract is determined to be within the scope of ASC 606 at contract inception, we review the contract to determine which performance obligations we must deliver and which of these performance obligations are distinct. We recognize revenue based on the amount of the transaction price that is allocated to each performance obligation when that performance obligation is satisfied or as it is satisfied.

We are a principal and records revenue on a gross basis when we are primarily responsible for fulfilling the service, has discretion in establish pricing and controls the promised service before transferring that service to customers. Otherwise, we record revenue at the net amounts as commissions.

We derive revenue primary from the delivery of Hosting services, VPN services and Cloud services.

Hosting services are services that we dedicate data center space to house customers' servers and networking equipment and provides tailored server administration services including operating system support and assistance with updates, server monitoring, server backup and restoration, server security evaluation, firewall services, and disaster recovery. We also provides interconnectivity services to connect customers with each other, internet backbones in China and other networks through Border Gateway Protocol, or BGP, network, or single-line, dual-line or multiple-line networks. Hosting services are typically provided to customers for a fixed amount over the contract service period and the related revenues are recognized on a straight-line basis over the term of the contract. For certain contracts where considerations are based on the usage of the Hosting services, the related revenues are recognized based on the consumption at the predetermined rate as the services are rendered throughout the contact term. We are a principal and records revenue for Hosting service on a gross basis.

VPN services are services that we extend customers' private networks by setting up secure and dedicated connections through the public internet. VPN services are provided to customers for a fixed amount over the contract service period and revenue are recognized on a straight-line basis over the term of the contract. We are a principal and records revenue for VPN service on a gross basis.

Cloud services allow businesses to run their applications over the internet using the IT infrastructure. Revenue from Cloud services consisted of incentive revenue from Microsoft upon completion of certain conditions and a fixed percentage amount based on gross sales price generated from Cloud services provided to end customers. Cloud services are generally provided to end customers for a fixed amount over the contract period and the related revenues are recognized on a straight-line basis over the contract period. For certain contracts where considerations are based on the usage of the cloud resources, the related revenues are recognized based on the consumption at the predetermined rate as the services are rendered throughout the contract term. We record revenue for Cloud service on a net basis.

For certain arrangements, customers are required to pay us before the services are delivered. When either party to a revenue contract has performed, we recognize a contract asset or a contract liability in the consolidated balance sheet, depending on the relationship between our performance and the customer's payment. Contract liabilities were mainly related to fee received for Hosting services to be provided over the contract period, which were presented as deferred revenue on the consolidated balance sheets.

Deferred revenue represents our obligation to transfer the goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. As of December 31, 2018 and 2019, we have deferred revenue amounting up to RMB57.8 million and RMB57.6 million (US$8.3 million), respectively. The decrease in deferred revenue as compared to the year ended December 31, 2018 is a result of the decrease in consideration received from the customers. Revenue recognized from opening deferred revenue balance was RMB47.0 million (US$6.8 million) for the year ended December 31, 2019.

Fair Value of Financial Instruments

Our financial instruments include cash and cash equivalents, restricted cash, short-term investments, accounts receivable and payable, other receivables and payables, bonds payable, short-term and long-term bank borrowings, available-for-sale investments, liability classified restricted share units ("RSU"). Other than the bonds payable and long-term bank borrowings, the carrying values of these financial instruments approximate their fair values due to their short-term maturities.

The carrying amounts of bonds payable and long-term bank borrowings approximate their fair values since they bear interest rates which approximate market interest rates.

Consolidation of Variable Interest Entities

PRC laws and regulations currently restrict foreign ownership of PRC companies that engage in value-added telecommunications services, including content and application delivery services. To comply with the foreign ownership restriction, we conduct our businesses in the PRC through our variable interest entities using contractual arrangements entered into by us, 21Vianet China, 21Vianet Technology and its respective shareholders. See "—C. Organizational Structure". 21Vianet Beijing, subsidiary of 21Vianet Technology, holds a Cross-Regional VAT licenses to carry out the full data center business across two province-level municipalities and four cities in China and data center business (excluding internet resources coordination service) across two province-level municipalities and 18 cities in China. We exercise effective control over 21Vianet Technology through a series of contractual arrangements, including: (i) an irrevocable power of attorney, under which each shareholder of 21Vianet Technology appointed 21Vianet China or a person designated by 21Vianet China as his/her attorney-in-fact to attend shareholders' meeting of 21Vianet Technology and exercise all the shareholder's voting rights, such power of attorney has been subsequently assigned to 21Vianet Group; (ii) a loan agreement and a financial support letter pursuant to which we agree to give unlimited financial support to 21Vianet Technology; and (iii) an exclusive technical consulting and services agreement, where we receive substantially all of the economic benefits of 21Vianet Technology in consideration for the services provided by 21Vianet China and we are considered the primary beneficiary of 21Vianet Technology. Accordingly, 21Vianet Technology is our variable interest entity under U.S. GAAP and we consolidate its result in our consolidated financial statements. Similar contractual arrangements had been entered into (i) amongst iJoy BVI, SZ Zhuoaiyi, BJ iJoy and its shareholder; and (ii) amongst WiFire Group, aBitCool DG, WiFire Network and its shareholders; and similar conclusion has been reached respect to the variable interest entity structure with iJoy BVI and WiFire Group as the primary beneficiaries of BJ iJoy and WiFire Network, respectively. We have confirmed with Han Kun Law Offices, our PRC legal counsel, on the compliance and validity of each of the contractual agreements under PRC laws and regulations. However, any change in PRC laws and regulations may affect our ability to effectively control the variable interest entities and preclude us from consolidating the variable interest entities in the future.

Short-term Investments

All highly liquid investments with original maturities of greater than three months but less than twelve months, are classified as short-term investments. Interest income is included in earnings.

Long-term Investments

Our long-term investments consist of equity investments without readily determinable fair value, equity method investments and available-for-sale debt investments.

Prior to adopting ASC Topic 321, *Investments—Equity Securities* ("ASC 321") on January 1, 2018, we carries at cost its investments in investees that do not have readily determinable fair value and over which we do not have significant influence, in accordance with ASC Subtopic 325-20, *Investments-Other: Cost Method Investments* ("ASC 325-20").We only adjust the carrying value of such investments for other-than-temporary decline in fair value and for distribution of earnings that exceed our share of earnings since its investment.

Management regularly evaluates the impairment of equity investments without readily determinable fair value based on the performance and financial position of the investee as well as other evidence of market value. Such evaluation includes, but is not limited to, reviewing the investee's cash position, recent financing, projected and historical financial performance, cash flow forecasts and financing needs. An impairment loss is recognized in earnings equal to the excess of the investment's cost over its fair value at the balance sheet date of the reporting period for which the assessment is made. The fair value would then become the new cost basis of the investment.

We adopted ASC 321 on January 1, 2018 and the cumulative effect of adopting the new standard on opening retained deficit is nil. Pursuant to ASC 321, equity investments, except for those accounted for under the equity method and those that result in consolidation of the investee and certain other investments, are measured at fair value, and any changes in fair value are recognized in earnings. For equity securities without readily determinable fair value and do not qualify for the existing practical expedient in ASC Topic 820, *Fair Value Measurements and Disclosures* ("ASC 820"), to estimate fair value using the net asset value per share (or its equivalent) of the investment, we elected to use the measurement alternative to measure those investments at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer, if any. Equity securities with readily determinable fair value are measured at fair values, and any changes in fair value are recognized in earnings.

Pursuant to ASC 321, for equity investments measured at fair value with changes in fair value recorded in earnings, we do not assess whether those securities are impaired. For those equity investments that we elect to use the measurement alternative, we make a qualitative assessment of whether the investment is impaired at each reporting date. If a qualitative assessment indicates that the investment is impaired, the entity has to estimate the investment's fair value in accordance with the principles of ASC 820. If the fair value is less than the investment's carrying value, the entity has to recognize an impairment loss in net income equal to the difference between the carrying value and fair value.

Available-for-sale debt investments are convertible debt instruments issued by private companies, which are measured at fair value, with unrealized gains or losses recorded in accumulated other comprehensive income.

Investments in equity investees represent investments in entities in which we can exercise significant influence but does not own a majority equity interest or control are accounted for using the equity method of accounting in accordance with ASC Subtopic 323-10, *Investments-Equity Method and Joint Ventures:* Overall ("ASC 323-10"). we apply the equity method of accounting that is consistent with ASC 323-10 in limited partnerships in which we hold a three percent or greater interest. Under the equity method, we initially record our investment at cost and prospectively recognizes its proportionate share of each equity investee's net profit or loss into its consolidated statements of operations. The difference between the cost of the equity investee and the amount of the underlying equity in the net assets of the equity investee is recognized as equity method goodwill included in equity method investments on the consolidated balance sheets. We evaluate our equity method investments for impairment under ASC 323-10. An impairment loss on the equity method investments is recognized in the consolidated statements of operations when the decline in value is determined to be other-than-temporary.

Goodwill

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business. In accordance with ASC Topic 350, *Goodwill and Other Intangible Assets* ("ASC 350"), recorded goodwill amounts are not amortized, but rather are tested for impairment annually or more frequently if there are indicators of impairment present.

In accordance with ASC 350, we assigned and assessed goodwill for impairment at the reporting unit level. A reporting unit is an operating segment or one level below the operating segment. In 2017, there were two reporting units consisting of two service lines namely hosting and related services and managed network services. The goodwill was reassigned to the two reporting units using a relative fair value allocation approach.

After the disposal of WiFire Entities and Aipu Group in September 2017, we determined that there is only hosting and related services remained and hence our company as a whole is one reporting unit as of December 31, 2018 and 2019.

We early adopted ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), which simplifies the accounting for goodwill impairment by eliminating Step two from the goodwill impairment test. Under the new guidance, if a reporting unit's carrying amount exceeds its fair value, an entity will record an impairment charge based on that difference. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit. Fair value is primarily determined by computing the future discounted cash flows expected to be generated by the reporting unit.

Immediately before the disposal of WiFire Entities and Aipu Group in September 2017, we completed the impairment test for goodwill in managed network services. We determined the fair value of the reporting unit using the income approach based on the discounted expected cash flows associated with the reporting unit. The discounted cash flows for the reporting unit were based on five-year projections. Cash flow projections were based on past experience, actual operating results and management best estimates about future developments as well as certain market assumptions. Cash flows after five years were estimated using a terminal value calculation, which considered terminal value growth at 3%, considering the long-term revenue growth for entities in a similar industry in the PRC. The discount rate of approximately 13% was derived and used in the valuations which reflect the market assessment of the risks specific to us and our industry and is based on its weighted average cost of capital. The resulting fair value of the reporting unit significant lower than its carrying value, we fully impaired goodwill in managed network services and recorded an amount of RMB766 million for impairment loss of goodwill as of December 31, 2017.

Pursuant to ASC 350, in 2018 and 2019, we performed a qualitative assessment for hosting and related services and completed our annual impairment test for goodwill that has arisen out of our acquisitions. We evaluated all relevant factors including, but not limited to, macroeconomic conditions, industry and market conditions, financial performance, and the share price of us. We weighed all factors in their entirety and concluded that it was not more-likely-than-not the fair value was less than the carrying amount of the reporting unit, and further impairment testing on goodwill was unnecessary.

No impairment loss of goodwill in hosting and related services was recognized for the years ended December 31, 2018 and 2019.

Impairment of long-lived assets

We evaluate our long-lived assets or asset group, including intangible assets with finite lives, for impairment whenever events or changes in circumstances (such as a significant adverse change to market conditions that will impact the future use of the assets) indicate that the carrying amount of an asset or a group of long-lived assets may not be recoverable. When these events occur, we evaluate for impairment by comparing the carrying amount of the assets to future undiscounted net cash flows expected to result from the use of the assets and their eventual disposition. If the sum of the expected undiscounted cash flow is less than the carrying amount of the assets, we would recognize an impairment loss based on the excess of the carrying amount of the asset group over its fair value. Fair value is generally determined by discounting the cash flows expected to be generated by the assets, when the market prices are not readily available for the long-lived assets.

In 2016, due to the deterioration of the operating results of one of our asset group, we recognized an impairment loss based on the excess of the carrying amount of the asset group over its fair value. We determined the fair value of the asset group using the income approach based on the discounted expected cash flows associated with the asset group. The discounted cash flows for the asset group were based on eight year projections which is consistent with the remaining useful lives of its principal assets. Cash flow projections were based on past experience, actual operating results and management best estimates about future developments as well as certain market assumptions. The discount rate of approximately 13% was derived and used in the valuations which reflect the market assessment of the risks specific to us and our industry and is based on its weighted average cost of capital.

As of December 31, 2017, due to continued operational losses, we recorded the long-lived assets impairment amounting to RMB170.7 million and RMB231.1 million for the asset groups of Aipu Group and WiFire Entities, respectively, resulting from excess of the carrying amount of the asset groups over their fair values of the two asset groups, respectively.

We determined the fair value of the asset groups using the income approach based on the discounted expected cash flows associated with the respective asset groups. The discounted cash flows for the asset groups were based on seven year projections for Aipu and five years for WiFire Entities, which are consistent with the remaining useful lives of its principal assets. Cash flow projections were based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The discount rate of approximately 13% was derived and used in the valuations which reflect the market assessment of the risks specific to us and our industry and is based on its weighted average cost of capital. No impairment was recognized in other assets groups as there was no impairment indicator identified.

The impairment loss reduced the carrying amount of the long-lived assets of a group on a pro-rata basis using the relative carrying amount of those assets.

In 2018 and 2019, we performed a qualitative assessment for impairment on whether events or changes in circumstances indicate that the carrying amount of an asset or a group of long-lived assets might not be recoverable. No impairment was recognized for the year ended December 31, 2018 and 2019 as there was no impairment indicator identified.

We recorded impairment charges associated with our long-lived assets and acquired intangibles as follows:

	Years ended December 31,			
	2017	2018	2019	
	RMB'000	RMB'000	RMB'000	US$'000
Impairment of property and equipment	237,956	—	—	—
Impairment of intangible assets	163,852	—	—	—

Leases

Effective January 1, 2019, we adopted ASC Topic 842, *Lease* ("ASC 842") using the modified retrospective method and did not restate the comparable periods. We determine if an arrangement is a lease at inception. Leases are classified as operating or finance leases in accordance with the recognition criteria in ASC 842-20-25. Our leases do not contain any material residual value guarantees or material restrictive covenants.

We have elected the package of practical expedients, which allows us not to reassess (1) whether any expired or existing contracts as of the adoption date are or contain a lease, (2) lease classification for any expired or existing leases as of the adoption date and (3) initial direct costs for any expired or existing leases as of the adoption date. We have lease agreements with lease and nonlease components, which are generally accounted for separately. Lastly, we elected the short-term lease exemption for all contracts with lease term of 12 months or less.

At the commencement date of a lease, we determine the classification of the lease based on the relevant factors present and records a right-of-use ("ROU") asset and lease liability for operating lease, and records property and equipment and finance lease liability for finance lease. ROU assets and property and equipment acquired through lease represent the right to use an underlying asset for the lease term, and operating lease liabilities and finance lease liabilities represent the obligation to make lease payments arising from the lease. ROU assets and lease liabilities are calculated as the present value of the lease payments not yet paid. If the rate implicit in our leases is not readily available, we use an incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. This incremental borrowing rate reflects the fixed rate at which we could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. ROU assets include any lease prepayments and are reduced by lease incentives. Operating lease expense for lease payments is recognized on a straight-line basis over the lease term. Lease terms are based on the non-cancelable term of the lease and may contain options to extend the lease when it is reasonably certain that we will exercise that option.

Leases with an initial lease term of 12 months or less are not recorded on the consolidated balance sheet. Lease expense for these leases is recognized on a straight-line basis over the lease term.

Income Taxes

We account for income taxes using the liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial reporting and tax bases of assets and liabilities using enacted tax rates that will be in effect in the period in which the differences are expected to reverse. We record a valuation allowance against deferred tax assets if, based on the weight of available evidence, it is more-likely-than-not that some portion, or all, of the deferred tax assets will not be realized. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date.

We apply ASC Topic 740, *Accounting for Income Taxes* ("ASC 740") to account for uncertainty in income taxes. ASC 740 prescribes a recognition threshold a tax position is required to meet before being recognized in the financial statements.

We have elected to classify interest and penalties related to unrecognized tax benefits, if and when required, as part of "income tax benefits (expenses)" in the consolidated statements of operations.

Share-based Compensation

Share options and Restricted Share Units ("RSUs") granted to employees are accounted for under ASC Topic 718, *Compensation—Stock Compensation* ("ASC 718"), which requires that share-based awards granted to employees be measured based on the grant date fair value and recognized as compensation expense over the requisite service period and/or performance period (which is generally the vesting period) in the consolidated statements of operations. We account our forfeitures as we occur.

We have elected to recognize compensation expense using the straight-line method for share-based awards granted with service conditions that have a graded vesting schedule. For share-based awards granted with performance conditions, we recognize compensation expense using the accelerated method. We commence recognition of the related compensation expense if it is probable that the defined performance condition will be met. To the extent that we determine that it is probable that a different number of share-based awards will vest depending on the outcome of the performance condition, the cumulative effect of the change in estimate is recognized in the period of change. For share-based awards with market conditions, the probability to achieve market conditions is reflected in the grant date fair value. We recognized the related compensation expenses when the requisite service is rendered using the accelerate method.

On November 26, 2016, the Board approved a new incentive program to certain individuals with a new bonus scheme which will be settled by issuing a variable number of shares with a fair value equal to fixed dollar amount on the settlement date. We remeasure the fair value of such liability at each reporting period end through earnings until the actual settlement date, which is the date when the number of underlying shares were fixed and recorded the compensation cost over the remaining vesting term.

For the performance bonuses that the employees can elect to settle in cash and/or restricted shares of the us ("Share-Settled Bonus"), we estimate the portion of the arrangement to be settled in shares based on its past settlement practices and classifies such portion as a liability in accordance with ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480") as we can only settle the Share-Settled Bonus by issuing variable number of shares until the settlement date. We remeasure the fair value of such liability at each reporting period end through earnings until the underlying shares were approved and granted to the employees and accounted for the granted restricted shares unit as equity award. The original cash bonus amount continues to be classified as a liability within "Accrued expenses and other payables" in the consolidated balance sheets.

A cancellation of the terms or conditions of an equity award under original award in exchange for a new award should be treated as modification. The compensation costs associated with the modified awards are recognized if either the original vesting conditions or the new vesting conditions have been achieved. Total recognized compensation cost for the awards is at least equal to the fair value of the original awards at the grant date unless at the date of the modification the performance or service conditions of the original awards are not expected to be satisfied. The incremental compensation cost is measured as the excess of the fair value of the replacement awards over the fair value at the modification date. Therefore, in relation to the modified awards, we recognize share-based compensation over the vesting periods of the new awards, which comprises (i) the amortization of the incremental portion of share-based compensation over the remaining vesting term, and (ii) any unrecognized compensation cost of original awards, using either the original term or the new term, whichever results in higher expenses for each reporting period. For modification of a liability award that remains a liability after modification, the liability award continues to be re-measured at fair value at each reporting date.

In January 2017, we made revisions to the Share-Settled Bonus to remove the option to settle bonus accrued in 2017. For the Share-Settled Bonus accrued in 2016 which were elected to be settled in shares, we issued shares to settle all the Share-Settled Bonus as of December 31, 2017.

Segment Reporting

In accordance with ASC Topic 280, *Segment Reporting* (“ASC 280”), we historically had two reportable segment since our chief executive officer, who has been identified as our chief operating decision-maker (“CODM”) formerly relied on the results of operations of hosting and related services and managed network services separately when making decisions on allocating resources and assessing performance of us. Hosting and related services business focuses primarily on colocation, interconnectivity, cloud, VPN, hybrid IT and other value-added services. Managed network services focuses on businesses that primarily utilize bandwidth such as content delivery network (“CDN”) service, hosting area network services and last-mile wired broadband service.

In September 2017, we disposed WiFire Entities and Aipu Group, which are primarily engaged in the managed network services. After the disposal, we have only one hosting and related services remained and the CODM reviews the operation result of the company as a whole. As of December 31, 2018 and 2019, we only had one reporting segment.

Recently Issued Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments — Credit Losses* (Topic 326), Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. The standard will replace "incurred loss" approach with an "expected loss" model for instruments measured at amortized cost. For available-for-sale debt securities, entities will be required to record allowances rather than reduce the carrying amount, as they do today under the other-than-temporary impairment model. The standard is effective for public business entities for annual periods beginning after December 15, 2019, and interim periods therein. We do not currently anticipate the adoption of this ASU to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* ("ASU 2018-13"). ASU 2018-13 modifies the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. The amendments in ASU 2018-13 will be effective for us beginning after January 1, 2020 including interim periods within the year. Early adoption is permitted. An entity is permitted to early adopt any removed or modified disclosures upon issuance of ASU No. 2018-13 and delay adoption of the additional disclosures until their effective date. We do not expect the amendments of this guidance to have a material impact on our consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): *Simplifying the Accounting for Income Taxes*. This update simplifies the accounting for income taxes as part of the FASB's overall initiative to reduce complexity in accounting standards. The amendments include removal of certain exceptions to the general principles of ASC 740, Income taxes, and simplification in several other areas such as accounting for a franchise tax (or similar tax) that is partially based on income. The update is effective in fiscal years beginning after December 15, 2020, and interim periods therein, and early adoption is permitted. Certain amendments in this update should be applied retrospectively or modified retrospectively, all other amendments should be applied prospectively. We do not expect the amendments of this guidance to have a material impact on our consolidated financial statement.

Inflation

In the last 3 years, inflation in China has not materially impacted our results of operations. According to the National Bureau of Statistics of China, the annual average percent changes in the consumer price index in China for 2017, 2018 and 2019 were 1.6%, 2.1% and 2.9%, respectively. The year-over-year percent changes in the consumer price index for January 2018, 2019 and 2020 were increases of 1.5%, 1.7% and 5.4%, respectively. Although we have not been materially affected by inflation in the past, we cannot assure you that we will not be affected in the future by higher rates of inflation in China.

Results of Operations

The following table sets forth our consolidated results of operations for the periods indicated both in absolute amount and as a percentage of our total net revenues. This information should be read together with our consolidated financial statements and related notes included elsewhere in this annual report. The results of operations in any period are not necessarily indicative of the results you may expect for future periods.

	For the Years Ended December 31,						
	2017		2018		2019		
	RMB	%	RMB	%	RMB	USD	%
	(in thousands, except percentages)						
Consolidated Statements of Operations Data:							
Net revenues	3,392,705	100.0	3,401,037	100.0	3,788,967	544,251	100.0
Hosting and related services	2,975,178	87.7	3,401,037	100.0	3,788,967	544,251	100.0
Managed network services	417,527	12.3	—	—	—	—	—
Cost of revenues	(2,634,295)	(77.6)	(2,456,166)	(72.2)	(2,849,518)	(409,308)	(75.2)
Hosting and related services	(2,130,279)	(62.7)	(2,456,166)	(72.2)	(2,849,518)	(409,308)	(75.2)
Managed network services	(504,016)	(14.9)	—	—	—	—	—
Gross profit	758,410	22.4	944,871	27.8	939,449	134,943	24.8
Operating (expenses) income:							
Sales and marketing expenses	(256,682)	(7.6)	(172,176)	(5.1)	(206,309)	(29,634)	(5.4)
Research and development expenses	(149,143)	(4.4)	(92,109)	(2.7)	(88,792)	(12,754)	(2.3)
General and administrative expenses	(519,950)	(15.3)	(462,637)	(13.5)	(415,277)	(59,651)	(11.0)
(Allowance)/reversal for doubtful debt	(37,427)	(1.1)	598	0.0	(1,557)	(224)	(0.0)
Changes in the fair value of contingent purchase consideration payables	(937)	(0.0)	13,905	0.4	—	—	—
Impairment of long-lived assets	(401,808)	(11.8)	—	—	—	—	—
Impairment of goodwill	(766,440)	(22.6)	—	—	—	—	—
Impairment of receivables from equity investees	—	—	—	—	(52,142)	(7,490)	(1.4)
Other operating income	5,439	0.2	5,027	0.1	6,862	986	0.1
Total operating expenses	(2,126,948)	(62.6)	(707,392)	(20.8)	(757,215)	(108,767)	(20.0)
Operating (loss) profit	(1,368,538)	(40.2)	237,479	7.0	182,234	26,176	4.8
Interest income	32,925	1.0	45,186	1.3	54,607	7,844	1.4
Interest expense	(185,313)	(5.5)	(236,066)	(6.9)	(345,955)	(49,693)	(9.1)
Impairment of long-term investment	(20,258)	(0.6)	—	—	—	—	—
Gain on disposal of subsidiaries	497,036	14.7	4,843	0.1	—	—	—
Loss on debt extinguishment	—	—	—	—	(18,895)	(2,714)	(0.5)
Other income	16,764	0.5	58,033	1.7	36,380	5,226	1.0
Other expenses	(17,060)	(0.5)	(4,103)	(0.1)	(5,632)	(809)	(0.1)
Foreign exchange loss	(17,153)	(0.5)	(81,055)	(2.4)	(27,995)	(4,021)	(0.7)
(Loss) income before income taxes and gain (loss) from equity method investments	(1,061,597)	(31.1)	24,317	0.7	(125,256)	(17,991)	(3.3)
Income tax benefits (expense)	90,170	2.7	(24,411)	(0.7)	(5,437)	(781)	(0.1)
Gain (loss) from equity method investments	53,783	1.6	(186,642)	(5.5)	(50,553)	(7,261)	(1.3)
Consolidated net loss	(917,644)	(26.8)	(186,736)	(5.5)	(181,246)	(26,033)	(4.8)
Net loss (income) attributable to non-controlling interest	144,914	4.3	(18,329)	(0.5)	(1,046)	(150)	(0.0)
Net loss attributable to the Company's ordinary shareholders	(772,730)	(22.5)	(205,065)	(6.0)	(182,292)	(26,183)	(4.8)

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Net Revenues

Our net revenues in 2019 increased from RMB3,401.0 million in 2018 to RMB3,789.0 million (US$544.3 million) in 2019. The increase was primarily attributable to the growing demand for data centers in the domestic market, driven by the ongoing expansion of corporate digitalization across China.

Revenues from our hosting and related services amounted to RMB3,789.0 million (US$544.3 million) in 2019, increasing by 11.4% from RMB3,401.0 million in 2018. The increase in revenues from our hosting and related services was primarily due to (i) the increase in the total number of billable cabinets and the amount of monthly recurring revenue per cabinet under our management, which was attributable to growing customer demand, (ii) the growth in demand for our cloud business. The number of cabinets under our management increased from 30,654 as of December 31, 2018 to 36,291 as of December 31, 2019.

Cost of Revenues

Our cost of revenues increased by 16.0% from RMB2,456.2 million in 2018 to RMB2,849.5 million (US$409.3 million) in 2019. Our telecommunication costs increased by 17.9% from RMB1,332.3 million in 2018 to RMB1,570.8 million (US$225.6 million) in 2019. The increase in our cost of revenues was primarily due to the delivery of additional pipeline capacity.

Gross Profit

Our gross profit decreased by 0.6% from RMB944.9 million in 2018 to RMB939.4 million (US$134.9 million) in 2019. As a percentage of net revenues, our gross profit decreased from 27.8% in 2018 to 24.8% in 2019. The decrease of gross profit and gross margin was primarily due to the delivery of additional pipeline capacity.

Operating Expenses

Our operating expenses increased by 7.0% from RMB707.4 million in 2018 to RMB757.2 million (US$108.8 million) in 2019. Our operating expenses as a percentage of net revenues decreased from 20.8% in 2018 to 20.0% in 2019. The decrease of operating expenses as a percentage of net revenues was primarily due to the successful implementation of the Company's efficiency enhancement initiatives.

Sales and Marketing Expenses. Our sales and marketing expenses increased by 19.8% from RMB172.2 million in 2018 to RMB206.3 million (US$29.6 million) in 2019, primarily due to the successful implementation of various market activities. As a percentage of net revenues, our sales and marketing expenses was 5.1% and 5.4% in 2018 and 2019, respectively.

Research and Development Expenses. Our research and development expenses decreased from RMB92.1 million in 2018 to RMB88.8 million (US$12.8 million) in 2019. As a percentage of net revenues, our research and development expenses decreased from 2.7% in 2018 to 2.3% in 2019.

General and Administrative Expenses. Our general and administrative expenses decreased by 10.2% from RMB462.6 million in 2018 to RMB415.3 million (US$59.7 million) in 2019, primarily due to a decrease in labor cost as a result of the successful implementation of the Company's efficiency enhancement initiatives. As a percentage of net revenues, our general and administrative expenses decreased from 13.5% in 2018 to 11.0% in 2019.

Changes in the Fair Value of Contingent Purchase Consideration Payable. We incurred nil in the changes of the fair value of contingent purchase consideration payable in 2019.

Impairment of receivables from equity investees. We recorded a loss of RMB52.1 million (US$7.5 million) in 2019.

Impairment of long-lived assets. We incurred nil in impairment of long-lived assets in 2019.

Impairment of goodwill. We incurred nil in impairment of goodwill in 2019.

Interest Income

Our interest income increased from RMB45.2 million in 2018 to RMB54.6 million (US$7.8 million) in 2019, primarily due to an increase in interest income generated from short-term investments.

Interest Expense

Our interest expense increased from RMB236.1 million in 2018 to RMB346.0 million (US$49.7 million) in 2019, primarily due to interest expense recognized for the 2021 Notes.

Other Income

Our other income decreased from RMB58.0 million in 2018 to RMB36.4 million (US$5.2 million) in 2019. Other income in 2019 was primarily attributable to disposal gain on equity method investments.

Other Expenses

Our other expenses increased from RMB4.1 million in 2018 to RMB5.6 million (US$0.8 million) in 2019. Other expenses in both periods were primarily due to the loss attributable to the disposal of certain of our equipment, such as servers and back-up batteries.

Loss on Debt Extinguishment

We recorded a loss on debt extinguishment of RMB18.9 million (US$2.7 million) 2019.

Foreign Exchange Loss

We had a foreign exchange loss of RMB28.0 million (US$4.0 million) in 2019, primarily due to the appreciation of U.S. dollar against Renminbi in 2019.

Income Tax Expenses

We recorded income tax expenses in the amount of RMB5.4 million (US$0.8 million) in 2019, compared with income tax expenses of RMB24.4 million in 2018, with the effective tax rates 3.1%. This is primarily due to:

- Change in valuation allowance leads to a decrease in the income tax expense in the amount of RMB25.4 million (US$3.7 million) in 2019;
- Loss incurred outside China reduces the income tax benefit by RMB77.1 million (US$11.1 million) in 2019; and
- Current and deferred tax rate differences leads to an income tax expense in the amount of RMB8.7 million (US$1.3 million) in 2019.

Consolidated Net Loss

As a result of the above, we recorded a net loss of RMB181.2 million (US$26.0 million) in 2019, as compared to a net loss of RMB186.7 million in 2018.

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Net Revenues

Our net revenues in 2018 increased from RMB3,392.7 million in 2017 to RMB3,401.0 million in 2018. The increase was primarily attributable to the growing demand for data centers and cloud services in the domestic market, partially offset by the disposal of WiFire Entities and Aipu Group.

Revenues from our hosting and related services amounted to RMB3,401.0 million in 2018, increasing by 14.3% from RMB2,975.2 million in 2017. The increase in revenues from our hosting and related services was primarily due to (i) the increase in the total number of billable cabinets and the amount of monthly recurring revenue per cabinet under our management, which was attributable to growing customer demand, (ii) the growth in demand for our cloud business. The number of cabinets under our management increased from 29,080 as of December 31, 2017 to 30,654 as of December 31, 2018.

Cost of Revenues

Our cost of revenues decreased by 6.8% from RMB2,634.3 million in 2017 to RMB2,456.2 million in 2018. Our telecommunication costs decreased by 13.1% from RMB1,533.6 million in 2017 to RMB1,332.3 million in 2018. The decrease in our cost of revenues was primarily due to our improved cost efficiency of hosting and related services and disposal of WiFire Entities and Aipu Group.

Gross Profit

Our gross profit increased by 24.6% from RMB758.4 million in 2017 to RMB944.9 million in 2018. As a percentage of net revenues, our gross profit increased from 22.4% in 2017 to 27.8% in 2018. The increase of gross profit and gross margin was primarily due to our improved cost efficiency of hosting and related services and disposal of WiFire Entities and Aipu Group.

Operating Expenses

Our operating expenses decreased by 66.7% from RMB2,126.9 million in 2017 to RMB707.4 million in 2018. Our operating expenses as a percentage of net revenues decreased from 62.6% in 2017 to 20.8% in 2018. The decrease of our operating expenses was primarily due to the successful implementation of the Company's efficiency enhancement initiatives and the decrease in labor cost as a result of the disposal of WiFire Entities and Aipu Group.

Sales and Marketing Expenses. Our sales and marketing expenses decreased by 32.9% from RMB256.7 million in 2017 to RMB172.2 million in 2018, primarily due to a decrease in labor cost as a result of the disposal of WiFire Entities and Aipu Group. As a percentage of net revenues, our sales and marketing expenses was 7.6% and 5.1% in 2017 and 2018, respectively.

Research and Development Expenses. Our research and development expenses decreased from RMB149.1 million in 2017 to RMB92.1 million in 2018. As a percentage of net revenues, our research and development expenses decreased from 4.4% in 2017 to 2.7% in 2018.

General and Administrative Expenses. Our general and administrative expenses decreased by 11.0% from RMB520.0 million in 2017 to RMB462.6 million in 2018, primarily due to a decrease in labor cost as a result of the disposal of WiFire Entities and Aipu Group. As a percentage of net revenues, our general and administrative expenses decreased from 15.3% in 2017 to 13.5% in 2018.

Changes in the Fair Value of Contingent Purchase Consideration Payable. We recorded a gain from the changes of the fair value of contingent purchase consideration payable in the amount of RMB13.9 million in 2018 in connection with our acquisition, which was attributable to the seller's waiver of its rights to receive contingent purchase consideration in this transaction.

Impairment of long-lived assets. We incurred nil in impairment of long-lived assets in 2018.

Impairment of goodwill. We incurred nil in impairment of goodwill in 2018.

Interest Income

Our interest income increased from RMB32.9 million in 2017 to RMB45.2 million in 2018, primarily due to an increase in interest income generated from short-term investments.

Interest Expense

Our interest expense increased from RMB185.3 million in 2017 to RMB236.1 million in 2018, primarily due to interest expense recognized for the 2020 Notes.

Other Income

Our other income increased from RMB16.8 million in 2017 to RMB58.0 million in 2018. Other income in 2018 was primarily attributable to disposal gain on an equity method investment and equity investment without readily determinable fair value.

Other Expenses

Our other expenses decreased from RMB17.1 million in 2017 to RMB4.1 million in 2018. Other expenses in both periods were primarily due to the loss attributable to the disposal of certain of our equipment, such as servers and back-up batteries.

Loss on Debt Extinguishment

We incurred nil in loss on debt extinguishment in 2018.

Foreign Exchange Gain

We had a foreign exchange loss of RMB81.1 million in 2018, primarily due to the appreciation of U.S. dollar against Renminbi in 2018.

Income Tax (Expense) Benefits

We recorded income tax expense in the amount of RMB24.4 million in 2018, compared with income tax benefits of RMB90.2 million in 2017, with the effective tax rates 15.0%. This is primarily due to:

- Change in valuation allowance leads to an increase in the income tax expense in the amount of RMB79.7 million in 2018;
- Loss incurred outside China reduces the income tax benefit by RMB63.5 million in 2018; and
- Current and deferred tax rate differences leads to an income tax benefit in the amount of RMB37.9 million in 2018.

Consolidated Net Loss

As a result of the above, we recorded a net loss of RMB186.7 million in 2018, as compared to a net loss of RMB917.6 million in 2017.

B. Liquidity and Capital Resources

As of December 31, 2019, we had RMB1,808.5 million (US$259.8 million) in cash and cash equivalents, RMB548.7 million (US$78.8 million) in restricted cash (current and non-current portion) and RMB363.9 million (US$52.3 million) in short-term investments.

As of December 31, 2019, we had short-term bank borrowings and long-term bank borrowings (current portions) from various commercial banks with an aggregate outstanding balance of RMB267.0 million (US$38.4 million), and long-term bank borrowings (excluding current portions) from various commercial banks with an aggregate outstanding balance of RMB79.5 million (US$11.4 million). The short-term bank borrowings bore weighted average interest rates of 4.04%, 4.05% and 4.56% per annum, respectively, in 2017, 2018 and 2019. Our short-term bank borrowings have maturity terms of one year and expire at various times throughout the year. There are no material covenants or restrictions on us associated with our outstanding short-term borrowings.

We have entered into long-term bank borrowing arrangements since 2013 with maturity terms of two to five years. The long-term bank borrowing (including current portion) outstanding as of December 31, 2017, 2018 and 2019 bore weighted-average interest rates of 5.50%, 5.31% and 5.28% per annum, respectively, in 2017, 2018 and 2019 and have certain financial covenants.

In August 2017, we issued the Original Notes. In September 2017, we issued the Notes. The Notes were priced at a slight premium of 100.04, with an effective yield of 6.98%. The Notes constitute a further issuance of, and were consolidated to form a single series with, the Original Notes. Interest on the 2020 Notes is payable semi-annually in arrears on, or nearest to, August 17 and February 17 in each year, beginning on February 17, 2018.

In April 2019, we issued the 2021 Notes, and used a portion of the proceeds to purchase, pursuant to a tender offer, US$150,839,000 in principal amount of the 2020 Notes, representing 50.28% of the outstanding principal amount of the 2020 Notes. On August 12, 2019, we repurchased US$18,000,000 in principal amount of 2020 Notes at the par value, with US$131,161,000 of the principal amount of the 2020 Notes remains outstanding as of December 31, 2019. Interest on the 2021 Notes is payable semi-annually in arrears on April 15 and October 15 in each year, beginning on October 15, 2019.

Both the 2020 Notes and 2021 Notes have (i) restrictive covenant that restricts our ability in consolidation, merger and sale of assets to a certain extent; (ii) negative pledge covenant that restricts our ability to create security upon our undertaking, assets or revenues to secure bonds, notes, debentures or other securities that are quoted, listed or dealt in or traded on securities market; (iii) dividend payment restriction covenant; and (iv) covenant relating to the ratio of our Adjusted EBITDA to our Consolidated Interest Expense (interest expense paid net of interest income received). Such covenants may limit our ability to undertake additional debt financing, but not equity financing.

We have unused credit line in the amount of RMB326.1 million (US$46.8 million) as of December 31, 2019, pursuant to credit agreements entered into with six banks. A total of RMB750.0 million (US$107.7 million) credit line was granted to us under seven credit agreements, of which we have used RMB423.9 million (US$60.9 million). There are no material covenants that restrict our ability to undertake additional financing associated with the used credit line. No terms and conditions of the unused credit line are available yet because utilization of such unused portion requires approval by the banks and separate loan agreements setting forth detailed terms and conditions will only be entered into with the banks upon utilization. We believe the working capital as of December 31, 2019 is sufficient for our present requirements.

As of December 31, 2019, we had total outstanding debts of RMB3,318.4 million (US$476.7 million). The growth of our business relies on the construction of new data centers. In additions, we also intend to acquire or invest in companies that are complementary to our business. Therefore, we intend to use the proceeds of our outstanding debt mainly to add new data centers and fund acquisitions. For example, as of December 31, 2019, we have purchase commitments (commitments related to acquisition of machinery, equipment, construction in progress, bandwidth and cabinet capacity) of RMB826.1 million (US$118.7 million) coming due during the 12-month period, and we intend to use a portion of the proceeds to fund the purchase commitments.

As of December 31, 2019, the amount of outstanding debt inside and outside of the PRC was RMB346.5 million (US$49.8 million) and RMB2,971.9 million (US$426.9 million), respectively. We believe we have sufficient financial resources to meet both of our onshore and offshore debt obligations when due.

Except as disclosed in this annual report, we have no outstanding bank loans or financial guarantees or similar commitments to guarantee the payment obligations of third parties. We believe that our current cash, cash equivalents and time deposits, our cash flow from operations and proceeds from our financing activities will be sufficient to meet our anticipated cash needs, including our cash needs for working capital and capital expenditures, for the next 12 months. If we have additional liquidity needs in the future, we may obtain additional financing, including equity offering and debt financing in capital markets, to meet such needs.

As of December 31, 2019, the total amount of cash and cash equivalents, restricted cash and short-term investments was RMB2,721.0 million (US$390.9 million), of which RMB918.5 million (US$132.0 million), RMB252.5 million (US$36.3 million) and RMB1,550.0 million (US$222.6 million) was held by our consolidated affiliated entities, PRC subsidiaries and offshore subsidiaries, respectively. Cash transfers from our PRC subsidiaries to our subsidiaries outside of China are subject to PRC government control of currency conversion. Restrictions on the availability of foreign currency may affect the ability of our PRC subsidiaries and consolidated affiliated entities to remit sufficient foreign currency to pay dividends or other payments to us, or otherwise satisfy their foreign currency denominated obligations. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Governmental control of currency conversion may limit our ability to receive and utilize our revenues effectively.” The major cost that would be incurred to distribute dividends is the withholding tax imposed on the dividends distributed by our PRC operating subsidiaries at the rate of 10% or a lower rate under an applicable tax treaty, if any.

The following table sets forth a summary of our cash flows for the periods indicated:

	For the Years Ended December 31,			
	2017[1]	2018[1]	2019	
	RMB	RMB	RMB	US$
	(in thousands)			
Net cash generated from operating activities	487,202	704,966	802,922	115,332
Net cash used in investing activities	(833,307)	(304,846)	(1,611,983)	(231,550)
Net cash (used in) generated from financing activities	(612,651)	(19,901)	461,557	66,302
Effect on foreign exchange rate changes on cash and cash equivalents and restricted cash	(140,298)	85,333	43,660	6,271
Net (decrease) increase in cash and cash equivalents and restricted cash	(1,099,054)	465,552	(303,844)	(43,645)
Cash and cash equivalents and restricted cash at beginning of the year	3,294,523	2,195,469	2,661,021	382,232
Cash and cash equivalents and restricted cash at end of the year	2,195,469	2,661,021	2,357,177	338,587
Cash and cash equivalents, restricted cash and short-term investments at end of the year	2,744,359	2,906,035	2,721,033	390,852

Note:

(1) The FASB issued new guidance in August 2016 and further updated in November 2016, which requires that amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning of period and end of period total amount shown on the statement of cash flows. This guidance has been adopted and applied retrospectively by us to the prior periods of 2017 presented herein.

Operating Activities

Net cash generated from operating activities was RMB802.9 million (US$115.3 million) in 2019, compared to net cash generated from operating activities of RMB705.0 million in 2018.

Net cash generated from operating activities in 2019 primarily resulted from a net loss of RMB181.2 million (US$26.0 million), positively adjusted for certain items such as (i) depreciation and amortization of RMB772.2 million (US$110.9 million), (ii) the increase in advances from customers of RMB398.7 million (US$57.3 million), and (iii) loss from equity method investments of RMB50.6 million (US$7.3 million) , partially offset by certain item such as the increase in prepaid expenses and other current assets of RMB328.2 million (US$47.1 million).

Net cash generated from operating activities in 2019 primarily reflected payments of RMB3,795.1 million (US$545.1 million) received from our customers, partially offset by our payments for telecommunication costs of RMB859.1 million (US$123.4 million) in 2019, payment for taxes of RMB71.3 million (US$10.2 million) and payment to employees of RMB688.6 million (US$98.9 million).

Net cash generated from operating activities was RMB705.0 million in 2018, compared to net cash generated from operating activities of RMB487.2 million in 2017.

Net cash generated from operating activities in 2018 primarily resulted from a net loss of RMB186.7 million, positively adjusted for certain items such as (i) depreciation and amortization of RMB634.6 million, (ii) the increase in advances from customers of RMB266.8 million, and (iii) loss from equity method investments of RMB186.6 million, partially offset by certain item such as the increase in prepaid expenses and other current assets of RMB262.4 million.

Net cash generated from operating activities in 2018 primarily reflected payments of RMB3,611.8 million received from our customers, partially offset by our payments for telecommunication costs of RMB852.0 million in 2018, payment for taxes of RMB86.3 million and payment to employees of RMB670.1 million.

Investing Activities

Net cash used in investing activities was RMB1,612.0 million (US$231.6 million) in 2019, as compared to net cash used in investing activities of RMB304.8 million in 2018. Net cash used in investing activities in 2019 is primarily related to our purchase of property and equipment in the amounts of RMB1,248.8 million (US$179.4 million), our payments for long-term investments in the amount of RMB9.3 million (US$1.3 million), our payment for short-term investments in the amount of RMB436.7 million(US$62.7 million), offset by proceeds received from maturity for short-term investments in the amount of RMB312.2 million (US$44.8 million), proceeds from disposal of long-term investments in the amount of RMB19.0 million (US$2.7 million).

Net cash used in investing activities was RMB304.8 million in 2018, as compared to net cash used in investing activities of RMB833.3 million in 2017. Net cash used in investing activities in 2018 is primarily related to our purchase of property and equipment in the amounts of RMB435.2 million, our payments for long-term investments in the amount of RMB252.8 million, our payment for short-term investments in the amount of RMB98.9 million, offset by proceeds received from maturity for short-term investments in the amount of RMB417.6 million, proceeds from disposal of long-term investments in the amount of RMB75.7 million.

Financing Activities

Net cash generated from financing activities was RMB461.6 million (US$66.3 million) in 2019, as compared to net cash used in financing activities amounting to RMB19.9 million in 2018. Net cash generated from financing activities in 2019 is primarily related to the proceeds from issuance of 2021 Notes of RMB2,012.1 million (US$289.0 million) and the proceeds from short-term bank borrowings of RMB234.5 million (US$33.7 million), partially offset by payment for purchase of property and equipment through finance leases of RMB333.6 million (US$47.9 million), the repayment of long-term bank borrowings of RMB85.1 million (US$12.2 million) and the repurchase of 2020 Notes of RMB1,148.1 million (US$164.9 million).

Net cash used in financing activities was RMB19.9 million in 2018, as compared to net cash used in financing activities amounting to RMB612.7 million in 2017. Net cash used in financing activities in 2018 is primarily related to the payment for purchase of property and equipment through finance leases of RMB279.9 million and the repayment of long-term bank borrowings of RMB70.6 million, partially offset by the contribution from non-controlling interest in a subsidiary of RMB196.3 million and proceeds from the issuance of notes of RMB95.6 million.

Capital Expenditures

We had capital expenditures relating to the addition of property and equipment of RMB396.0 million, RMB435.2 million and RMB1,248.8 million (US$179.4 million) in 2017, 2018 and 2019, respectively, representing 11.8%, 12.8% and 33.0%, respectively, of our total net revenues. Our capital expenditures were primarily for building self-built data centers, purchasing network equipment, servers and other equipment. Our capital expenditures have been primarily funded by cash generated from our operations and net cash provided by financing activities. We estimate that our data center capital expenditures in 2020 will be within the range of RMB2.4 billion to RMB2.8 billion, which will be primarily used to build self-built data centers, purchase network equipment, servers and other equipment to expand our business. We may have additional capital expenditure for real property purchase, data center construction and network capacity expansion if our actual development is beyond our current plan. We plan to fund the balance of our capital expenditure requirements for 2020 with cash from the proceeds from our operations, overseas offerings, operations and additional bank borrowings, if available.

Holding Company Structure

21Vianet Group, Inc. is a holding company with no material operations of its own. We conduct our operations primarily through our PRC subsidiaries and consolidated affiliated entities in China. As a result, although other means are available for us to obtain financing at the holding company level, 21Vianet Group, Inc.'s ability to pay dividends and to finance any debt it may incur depends upon dividends paid by our subsidiaries. If our subsidiaries or any newly formed subsidiaries incur debt on its own behalf in the future, the instruments governing their debt may restrict its ability to pay dividends to 21Vianet Group, Inc. In addition, our PRC subsidiaries and consolidated affiliated entities are permitted to pay dividends to us only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under PRC law, our PRC subsidiaries and consolidated affiliated entities are required to set aside a portion of their after-tax profits each year to fund a statutory reserve and to further set aside a portion of its after-tax profits to fund the employee welfare fund at the discretion of the board or the enterprise itself. Although the statutory reserves can be used, among other ways, to increase the registered capital and eliminate future losses in excess of retained earnings of the respective companies, the reserve funds are not distributable as cash dividends except in the event of liquidation of these subsidiaries and consolidated affiliated entities.

C. Research and Development, Patents and Licenses, etc.

Research and Development

Our strong research and development capabilities support and enhance our service offerings. We believe that we have one of the most experienced research and development teams in the internet infrastructure sector in China. We devote significant resources to our research and development efforts, focusing on improving customer experience, increasing operational efficiency and bringing innovative solutions to the market quickly. Over 65% of the work force on our research and development team are engineers. Many of our engineers have more than 10 years of relevant industry experience. In 2017, 2018 and 2019, our research and development expenses were RMB149.1 million, RMB92.1 million and RMB88.8 million (US$12.8 million), respectively.

Consistent with our strong culture of innovation, we devote significant resources to the research and development of our smart routing technology, cloud computing infrastructure service technologies. Our research and development efforts have yielded 70 patents, 45 patent applications and 72 software copyright registrations, all in China and related to different aspects of internet infrastructure services. We intend to continue to devote a significant amount of time and resources to carry out our research and development efforts.

Intellectual Property

We use our proprietary smart routing technology to optimize network connectivity and overcome the inherent inadequacies in China's telecommunication and internet infrastructure. Our smart routing technology continually monitors and analyzes the performance of all available routes and identifies the most appropriate pathway in real-time. In planning for and finding the optimized routing plan, our smart routing technology takes into consideration speed (latency), performance, route stability and pocket losses and dynamically responds with intelligent route adjustments in order to ensure that data is traveling along the fastest and most reliable route.

We rely on a combination of copyright, patent, trademark, trade secret and other intellectual property laws, nondisclosure agreements and other protective measures to protect our intellectual property rights. We generally control access to, and use of, our proprietary software and other confidential information through the use of internal and external controls, including physical and electronic security, contractual protections, and intellectual property law. We have implemented a strict security and information technology management system, including the prohibition of copying and transferring of codes. We educate our staff on the need to, and require them to, comply with such security procedures. We also promote protection through contractual prohibitions, such as requiring our employees to enter into confidentiality and non-compete agreements.

D. Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the year ended December 31, 2019 that are reasonably likely to have a material adverse effect on our net revenues, income, profitability, liquidity or capital resources, or that caused the disclosed financial information to be not necessarily indicative of future results of operations or financial conditions.

E. Off-Balance Sheet Arrangements

We have not entered into any financial guarantees or other commitments to guarantee the payment obligations of any third parties. We have not entered into any derivative contracts that are indexed to our shares and classified as shareholder's equity, or that are not reflected in our consolidated financial statements. Furthermore, we do not have any retained or contingent interest in assets transferred to an unconsolidated entity that serves as credit, liquidity or market risk support to such entity. Moreover, we do not have any variable interest in any unconsolidated entity that provides financing, liquidity, market risk or credit support to us or engages in leasing, hedging or research and development services with us.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2019:

	Payment Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
			(in thousands of RMB)		
Short-term borrowings[1]	234,500	234,500	—	—	—
Long-term borrowings[1][2]	112,000	32,500	79,500	—	—
Notes payable[3]	3,007,865	915,005	2,092,860	—	—
Operating lease obligations[4]	1,782,797	466,670	534,196	134,512	647,419
Purchase commitments[5]	933,926	826,082	105,570	365	1,909
Finance lease minimum lease payment[6]	3,252,962	364,729	763,591	243,955	1,880,687
Total	9,324,050	2,839,486	3,575,717	378,832	2,530,015

Notes:

(1) As of December 31, 2019, our short-term bank borrowings bore a weighted average interest rate of 4.56% and have original maturity terms of one year. Our unused short-term and long-term bank borrowing facilities amounted to RMB326.1 million (US$46.8 million). We have pledged land use rights with the net book value of RMB16.0 million (US$2.3 million), property with the net book value of RMB137.6 million (US$19.8 million), and leasehold improvements with the net book value of RMB66.2 million (US$9.5 million) for our bank borrowings.

(2) Long-term bank borrowings (including the current portions) outstanding as of December 31, 2019 bear a weighted-average interest rate of 5.28% per annum, and are denominated in Renminbi. These loans were obtained from financial institutions located in the PRC.

(3) The 2020 Notes with US$131.2 million of the principal amount outstanding due 2020 at an interest rate of 7.000% per annum and the 2021 Notes with US$300.0 million of the principal amount outstanding due 2021 at an interest rate of 7.875% per annum.

(4) Operating lease obligations are primarily related to the lease of office and data center space.

(5) As of December 31, 2019, we had commitments of approximately RMB225.5 million (US$32.4 million) related to acquisition of machinery, equipment and construction in progress. In addition, we had outstanding purchase commitments in relation to bandwidth and cabinet capacity of RMB708.4 million (US$101.8 million).

(6) Related to finance leases for electronic equipment, optic fibers and property.

G. Safe Harbor

This annual report on Form 20-F contains forward-looking statements. These statements are made under the "safe harbor" provisions of Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements can be identified by terminology such as "will," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates," "may," "intend," "is currently reviewing," "it is possible," "subject to" and similar statements. Among other things, the sections titled "Item 3. Key Information—Risk Factors," "Item 4. Information on the Company," and "Item 5. Operating and Financial Review and Prospects" in this annual report on Form 20-F, as well as our strategic and operational plans, contain forward -looking statements. We may also make written or oral forward-looking statements in our reports filed with or furnished to the SEC, in our annual report to shareholders, in press releases and other written materials and in oral statements made by our officers, directors or employees to third parties. Statements that are not historical facts, including statements about our beliefs and expectations, are forward-looking statements and are subject to change, and such change may be material and may have a material adverse effect on our financial condition and results of operations for one or more prior periods. Forward -looking statements involve inherent risks and uncertainties. A number of important factors could cause actual results to differ materially from those contained, either expressly or impliedly, in any of the forward-looking statements in this annual report on Form 20-F. Potential risks and uncertainties include, but are not limited to, a further slowdown in the growth of China's economy, government measures that may adversely and materially affect our business, failure of the wealth management services industry in China to develop or mature as quickly as expected, diminution of the value of our brand or image due to our failure to satisfy customer needs and/or other reasons, our inability to successfully execute the strategy of expanding into new geographical markets in China, our failure to manage growth, and other risks outlined in our filings with the SEC. All information provided in this annual report on Form 20-F and in the exhibits is as of the date of this annual report on Form 20-F, and we do not undertake any obligation to update any such information, except as required under applicable law.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information regarding our directors and executive officers as of the date of this annual report.

Directors and Executive Officers	Age	Position/Title
Sheng Chen	51	Chairman of the Board of Directors
Yoshihisa Ueno	57	Independent Director
Kenneth Chung-Hou Tai	69	Independent Director
Sean Shao	63	Independent Director
Erhfei Liu	62	Independent Director
Yao Li	56	Independent Director
Wenbin Chen	49	Director
Tao Zou	44	Director
Shiqi Wang	44	Chief Executive Officer and President
Sharon Xiao Liu	39	Chief Financial Officer
Chunfeng Cai	37	Chief Operating Officer
Wing-Dar Ker	59	Senior Vice President
Chenggang Shen	38	Senior Vice President
Liang Zhao	44	Senior Vice President
Qihang Liu	48	President of Cloud Business Unit
Feng Liu	48	Vice President

Mr. Sheng Chen is one of our co-founders and has served as the executive chairman of our board of directors since our inception. He has been our chief executive officer since our inception to October 2015. Mr. Chen has been instrumental to the development and success of our business. Mr. Chen provides vision, overall management, and strategic decision-making relating to marketing, investment planning, and corporate development. Mr. Chen has more than 20 years' experience in the internet infrastructure industry in China and started his entrepreneur career in 1990 when he was a sophomore at Tsinghua University. In 1999, Mr. Chen founded our business and started the first carrier-neutral data center in China. Mr. Chen currently also serves as a director of Cloud Tech Services Limited. Mr. Chen received his bachelor's degree in electrical engineering from Tsinghua University in 1991. Mr. Chen is a member of the Tsinghua Entrepreneur & Executive Club and a managing director of the Internet Society of China.

Mr. Yoshihisa Ueno has served as our director since October 2010. Mr. Ueno is a serial entrepreneur & venture capitalist with operation & industrial expertise in the US, Europe, Japan and China and over 35 years of incubation investment experience in emerging technology startups. Mr. Ueno has been our lead investor and board member of several of our affiliated companies since 2006. Mr. Ueno has been the founding partner of Synapse Company Limited & Synapse Partners Limited since December 2002, Synapse Holdings Limited since October 2013 and SMC Synapse Partners Limited from December 2010 to September 2015. Mr. Ueno has also been a director of several start-up portfolios such as Hivelocity Inc. from March 2015 and Catalyst Group Limited (Exicon Limited) from March 2015. Mr. Ueno has also served as director of BeyondSoft Group Holding Limited (SZSE: 2649) from September 2005 to May 2010, CDS GS Japan Ltd. (a joint venture with CDC Corp. NASDAQ: CHINA) from June 2011 to April 2012, and Insource (HK) Ltd. (a JV with Insource Co., Ltd. TSE: 6200) from December 2011 to September 2014. Mr. Ueno has managed several venture funds such as the Japan-China Bridge Fund from March 2005 to February 2011, Intellectual Property Bank (IPB) Partners Fund #1 in Japan from March 2006 to March 2010 and IPB Holding LLC in the United States from March 2006 to July 2007. Mr. Ueno also served as the chief executive officer at Cycolor, Inc., in the US from September 1998 to June 2003, until Cycolor was acquired by Eastman Kodak in early 2003. Mr. Ueno worked for Fujitec from April 1985 to May 1997 in various managerial capacities in Japan, China, the United Kingdom, Spain and Hong Kong. Mr. Ueno received his bachelor's degree in business administration from Takushoku University.

Mr. Kenneth Chung-Hou Tai has served as our director since October 2012. Mr. Tai is a prominent figure in the Taiwanese technology sector with over 40 years of industry experience with leading technology and hardware companies in Taiwan and the United States. Mr. Tai co-founded Acer Computer in 1976, which has become one of the top five branded PC vendors in the world today, and held various managerial positions during his tenure. Later in his technology career, Mr. Tai also founded Investar Capital, a venture capital firm focusing on IT companies. Mr. Tai is now serving as chairman of Photonics Industry & Technology Development Association (PIDA) is a non-profit organization affiliated to the Ministry of Science and Technology (MOST), and chairman of Digitimes Incorporated, the only technology-focused newspaper in Taiwan. Currently, Mr. Tai serves on the board of directors for several public companies in Taiwan and Singapore, including Asustek Computer Inc. (TPE: 2357) and Wafer Works Corporation (TPE: 6182). Mr. Tai also serves on the board of directors for several private companies, including Chief Telecom Corporation (TPE: 6561) and Jasper Display Corporation. Mr. Tai received a master's degree in business administration from Tam Kang University and a bachelor's degree in electrical engineering from National Chiao Tung University in Taiwan.

Mr. Sean Shao has served as our director since August 2015. Mr. Sean Shao also serves as independent director and chairman of the audit committee for Luckin Coffee Inc. (NASDAQ: LK) since May 2019, Jumei International Holding Ltd. (NYSE: JMEI) since May 2014, LightInTheBox Holdings Co. Ltd. (NYSE: LITB) since June 2013, UTStarcom Holdings Corp. (NASDAQ: UTSI) since October 2012, and China Biologic Products, Inc. (NASDAQ: CBPO) since July 2008. He served as chief financial officer and a board member of Trina Solar Limited from 2006 to 2008 and from 2015 to 2017, respectively. In addition, Mr. Shao served as chief financial officer of ChinaEdu Corporation and Watchdata Technologies Ltd from 2004 to 2006. Prior to that, Mr. Shao worked at Deloitte Touche Tohmatsu CPA Ltd. for approximately ten years. Mr. Shao received his master's degree in healthcare administration from the University of California at Los Angeles in 1988 and his bachelor's degree in arts from East China Normal University in 1982. Mr. Shao is a member of the American Institute of Certified Public Accountants.

Mr. Erhfei Liu has served as our director since May 2015. Mr. Liu also serves as independent director for QingLing Motors (Group) Co., Ltd. (HKG: 1122), one of the leading automobile manufacture in China, Jiangxi Copper Corporation (HKG: 358), China's extra-large copper cathode producer, and Frontage Holdings Corporation (HKG: 1521), a CRO providing integrated, science-driven, product development services throughout the drug discovery and development process. Mr. Liu has served as CEO of Asia Investment Fund (AIF), a private equity investment fund, since 2018, and co-founder and director of Cindat, a global restate investment platform, from 2013 to 2017. Mr. Liu has remained his position as a director at Cindat, but no longer participated in the day to day operations since 2018. From 1999 to 2012, Mr. Liu served as Chairman of Merrill Lynch China and then Country Executive of Bank of America Merrill Lynch. In addition to his various investment banking responsibilities, he was also in charge of the firm's private equity business in the Greater China from 2006 to 2010. Prior to joining Merrill Lynch, Mr. Liu worked as head of Asia or China for Goldman Sachs, Morgan Stanley, Smith Barney and Indosuez. Mr. Liu received an MBA from Harvard Business School and his bachelor's degrees from Brandeis University and Beijing Foreign Languages University.

Mr. Yao Li has served as our director since May 2018. Dr. Li has over 23 years' experience in finance and investment industry, and currently serves as the Chief Investment Officer of Asia for the International Finance Corporation (IFC) of the World Bank Group, Hong Kong office. Prior to joining IFC, Dr. Li served as the Vice General Manager in investment of PingAn Trust Company of PingAn Group of China from 2015 to early 2016. Prior to that, he served as the Chief Executive Officer of China-ASEAN Capital Advisory Company Limited and the Chairman of the Investment Committee of China-ASEAN Fund Management Company from mid-2011 to 2015. Prior to that, Dr. Li was a Co-head of the Investment Banking Business for Bank of China (BOC), where he was responsible for setting up the domestic securities business for BOC. Dr. Li holds a doctorate's degree in Economics from Renmin University of China.

Mr. Wenbin Chen has served as our director since September 2017. Mr. Chen currently serves as the chairman of TusCity Group and senior vice president of Tus-Holdings. Prior to that, Mr. Chen served as the chief editor of a magazine titled *the People's Rule of Law* and the deputy secretary-general of the China Behavior Law Association from 2011 to 2014. From 2008 to 2010, Mr. Chen worked as the head of capital operations and investor relations at China Longyuan Power Group Co., Ltd. (HKG: 0916) and a director at HaiNan Pearl River Holdings Co., Ltd. (000505. CN). Prior to that, Mr. Chen was a division chief at the National Audit Office of the PRC from 2001 to 2008, and taught at Beijing University of Technology from 1993 to 2001. Mr. Chen received his bachelor's degree in philosophy from Peking University and his Doctorate's degree in finance from Dongbei University of Finance and Economics.

Mr. Tao Zou has served as our director since December 2016. Mr. Zou is currently the chief executive officer and an executive director of Kingsoft Corporation Limited (HKG: 3888), a company listed on the Hong Kong Stock Exchange, and the chief executive officer and one of the directors of Seasun Holdings Limited, overseeing the operations of Seasun Holdings Limited and its subsidiaries, including the research and development of online games, and the operations of the gaming business of Kingsoft Corporation Limited and its subsidiaries, or Kingsoft Group. Mr. Zou also serves as a director of Cheetah Mobile (NYSE: CMCM) and Xunlei Limited (Nasdaq: XNET). Mr. Zou joined Kingsoft Group in 1998 and has taken various positions within the Kingsoft Group since then. Mr. Zou received a bachelor's degree from Tianjin Nankai University.

Mr. Shiqi Wang has serviced as our chief executive officer and President since February 2018. Mr. Wang also served as the Vice President of TUS Digital Group, a subsidiary of TUS Holdings, director of Beijing CIC Technology Co., Ltd. and director of Guangzhou Tuwei Technology Co., Ltd. Mr. Wang has nearly 20 years of experience in the telecommunications industry and has worked at various renowned international companies, including 11 years with Ericsson, focusing primarily on strategy development and execution, corporate management, and equity investments. Mr. Wang received a bachelor's degree from Tsinghua University and an MBA from Peking University-Vlerick MBA Program (BiMBA).

Ms. Sharon Xiao Liu has served as our chief financial officer since January 2018. Ms. Liu joined us in October 2010, and served as our vice president of finance in charge of the finance-related matters of our hosting and related services business prior to becoming our chief financial officer. Ms. Liu was also previously responsible for our pre- and post-IPO finance matters, investor relations, financial reporting, financial planning and analysis, and financial business plan. Prior to joining 21Vianet, Ms. Liu was a manager at KPMG China in its audit division since 2003. Ms. Liu is a Certified Public Accountant (CPA) in the state of North Dakota. Ms. Liu received her dual Bachelor' degrees in economics and law from Peking University.

Mr. Chunfeng Cai has served as our Chief Operating Officer since November 2019. Mr. Cai also served as the national general sales manager since January 2019. He has served as the general manager of our East China business and South China business since January 2016 and July 2017, respectively, to May 2018. Mr. Cai has ten years of working experience in IDC and CDN industry, as well as extensive experience in 2B business management. Prior to joining us, Mr. Cai was the vice president of ChinaCache, primarily responsible for the departments of enterprise business and company operation management center. Mr. Cai received his master's degree in mechanical and electronic engineering from Zhejiang University and his bachelor's degree in mechanical engineering from Jilin University.

Mr. Wing-Dar Ker has served as our senior vice president since February 2020. Mr. Ker served as our president of cloud business unit from October 2013 to February 2020. Prior to that, Mr. Ker was the general manager of Microsoft's Customer Service and Support for the Asia Pacific and Greater China Region. Mr. Ker started his career with Microsoft as the finance controller for the Greater China Region in August 1993, and held various managerial positions in Microsoft since then. Prior to joining Microsoft, Mr. Ker was the manager and group head of the Business Systems Consulting group of Andersen Consulting (now known as Accenture). Mr. Ker started his career in New York City where he served at several private companies for more than five years before joining Accenture. Mr. Ker received his MBA degree from the Case Western Reserve University in Cleveland, Ohio, and his bachelor's degree of economics from the National Taiwan University.

Mr. Chenggang Shen has served as our senior vice president and general manager of our East and South China business since January 2020. Mr. Shen joined us in January 2017, primarily responsible for our Hybrid IT services and product lines, respectively. Prior to joining us, Mr. Shen served as vice president for cloud products of GDS Holdings Limited (NASDAQ: GDS) and various senior executive positions in other reputable enterprises, including Samsung Electronics, Hewlett-Packard and Electronic Data Systems Corp., for technology management, business development and operation management. Mr. Shen has professional technology background and extensive industry experience, covering areas of finance, manufacturing, energy, automobile, e-commerce, aviation, and outsourcing. Mr. Shen received his bachelor's degree in software engineering from Sichuan University.

Mr. Liang Zhao has served as our senior vice president and general manager of our North China business since December 2019. Mr. Zhao has over 20 years of working experience and held various positions in China Unicom (SSE: 600050; SEHK: 762), including the vice general manager of China Unicom marketing division, China Unicom Online, and China Unicom Artificial Network Technology, the executive director of China Unicom Wo Music, and the vice chairman of the board of a joint venture established by China Unicom and Chery Automobile, respectively. Mr. Zhao has extensive experience in areas of products, operations, marketing and sales, 5G and internet-of-vehicle. Mr. Zhao received his EMBA degree from Stockholm University, master's degrees in sociology from Renmin University of China and in marketing communications from the University of Hong Kong, School of Professional and Continuing Education, and bachelor's degree in communication engineering from Southeast University.

Mr. Qihang Liu has served as our president of cloud business unit since March 2020. Mr. Liu served as our senior vice president from December 2019 to March 2020. Mr. Liu has over 25 years of technology and management experience in internet and technology industries. From 1994 to 2018, he held various positions in several reputable technology companies, including SONY, Microsoft and Hewlett-Packard, primarily responsible for research and development in networking and big data services, strategic planning and senior management. Mr. Liu has extensive experience in cloud computing, big data and artificial intelligence industries. Mr. Liu received his bachelor's degree in computer science from Beijing University of Technology.

Mr. Feng Liu has served as our vice president of infrastructure operation since January 2020. Mr. Liu served as our general manager of marketing and infrastructure operation from January 2019 to December 2019. From August 2016 to July 2017, Mr. Liu served as our vice president, primarily responsible for human resources, application development, information technology and key accounts departments. From July 2017 to the end of 2018, Mr. Liu served as the general manager of our North China business. Mr. Liu has extensive experience in telecom operator market management, research & development management, project delivery and international marketing. Prior to joining us, Mr. Liu was the vice president of AsiaInfo Group, primarily responsible for sales, delivery, research and development, marketing as well as the oversea business. Mr. Liu received his EMBA degree from the Economics and Management School of Tsinghua University and his bachelor's degree in engineering mechanics from Tsinghua University.

Employment Agreements

We have entered into employment agreements with each of our executive officers. Under these agreements, each of our senior executive officers is employed for a specified time period. We may terminate employment for cause, at any time, without advance notice or remuneration, for certain acts of the executive officer, such as conviction or plea of guilty to a felony or any crime involving moral turpitude, negligent or dishonest acts to our detriment, or misconduct or a failure to perform agreed duties. In such case, the executive officer will not be entitled to receive payment of any severance benefits or other amounts by reason of the termination, and the executive officer's right to all other benefits will terminate, except as required by any applicable law. We may also terminate an executive officer's employment without cause upon one-month advance written notice. In such case of termination by us, we are required to provide compensation to the executive officer, including severance pay, as expressly required by the applicable law of the jurisdiction where the executive officer is based. The executive officer may terminate the employment at any time with a one-month advance written notice, if there is any significant change in the executive officer's duties and responsibilities inconsistent in any material and adverse respect with his or her title and position or a material reduction in the executive officer's annual salary before the next annual salary review, or if otherwise approved by the board of directors.

Each executive officer has agreed to hold, both during and after the termination or expiry of his or her employment agreement, in strict confidence, and not to use, except as required in the performance of his or her duties in connection with the employment, any of our confidential information or trade secrets, any confidential information or trade secrets of our clients or prospective clients, or the confidential or proprietary information of any third party received by us and for which we have confidential obligations. The executive officers have also agreed to disclose in confidence to us all inventions, designs and trade secrets which they conceive, develop or reduce to practice and to assign all right, title and interest in them to us, and assist us in obtaining patents, copyrights and other legal rights for these inventions, designs and trade secrets.

In addition, each executive officer has agreed to be bound by non-competition and non-solicitation restrictions during the term of his or her employment and for one year following the last date of employment. Specifically, each executive officer has agreed not to (i) approach our clients, customers or contacts or other persons or entities introduced to the executive officer for the purpose of doing business with such persons or entities that will harm our business relationships with these persons or entities; (ii) assume employment with or provide services to any of our competitors, or engage, whether as principal, partner, licensor or otherwise, any of our competitors; or (iii) seek directly or indirectly, to solicit the services of any of our employees who is employed by us on or after the date of the executive officer's termination, or in the year preceding such termination.

B. Compensation

In 2019, the aggregate cash compensation we paid to our executive officers was approximately RMB20.9 million (US$3.0 million), which total amount included RMB0.73 million (US$0.1 million) for pension, retirement, medical insurance or other similar benefits for our executive officers. We did not provide any cash compensation to our non-executive directors in 2019. Other than the amounts stated above, no pension, retirement or similar benefits has been set aside or accrued for our executive officers or directors. None of our non-executive directors has a service contract with us that provides for benefits upon termination of employment.

In addition to the cash compensation referenced above, we also provide share-based compensation to our directors and officers. The total share-based compensation we provided to our directors and officers amounted to RMB36.8 million (US$5.3 million) in 2019. For option grants to our directors and officers, see "—Share Incentive Plans."

Share Incentive Plans

On July 16, 2010, we adopted our 2010 Plan to attract and retain the best available personnel, provide additional incentives to employees, directors and consultants and to promote the success of our business. We subsequently amended our 2010 Plan on January 14, 2011 and July 6, 2012. On May 29, 2014, we adopted our 2014 Plan on our annual general meeting, which was subsequently amended on April 1, 2015 and December 22, 2017 by unanimous written approval of our board of directors. The amended 2010 Plan and 2014 Plan permit the grant of options to purchase our ordinary shares, share appreciation rights, restricted shares, RSUs, dividend equivalent rights and other instruments as deemed appropriate by the administrator under the plans. The maximum aggregate number of ordinary shares that may be issued pursuant to all awards under the amended 2010 Plan is 39,272,595 Class A ordinary shares. Under the amended 2014 Plan, we are authorized to issue to our employees, directors and consultants (i) 21,888,624 Class A ordinary shares, and (ii) an automatic increase by a number that is equal to 15% of the number of new Class A and Class B Ordinary Shares (on an as converted basis) issued by the Company from time to time. Our board is also authorized, but not obligated, to increase the maximum number under the 2014 Plan by the number of, or a portion of, the Class A ordinary shares repurchased by us since January 1, 2014. As of February 29, 2020, options to purchase 931,254 ordinary shares and 3,271,135 RSUs have been granted under our amended 2010 Plan and amended 2014 Plan to our employees, directors and consultants without giving effect to the options that were exercised or terminated and RSUs that were vested.

Name	Options Granted	Restricted Share Units	Exercise Price (US$/Share)	Date of Grant	Date of Expiration
Sheng Chen	*	—	0.15	July 16, 2010	July 16, 2020
	—	*	—	August 30, 2012	—
	—	*	—	November 23, 2013	—
	—	*	—	March 7, 2015	—
	—	*	—	November 21, 2015	—
	—	*	—	November 26, 2016	—
	—	*	—	August 18, 2019	—
Yoshihisa Ueno	—	*	—	October 1, 2012	—
	—	*	—	April 25, 2014	—
	—	*	—	December 2, 2017	—
	—	*	—	March 7, 2018	—
	—	*	—	May 15, 2019	—
Kenneth Chung-Hou Tai	—	*	—	October 16, 2012	—
	—	*	—	November 21, 2015	—
	—	*	—	August 14, 2016	—
	—	*	—	May 12, 2017	—
	—	*	—	March 7, 2018	—
Sean Shao	—	*	—	November 21, 2015	—
	—	*	—	May 15, 2019	—
Erhfei Liu	—	*	—	November 21, 2015	—
	—	*	—	May 15, 2019	—
Yao Li	—	*	—	August 15, 2018	—
Wenbin Chen	—	—	—	—	—
Tao Zou	—	—	—	—	—
Shiqi Wang	—	*	—	April 16, 2018	—
	—	*	—	January 2, 2020	—
Sharon Xiao Liu	*	—	0.15	August 17, 2012	August 17, 2022
	—	*	—	July 1, 2013	—
	*	—	0.15	May 24, 2015	May 24, 2025
	—	*	—	August 23, 2015	—
	—	*	—	March 5, 2017	—
	—	*	—	April 16, 2018	—
	—	*	—	May 16, 2018	—
	—	*	—	January 2, 2020	—
Chunfeng Cai	—	*	—	March 6, 2016	—
	—	*	—	May 21, 2017	—
	—	*	—	May 16, 2018	—
	—	*	—	January 2, 2020	—
Wing-Dar Ker	—	*	—	November 22, 2014	—
	—	*	—	May 16, 2018	—
Chenggang Shen	—	*	—	March 5, 2017	—
Liang Zhao	—	—	—	—	—
Qihang Liu	—	—	—	—	—
Feng Liu	—	*	—	August 14, 2016	—
	—	*	—	May 16, 2018	—
Other individuals as a group	28,953,524	6,459,720	0.15 to 0.85	—	—

* Shares underlying vested options are less than 1% of our total outstanding shares.

Our 2010 Plan and 2014 Plan have similar terms, the following paragraphs describe the principal terms of our 2010 Plan and 2014 Plan.

Plan Administration. Our board and the compensation committee of the board will administer our plans. A committee of one or more members of the board designated by our board or the compensation committee is also authorized to grant or amend awards to participants other than senior executives. The committee will determine the provisions and terms and conditions of each award grant. It shall also have discretionary power to interpret the terms of our plans.

Award Agreement. Awards granted under our plans are evidenced by an award agreement that sets forth terms, conditions and limitations for each award, which may include the term of an award, the provisions applicable in the event the participant's employment or service terminates, and our authority to unilaterally or bilaterally amend, modify, suspend, cancel or rescind an award.

Eligibility. We may grant awards to our employees, consultants and directors. However, no shares may be optioned, granted or awarded if such action would cause an incentive share option to fail to qualify as an incentive share option under Section 422 of the Internal Revenue Code of 1986 of the United States.

Acceleration of Awards upon Change in Control. The participant's awards shall become fully exercisable and all forfeiture restrictions on such awards shall lapse, unless converted, assumed or replaced by a successor.

Exercise Price. The exercise price of an option shall be determined by the plan administrator and set forth in the award agreement and may be a fixed or variable price related to the fair market value of the shares, to the extent not prohibited by applicable laws. Subject to certain limits set forth in the plan, the exercise price may be amended or adjusted in the absolute discretion of the plan administrator, the determination of which shall be final, binding and conclusive. To the extent not prohibited by applicable laws or any exchange rule, a downward adjustment of the exercise prices of options shall be effective without the approval of the shareholders or the approval of the affected participants.

Vesting Schedule. In general, our plan administrator determines or the evidence of the award specifies, the vesting schedule.

Amendment and Termination of the Plan. With the approval of our board, our plan administrator may, at any time and from time to time, amend, modify or terminate the plan, provided, however, that no such amendment shall be made without the approval of our shareholders to the extent such approval is required by applicable laws, or in the event that such amendment increases the number of shares available under our plan, permits our plan administrator to extend the term of our plan or the exercise period for an option beyond ten years from the date of grant or results in a material increase in benefits or a change in eligibility requirements, unless we decides to follow home country practice.

C. Board Practices

Board of Directors

Our board of directors currently consists of eight directors. A director is not required to hold any shares in the company by way of qualification. Under our currently effective memorandum and articles of association, a director may vote in respect of any contract or proposed contract or arrangement and notwithstanding that he may be interested therein and if he does so his vote shall be counted and he may be counted in the quorum at the meeting of the directors at which such contract or proposed contract or arrangement is considered. Any of our directors who is in any way, whether directly or indirectly, interested in a contract or proposed contract with our company is required to declare the nature of his interest at a meeting of the directors. Our directors may exercise all the powers of the company to borrow money, mortgage its undertaking, property and uncalled capital, and issue debentures or other securities whenever money is borrowed or as security for any obligation of the company or of any third party.

Committees of the Board of Directors

We have three committees under the board of directors: the audit committee, the compensation committee and the nominating and corporate governance committee. We have adopted a charter for each of the three committees. Each committee's members and functions are described below.

Audit Committee. Our audit committee consists of Sean Shao, Kenneth Chung-Hou Tai and Yoshihisa Ueno, each of whom satisfies the "independence" requirements of Rule 5605 of Nasdaq Stock Market Rules and Rule 10A-3 under the Securities Exchange Act of 1934. Sean Shao is the chair of our audit committee. The purpose of the audit committee is to assist our board of directors with its oversight responsibilities regarding: (i) the integrity of our financial statements, (ii) our compliance with legal and regulatory requirements, (iii) the independent auditor's qualifications and independence and (iv) the performance of our internal audit function and independent auditor. The audit committee will be responsible for, among other things:

- appointing the independent auditors and pre-approving all auditing and non-auditing services permitted to be performed by the independent auditors;
- reviewing with the independent auditors any audit problems or difficulties and management's response;
- discussing the annual audited financial statements with management and the independent auditors;
- reviewing the adequacy and effectiveness of our accounting and internal control policies and procedures and any steps taken to monitor and control major financial risk exposures;
- reviewing and approving all proposed related party transactions;
- meeting separately and periodically with management and the independent auditors; and
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance.

Compensation Committee. Our compensation committee consists of Yoshihisa Ueno, Kenneth Chung-Hou Tai, Erhfei Liu and Yao Li, each of whom satisfies the "independence" requirements of Rule 5605 of Nasdaq Stock Market Rules. Yoshihisa Ueno is the chair of our compensation committee. The compensation committee assists the board in reviewing and approving the compensation structure, including all forms of compensation, relating to our directors and executive officers. Our chief executive officer may not be present at any committee meeting during which his compensation is deliberated. The compensation committee is responsible for, among other things:

- reviewing and approving, or recommending to the board for its approval, the compensation for our chief executive officer and other executive officers;
- reviewing and recommending to the board for determination with respect to the compensation of our non-employee directors; and
- reviewing periodically and approving any incentive compensation or equity plans, programs or similar arrangements.

Nominating and Corporate Governance Committee. Our nominating and corporate governance committee consists of Kenneth Chung-Hou Tai and Yoshihisa Ueno, each of whom satisfies the "independence" requirements of Rule 5605 of Nasdaq Stock Market Rules. Kenneth Chung-Hou Tai is the chair of our nominating and corporate governance committee. The nominating and corporate governance committee assists the board of directors in selecting individuals qualified to become our directors and in determining the composition of the board and its committees. The nominating and corporate governance committee is responsible for, among other things:

- selecting and recommending to the board nominees for election by the shareholders or appointment by the board;
- reviewing annually with the board the current composition of the board with regards to characteristics such as independence, knowledge, skills, experience and diversity;
- making recommendations on the frequency and structure of board meetings and monitoring the functioning of the committees of the board; and
- advising the board periodically with regards to significant developments in the law and practice of corporate governance as well as our compliance with applicable laws and regulations, and making recommendations to the board on all matters of corporate governance and on any remedial action to be taken.

Duties of Directors

Under Cayman Islands law, our directors have a fiduciary duty to act honestly and a duty to act in what they consider in good faith with a view to our best interests. Our directors must also exercise their powers only for a proper purpose. Our directors also owe to our company a duty to act with care and diligence that a reasonably prudent person would exercise in comparable circumstances and a duty to exercise the skill they actually possess. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association as amended and restated from time to time. We have the right to seek damages if a duty owed by our directors is breached.

Terms of Directors and Officers

Our officers are appointed by and serve at the discretion of our board of directors. Our directors are not subject to a term of office and hold office until such time as they are removed from office by ordinary resolution or the unanimous written resolution of all shareholders. We do not have a mandatory retirement age for directors. The office of a director shall be vacated if, among other things, the director (i) becomes bankrupt or makes any arrangement or composition with his or her creditors; (ii) dies or is found by our company to be or becomes of unsound mind; (iii) resign his office by notice in writing to our company; or (iv) without special leave of absence from our board, is absent from three consecutive board meetings and the board resolves that his office be vacated.

D. Employees

We had 2,267, 2,220 and 2,295 employees as of December 31, 2017, 2018 and 2019, respectively. The following table sets forth the number of our employees by function as of December 31, 2019:

Functional Area	Number of Employees	% of Total
Operations	1,072	47%
Sales, marketing and customer support	350	15%
Research and development	193	8%
General and administrative	680	30%
Total	**2,295**	**100%**

Of our total employees as of December 31, 2019, 1,299 were located in Beijing, and 996 in other cities in China.

Our recruiting efforts include on-campus recruiting, online recruiting and the use of professional recruiters. We partner with leading national research institutions and employ other measures designed to bring us into contact with suitable candidates for employment.

Our full time employees in the PRC participate in a government mandated defined contribution plan pursuant to which certain pension benefits, medical care, unemployment insurance, employee housing fund and other welfare benefits are provided to employees. Chinese labor regulations require that our PRC subsidiaries make contributions to the government for these benefits based on a fixed percentage of the employees' salaries.

E. Share Ownership

Please refer to "Item 7. Major Shareholders and Related Party Transactions—Major Shareholders."

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth information with respect to the beneficial ownership of our ordinary shares, as of March 6, 2020, by:

- each of our directors and executive officers; and
- each person known to us to own beneficially more than 5.0% of our ordinary shares.

The calculations in the table below assume there are 679,963,488 ordinary shares outstanding as of March 6, 2020, comprising of (i) 505,253,850 Class A ordinary shares, excluding treasury shares; (ii) 174,649,638 Class B ordinary shares; and 60,000 Class C ordinary shares.

Percentage ownership and beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire within 60 days of March 6, 2020, including through the exercise of any option, warrant or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person.

	Shares Beneficially Owned		
	Number	%	% of Voting Power[1]
Directors and Executive Officers:			
Sheng Chen[2]	49,560,817	7.3	15.2
Yoshihisa Ueno[3]	3,380,166	*	1.0
Kenneth Chung-Hou Tai	*	*	*
Sean Shao	*	*	*
Erhfei Liu	*	*	*
Yao Li	*	*	*
Wenbin Chen	—	—	—
Tao Zou	—	—	—
Shiqi Wang	*	*	*
Sharon Xiao Liu	*	*	*
Chunfeng Cai	*	*	*
Wing-Dar Ker	*	*	*
Chenggang Shen	*	*	*
Liang Zhao	—	—	—
Qihang Liu	—	—	—
Feng Liu	*	*	*
All Directors and Officers as a Group	58,245,745	8.5	16.4
Principal Shareholders:			
Tuspark Innovation Venture Ltd.[4]	143,050,264	21.0	50.7
King Venture Holdings Limited[5]	57,337,393	8.4	9.8
Fast Horse Technology Limited[2][6]	24,469,049	3.6	8.9
Sunrise Corporate Holding Ltd.[2][7]	18,887,875	2.8	5.7
Xiaomi Ventures Limited[8]	16,666,667	2.5	4.9

Notes:

* Less than 1%.

(1) Percentage of total voting power represents voting power with respect to all of our Class A, Class B and Class C ordinary shares, as a single class. Each holder of our Class B ordinary shares is entitled to ten votes per Class B ordinary share and each holder of Class A ordinary shares is entitled to one vote per Class A ordinary share held by our shareholders on all matters submitted to them for a vote. Each holder of Class C ordinary shares is entitled to one vote per Class C ordinary share on all matters submitted to them for a vote, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares: (i) any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited; (ii) entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and (iii) any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares. Our Class A, Class B and Class C ordinary shares vote together as a single class on all matters submitted to a vote of our shareholders, except as may otherwise be required by law. Our Class B and Class C ordinary shares are convertible at any time by the holder into Class A ordinary shares on a 1:1 basis.

(2) Consists of (i) 19,670,117 Class B ordinary shares and 799,822 ADSs (representing 4,798,932 Class A ordinary shares) held by Fast Horse Technology Limited, a British Virgin Islands company solely owned by Mr. Chen; (ii) 12,187,875 Class B ordinary shares and 6,700,000 Class A ordinary shares held by Sunrise Corporate Holding Ltd., a British Virgin Islands company solely owned by Mr. Chen; (iii) 60,000 Class C ordinary shares, 769,486 Class B ordinary shares and 4 Class A ordinary shares held by Personal Group Limited, a British Virgin Islands company solely owned by Mr. Chen; (iv) 3,894,737 Class A ordinary shares held by Beacon Capital Group Inc. a British Virgin Islands company solely owned by Mr. Chen; and (v) 1,479,666 Class A ordinary shares upon vesting of Mr. Chen's restricted share units within 60 days of March 6, 2020. The business address for Mr. Chen is Guanjie Building, Southeast 1st Floor, 10# Jiuxianqiao East Road, Chaoyang District, Beijing 100016, China.

(3) Consists of (i) 2,194,200 Class B ordinary shares held by Synapse Holdings Limited, and (ii) 1,185,966 Class A ordinary shares upon vesting of Mr. Ueno's restricted share units within 60 days of March 6, 2020. Mr. Ueno is a director of our company appointed by Synapse Holdings Limited. The business address for Mr. Ueno is 37/F, Tower 1, Metroplaza, 223 Hing Fong Road, Kwai Fong, New Territories, Hong Kong.

(4) Consists of 31,996,874 Class A ordinary shares and 111,053,390 Class B ordinary shares. The business address for Tuspark Innovation Venture Ltd. is 16/F, Block A, Innovation Park, Tsinghua Science Park, Haidian District, Beijing, the People's Republic of China.

(5) Consists of 39,087,125 Class A ordinary shares and 18,250,268 Class B ordinary shares. The business address for King Venture Holdings Limited is Kingsoft Tower No. 33, Xiaoying West Road, Haidian District, Beijing 100085, China.

(6) Consists of 19,670,117 Class B ordinary shares and 799,822 ADSs (representing 4,798,932 Class A ordinary shares). Fast Horse Technology Limited is 100% owned by Sheng Chen. The registered address for Fast Horse Technology Limited is P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands.

(7) Consists of 6,700,000 Class A ordinary shares and 12,187,875 Class B ordinary shares. Sunrise Corporate Holding Ltd. is 100% owned by Sheng Chen. The registered address for Sunrise Corporate Holding Ltd. is Kingston Chambers, PO Box 173, Road Town, Tortola, British Virgin Islands.

(8) Consist of 6,142,410 Class A ordinary shares and 10,524,257 Class B ordinary shares. The business address for Xiaomi Ventures Limited is No. 68 Qinghe Middle Street, Wu Cai Cheng Office Building, 12F-056, Haidian District, Beijing 100085, China.

Our ordinary shares are divided into Class A ordinary shares, Class B ordinary shares and Class C ordinary shares. Holders of Class A ordinary shares are entitled to one vote per share, while holders of Class B ordinary shares are entitled to ten votes per share and holders of Class C ordinary shares are entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares: (i) any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited; (ii) entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and (iii) any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares. We issued Class A ordinary shares represented by our ADSs in our initial public offering in April 2011 and issued Class C ordinary shares in October 2019 to further enhance our ability to execute business strategies over the long term under the leadership of our board and senior management. Holders of our Class B ordinary shares or Class C ordinary shares may choose to convert their Class B ordinary shares or Class C ordinary shares into the same number of Class A ordinary shares at any time. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our ADSs—Our triple-class voting structure will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A ordinary shares and ADSs may view as beneficial."

To our knowledge, as of March 6, 2020, a total of 448,901,050 Class A ordinary shares and 16 Class B ordinary shares are held by eleven record holders in the United States, including Citibank N.A., the depositary of our ADS program. The number of beneficial owners of our ADSs in the United States is likely to be much larger than the number of record holders of our ordinary shares in the United States.

B. Related Party Transactions

Transactions with Shareholders and Affiliates

On August 15, 2018, 21Vianet Beijing entered into a lease agreement with Beijing Tuspark, a company controlled by Tus-Holdings, to lease certain floors of a building owned by Beijing Tuspark for a term of 20 years expiring on September 27, 2038, which will extend for another 20 years upon signing of a renewal agreement prior to 6 months before the expiration of the term. For the year ended December 31, 2019, we paid RMB68.8 million (US$9.9 million) rental to Beijing Tuspark. We also had non-current receivables due from, current payables due to, and non-current payables due to Beijing Tuspark, in the amount of RMB11.9 million (US$1.7 million), RMB24.9 million (US$3.6 million), and RMB698.5 million (US$100.3 million), respectively.

We currently lease certain equipment from Ziguang Financial Leasing Co., Ltd., a company controlled by Tus-Holdings, through certain finance lease arrangements. For the year ended December 31, 2019, we paid RMB6.2 million (US$0.9 million) lease deposit and RMB17.2 million (US$2.5 million) lease payment to Ziguang Financial Leasing Co., Ltd. We also had non-current receivables due from, current payables due to, and non-current payables due to Ziguang Financial Leasing Co., Ltd., in the amount of RMB8.2 million (US$1.2 million), RMB27.2 million (US$3.9 million), and RMB47.4 million (US$6.8 million), respectively.

For the year ended December 31, 2019, we provided hosting and related services in the amount of RMB7.4 million (US$1.1 million) to Qidi Bus (Beijing) Technology Co., Ltd., a company controlled by Tus-Holdings. We also had receivables due from Qidi Bus (Beijing) Technology Co., Ltd. in the amount of RMB1.2 million (US$0.2 million) for the hosting and related services provided by us.

In October 2019, we entered into an agreement with Personal Group Limited, a British Virgin Islands company wholly owned by Mr. Sheng Chen, our executive chairman, pursuant to which we issued 60,000 Class C ordinary shares to Personal Group Limited at a price of US$1.35 per share.

For the year ended December 31, 2019, we provided hosting and related services to companies that are under common control with Xiaomi in the amount of RMB437.7 million (US$62.9 million). We also had receivables due from companies that are under common control with Xiaomi in the amount of RMB39.8 million (US$5.7 million).

For the year ended December 31, 2019, we provided hosting and related services to companies that are under common control with Kingsoft in the amount of RMB3.6 million (US$0.5 million). We purchased services from companies that are under common control with Kingsoft in the amount of RMB3.5 million (US$0.5 million). We also had payables due to a company that is under common control with Kingsoft in the amount of RMB1.1 million (US$0.2 million) for services purchased by us.

Other Transactions with Related Parties

For the year ended December 31, 2019, we provided hosting and related services to the WiFire Entities in the amount of RMB1.9 million (US$0.3 million). We purchased internet related services from the WiFire Entities in the amount of RMB38.9 million (US$5.6 million). We had interest income from one of the WiFire Entity in the amount of RMB0.7 million (US$0.1 million) in connection with a loan provided by us to such WiFire Entity in 2017. We also had payables due to WiFire Entities in the amount of RMB6.3 million (US$0.9 million).

Other related party transactions, including services provided by/to our equity method investees and other investees measured using measurement alternative in the ordinary course of business were insignificant for the year ended December 31, 2019.

In February 2020, we entered into a convertible note purchase agreement with a private equity fund affiliated with one of our independent directors, pursuant to which such private equity fund acquired convertible notes in an aggregate principal amount of US$50,000,000. The convertible notes will mature in five years, bearing interest at the rate of 2% per annum from the issuance date which shall be payable semiannually in arrears in cash. At any time after the issuance, each note is convertible into Class A ordinary shares at the holder's option at a conversion price of US$2 per share, or US$12 per ADS, subject to customary anti-dilution adjustments. Unless previously redeemed or converted, we shall redeem the note on the maturity date at 115% of the then outstanding principal amount plus all accrued but unpaid interest. In addition, if any portion of the outstanding principal amount of the notes has not been converted into our shares by the third anniversary of the note issuance date, the holders have the right to require us to redeem, in whole or in part, the outstanding principal amount of the note at 109% of the principal amount plus all accrued but unpaid interest.

Contractual Arrangements with Our Variable Interest Entities and Their Shareholders

See "Item 4.C. Information on the Company—Organizational Structure—Contractual Arrangements with Our Variable Interest Entities and Their Shareholders."

Our PRC subsidiaries and consolidated affiliated entities have engaged, during the ordinary course of business, in a number of customary transactions with each other. All of these inter-company balances have been eliminated in consolidation.

Employment Agreement

Please refer to "Item 6.A. Directors, Senior Management and Employees—Directors and Senior Management—Employment Agreements."

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

We have appended consolidated financial statements filed as part of this annual report.

Legal Proceedings

From time to time, we are subject to legal proceedings, investigations and claims incidental to the conduct of our business. For example, in March 2019, we received a court notification regarding a lawsuit launched by one of our third-party suppliers against us, alleging that we had not fully fulfilled our contractual obligations under the network infrastructure cooperation agreement entered into by and between 21Vianet Beijing and the supplier in 2013, and this legal proceeding remains in the preliminary stage. We believe this legal proceeding is without merit and intend to defend the action vigorously. For risks and uncertainties relating to the pending case against us, please see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business— We may be subject to legal proceedings or arbitration claims in the ordinary course of our business, and the court ruling or arbitration award may not be favorable to us." We are currently not involved in any legal or administrative proceedings that may have a material adverse impact on our business, financial position or profitability.

Litigation

In September 2014, the Company and certain of its officers and directors were named as defendants in two putative securities class actions filed in U.S. federal district courts in Texas: Sun v. 21Vianet et al., Civil Action No. 14 CV 926 (E.D. Tex.) and Singh v. 21Vianet et al., Civil Action No. 14 CV 894 (E.D. Tex.). The Sun action originally was filed in the U.S. District Court for the Southern District of Texas and was transferred to the U.S. District Court for the Eastern District of Texas. The complaints in both actions allege that certain of the Company's financial statements and other public disclosures contained misstatements or omissions and assert claims under the U.S. securities laws. On September 15, 2015, the Court entered an order consolidating the cases and on September 21, 2015, the Court entered an order appointing a lead plaintiff and lead counsel for the consolidated case. On September 13, 2016, the lead plaintiff filed an amended complaint against the Company and certain of its personnel and seeking to represent a class of persons who allegedly suffered damages as a result of their trading activities related to the Company's ADSs from August 20, 2013 to August 16, 2016. After the company's motion to dismiss the case was denied, on April 9, 2018, the lead plaintiff filed an unopposed motion for preliminary approval of class action settlement, requesting that the Court a) preliminarily approve a settlement agreement that the parties reached to settle the case for US$9,000,000, b) preliminarily certify the proposed settlement class, c) approve the parties' proposed notice to the settlement class, and d) set a hearing date at which the Court will consider final approval of the settlement and entry of a proposed final judgment approving class action settlement, the plan of allocation of settlement proceeds, and lead counsel's application for an award of attorneys' fees and expenses. The Court granted that motion and, on October 31, 2018, held a settlement approval hearing. On November 9, 2018, the Court approved the settlement and issued final judgment, ending the case.

Disputes with Shanghai 21Vianet Information System Co., Ltd.

Shanghai 21Vianet Information System Co., Ltd. is a company bearing "21Vianet" in its name but is not affiliated with us. In January 2008, 21Vianet Beijing and 21Vianet China brought two lawsuits against Shanghai 21Vianet Information System Co., Ltd. in a Beijing court for intellectual property rights infringement and unfair competition. 21Vianet Beijing and 21Vianet China prevailed in each case. The court ordered Shanghai 21Vianet Information System Co., Ltd. to stop infringing our trademark and stop engaging unfair competition activities. 21Vianet Beijing and 21Vianet China was also awarded RMB150,000 in damages for each case. In October 2010, 21Vianet China filed another complaint against Shanghai 21Vianet Information System Co., Ltd. for domain name infringement and unfair competition. In July 2011, Shanghai 21Vianet Information System Co., Ltd. settled the case with us and transferred the domain name www.21vianet.com.cn to us for free. However, Shanghai 21Vianet Information System Co., Ltd. may continue to include "21Vianet" as part of its official company name when the name is spelt out in full, while using "21Vianet" or our logo in a short form or other context is prohibited.

Our executive chairman, Sheng Chen, holds a minority equity interest in Shanghai 21Vianet Information System Co., Ltd. due to historical reasons. As a result of the restriction on equity transfer pursuant to its articles of association, it is not practical for Mr. Chen to transfer his equity interest in Shanghai 21Vianet Information System Co., Ltd. to us or any other parties. Mr. Chen, however, has executed an irrevocable power of attorney, pursuant to which Mr. Chen has appointed 21Vianet Beijing as his attorney-in-fact to attend shareholders' meeting of Shanghai 21Vianet Information System Co., Ltd. and to exercise all the shareholder's voting rights. Such power of attorney remains valid and irrevocable so long as Mr. Chen remains the shareholder of Shanghai 21Vianet Information System Co., Ltd.

Dividend Policy

We do not plan to pay any dividends on our ordinary shares in the foreseeable future. We currently intend to retain most, if not all, of our available funds and any future earnings to operate and expand our business.

Our board of directors has complete discretion whether to distribute dividends, subject to certain restrictions under Cayman Islands law and our memorandum and articles or association. In addition, our shareholders may by ordinary resolution declare a dividend, but no dividend may exceed the amount recommended by our board of directors. Under Cayman Islands law, a Cayman Islands company may pay a dividend out of either profit or share premium account, provided that in no circumstances may a dividend be paid if this would result in the company being unable to pay its debts as they fall due in the ordinary course of business. Even if our board of directors decides to pay dividends, the form, frequency and amount will depend upon our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the board of directors may deem relevant.

Holders of our ADSs will be entitled to receive dividends, if any, subject to the terms of the deposit agreement, to the same extent as the holders of our ordinary shares. Cash dividends will be paid to the depositary in U.S. dollars, which will distribute them to the holders of ADSs according to the terms of the deposit agreement. Other distributions, if any, will be paid by the depositary to the holders of ADSs by any means it deems legal, fair and practical.

We are a holding company incorporated in the Cayman Islands. We rely on dividends from our operating subsidiary to fund cash and financing requirements. Our operating subsidiary is required to comply with the applicable PRC regulations when it pays dividends to us. See “Item 3.D. Key Information—Risk Factors—Risks Related to Doing Business in China—We may rely on dividends paid by our operating subsidiaries to fund cash and financing requirements, and limitations on the ability of our operating subsidiaries to make payments to us could have a material adverse effect on our ability to conduct our business and fund our operations.”

B. Significant Changes

Except as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

ITEM 9. THE OFFER AND LISTING

A. Offering and Listing Details

Our ADSs, each representing six of our Class A ordinary shares, have been listed on the Nasdaq Global Select Market since April 21, 2011 under the symbol “VNET.”

B. Plan of Distribution

Not applicable.

C. Markets

Our ADSs, each representing six of our ordinary shares, have been traded on the Nasdaq Global Select Market since April 21, 2011 under the symbol “VNET.”

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share capital

Not applicable.

B. Memorandum and Articles of Association

We are a Cayman Islands company and our corporate affairs are governed by our memorandum and articles of association and by the Companies Law (as amended) and common law of the Cayman Islands.

As of the date hereof, our authorized share capital is US$15,000 divided into (i) 1,199,940,000 Class A Ordinary Shares of a nominal or par value of US$0.00001 each, (ii) 300,000,000 Class B Ordinary Shares of a nominal or par value of US$0.00001 each, and (iii) 60,000 Class C Ordinary Shares of a nominal or par value of US$0.00001 each. As of February 29, 2020, there are 505,253,850 Class A ordinary shares (excluding treasury shares), 174,649,638 Class B ordinary shares and 60,000 Class C ordinary shares issued and outstanding.

The following are summaries of material provisions of our currently effective memorandum and articles of association and the Companies Law insofar as they relate to the material terms of our shares.

Registered Office and Objects

The Registered Office of the Company is situated at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands, or at such other location within the Cayman Islands as our directors may from time to time determine. The objects for which the Company is established are unrestricted and the Company shall have full power and authority to carry out any object not prohibited by the Companies Law or any other law of the Cayman Islands.

Board of Directors

See “Item 6. Board Practices—C. Board of Directors.”

Ordinary shares

General. Our ordinary shares are divided into Class A ordinary shares, Class B ordinary shares and Class C ordinary shares. Holders of Class A ordinary shares, Class B ordinary shares and Class C ordinary shares have the same rights except for voting and conversion rights (as described in more details below). Our ordinary shares are issued in registered form, and are issued when registered in our register of members (shareholders). Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their shares.

Dividends. The holders of our ordinary shares are entitled to such dividends as may be declared by our board of directors, subject to the Companies Law and our articles of association. In addition, our shareholders may by ordinary resolution declare a dividend, but no dividend may exceed the amount recommended by our directors. Under Cayman Islands law, a Cayman Islands company may pay a dividend on its shares out of either profit or share premium account, provided that in no circumstances may a dividend be paid if this would result in the company being unable to pay its debts as they fall due in the ordinary course of business.

Conversion. Each Class B ordinary share or each Class C ordinary share is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares or Class C ordinary shares under any circumstances.

Upon any transfer of Class B ordinary shares or Class C ordinary shares by a holder thereof to any person or entity which is not an affiliate of such holder, such Class B ordinary shares or Class C ordinary shares will be automatically and immediately converted into an equal number of Class A ordinary shares.

Voting Rights. In respect of matters requiring shareholders' votes, each Class A ordinary share is entitled to one vote, each Class B ordinary share is entitled to ten votes, and each Class C ordinary shares is entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares: (i) any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited; (ii) entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and (iii) any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares. Voting at any shareholders' meeting is by show of hands unless a poll is demanded. A poll may be demanded by the chairman or by any three shareholders entitled to vote at the meeting, or one or more shareholders holding at least 10% of the paid-up voting share capital or 10% of the total voting rights entitled to vote at the meeting, present in person or by proxy.

A quorum required for a meeting of shareholders consists of at least one shareholder present in person or by proxy or, if a corporation or other non-natural person, by its duly authorized representative, who holds no less than one-third of the voting power of the shares in issue carrying a right to vote at a meeting of shareholders. Shareholders' meetings may be held annually and may be convened by our board of directors on its own initiative or upon a requisition to the directors made by shareholders holding in aggregate at least one-third of the voting power of the shares in issue carrying a right to vote at a meeting of shareholders. Advance notice of at least 14 days is required for a meeting of shareholders.

An ordinary resolution to be passed by the shareholders requires a simple majority of votes attaching to the ordinary shares cast in a general meeting while a special resolution requires no less than two-thirds of the votes attaching to the ordinary shares cast in a general meeting. Both ordinary resolutions and special resolutions may also be passed by a unanimous written resolution signed by all the shareholders of our company, as permitted by the Companies Law and our memorandum and articles of association. A special resolution is required for matters including, but not limited to, amending the memorandum and articles of association of the company, reducing share capital and winding up. Our shareholders may affect certain changes by ordinary resolution, including increasing the amount of our authorized share capital, consolidating and dividing all or any of our share capital into shares of larger amount than our existing shares, and the cancellation of any authorized but unissued shares.

Transfer of Shares. Subject to the restrictions of our memorandum and articles of association, any of our shareholders may transfer all or any of his or her ordinary shares by an instrument of transfer in any usual or common form or any other form approved by our board of directors.

Our board of directors may, in its sole discretion, decline to register any transfer of any ordinary share which is not fully paid up or on which we have a lien. Our directors may also decline to register any transfer of any share unless (a) the instrument of transfer is lodged with us, accompanied by the certificate for the shares to which it relates and such other evidence as our board of directors may reasonably require to show the right of the transferor to make the transfer; (b) the instrument of transfer is in respect of only one class of shares; (c) the instrument of transfer is properly stamped, if required; (d) in the case of a transfer to joint holders, the number of joint holders to whom the share is to be transferred does not exceed four; I the shares transferred are free of any lien in favor of us; and (f) a nominal processing fee determined to be payable by our directors (not to exceed the maximum sum as Nasdaq may determine to be payable) has been paid to us in respect thereof.

If our directors refuse to register a transfer, they must, within two months after the date on which the instrument of transfer was lodged, send to each of the transferor and the transferee notice of such refusal. The registration of transfers may, on 14 days' notice being given by advertisement in one or more newspapers or by electronic means, be suspended and the register closed at such times and for such periods as our board of directors may from time to time determine; provided, however, that the registration of transfers may not be suspended and the register may not closed for more than 30 days in any year.

Liquidation. On a return of capital on winding up, if the assets available for distribution among our shareholders are more than sufficient to repay the whole of the share capital at the commencement of the winding up, the surplus will be distributed among shareholders in proportion to the par value of the shares held by them at the commencement of the winding up, subject to a deduction from those shares in respect of which there are monies due, of all monies payable to our company for unpaid calls or otherwise. If our assets available for distribution are insufficient to repay the whole of the share capital, the assets will be distributed so that, as nearly as may be, the losses are borne by our shareholders in proportion to the par value of the shares held by them.

Calls on Shares and Forfeiture of Shares. Our board of directors may from time to time make calls upon shareholders for any amounts unpaid on their shares in a notice served to such shareholders at least 14 days prior to the specified time of payment. The shares that have been called upon and remain unpaid on the specified time are subject to forfeiture.

Redemption, Repurchase and Surrender of Shares. We may issue shares on terms that such shares are subject to redemption, at our option or at the option of the holders thereof, on such terms and in such manner as may be determined, before the issue of such shares, by our board of directors or by a special resolution of our shareholders. Our company may also repurchase any of our shares provided that the manner of such purchase has been approved by an ordinary resolution of our shareholders, or the manner of purchase is in accordance with the procedures set out in our memorandum and articles of association. Under the Companies Law, the redemption or repurchase of any share may be paid out of our company's profits or out of the proceeds of a fresh issue of shares made for the purpose of such redemption or repurchase, or out of capital (including share premium account and capital redemption reserve) if our company can, immediately following such payment, pay its debts as they fall due in the ordinary course of business. In addition, under the Companies Law no such share may be redeemed or repurchased (a) unless it is fully paid up, (b) if such redemption or repurchase would result in there being no shares outstanding, or (c) if the company has commenced liquidation. In addition, our company may accept the surrender of any fully paid share for no consideration.

Variations of Rights of Shares. Whenever the capital of our company is divided into different classes, the rights attached to any such class of shares may, subject to any right or restriction attached to any class, be varied either with the written consent of the holders of a majority of the issued shares of that class or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class. The rights conferred upon the holders of the shares of any class will not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking in priority to or pari passu with such previously existing shares.

Inspection of Books and Records. Holders of our ordinary shares will have no right to inspect our corporate records except as conferred by Cayman Islands law or authorized by the board or by ordinary resolution of the shareholders.

C. Material Contracts

On October 14, 2019, we entered into a Share Subscription Agreement with Personal Group Limited, a British Virgin Islands company wholly owned by Mr. Sheng Chen. Pursuant to the Share Subscription Agreement, we issued 60,000 Class C ordinary shares to Personal Group Limited, with the rights, restrictions, preferences and privileges set forth therein, at a price of US$1.35 per share. The holders of Class C ordinary shares are entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares:

- any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited;

- entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and

- any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares.

Each Class C ordinary share is convertible into one Class A ordinary share at any time by the holder thereof, and Class C ordinary shares are not convertible into Class B ordinary shares or preferred shares under any circumstances. Upon any transfer of Class C ordinary shares by a holder thereof to any person or entity which is not an affiliate of such holder, such Class C ordinary shares shall be automatically and immediately converted into the equal number of Class A ordinary shares.

On July 24, 2019, we reached the following agreements with Warburg Pincus to restructure our partnership: (i) an amended and restated investment agreement, by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited; and (ii) a restructuring agreement, by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited. On January 15, 2020, we further entered in to an amendment to restructuring agreement, by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited, in connection with the restructuring of our joint ventures with Warburg Pincus. Pursuant to the amended and restated investment agreement, the restructuring agreement, and the amendment to restructuring agreement, (i) one of the joint ventures distributed its assets and projects to us and to Princeton Digital Group (PDG), a Warburg Pincus-backed company, on a pro rata basis in principle, after which we obtained 100% ownership of a project under development in the Shanghai Waigaoqiao Free Trade Zone, as well as a certain amount of cash, and Princeton Digital Group (PDG) obtained 100% ownership of four projects under development in Shanghai, Nanjing, Nantong and Wuxi; and (ii) we and Warburg Pincus will adjust the existing holding structure for operating the current projects, and jointly establish an additional holding vehicle for sourcing and developing new projects in China.

In February 2020, we entered into convertible note purchase agreements with a group of investors led by Goldman Sachs Asia Strategic Pte. Ltd. in an aggregate principal amount of US$200 million through a private placement to the investors. The convertible notes will mature in five years, bearing interest at the rate of 2% per annum from the issuance date which shall be payable semiannually in arrears in cash. At any time after the issuance, each note is convertible into Class A ordinary shares at the holder's option at a conversion price of US$2 per share, or US$12 per ADS, subject to customary anti-dilution adjustments. Unless previously redeemed or converted, we shall redeem the note on the maturity date at 115% of the then outstanding principal amount plus all accrued but unpaid interest. In addition, if any portion of the outstanding principal amount of the notes has not been converted into our shares by the third anniversary of the note issuance date, the holders have the right to require us to redeem, in whole or in part, the outstanding principal amount of the note at 109% of the principal amount plus all accrued but unpaid interest.

Other than in the ordinary course of business and other than those described above, in "Item 4. Information on the Company" and "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions" or elsewhere in this annual report, we have not entered into any material contract during the two years immediately preceding the date of this annual report.

D. Exchange Controls

See "Item 4. Information on the Company—B. Business Overview—Regulations—Regulations on Foreign Currency Exchange."

E. Taxation

The following summary of the material Cayman Islands, PRC and United States federal income tax consequences of an investment in our ADSs or Class A ordinary shares is based upon laws and relevant interpretations thereof in effect as of the date of this annual report, all of which are subject to change. This summary does not deal with all possible tax consequences relating to an investment in our ADSs or Class A ordinary shares, such as the tax consequences under state, local and other tax laws.

The Cayman Islands

The Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciation and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to our company levied by the government of the Cayman Islands, except for stamp duties that may be applicable on instruments executed in, or after execution, brought within the jurisdiction of, the Cayman Islands. The Cayman Islands is not a party to any double taxation treaties that are applicable to any payments made to or by our company. There are no exchange control regulations or currency restrictions in the Cayman Islands.

Payment of dividends and capital in respect of the shares will not be subject to taxation in the Cayman Islands and no withholding will be requested on the payment of a dividend or capital to any holder of the shares, nor will gains derived from the disposal of the shares be subject to Cayman Islands income or corporation tax.

People's Republic of China Taxation

Under the EIT Law, an enterprise established under the laws of foreign countries or regions and whose "place of effective management" is located within the PRC are considered PRC tax resident enterprises and subject to PRC income tax at the rate of 25% on worldwide income. Circular 82, as amended, clarified that dividends and other income paid by certain offshore enterprises controlled by a PRC company or a PRC company group established outside of the PRC will be considered PRC-source income and subject to PRC withholding tax, currently at a rate of 10% (or a lower rate under an applicable tax treaty, if any), when paid to non-PRC enterprise shareholders. Under the implementation regulations to the EIT Law, a "place of effective management" is defined as a body that has material and overall management and control over the manufacturing and business operations, personnel and human resources, finances and properties of an enterprise. In addition, the circular mentioned above specifies that certain offshore enterprises controlled by a PRC company or a PRC company group will be classified as PRC resident enterprises if the following are located or resident in the PRC: senior management personnel and departments that are responsible for daily production, operation and management; financial and personnel decision-making bodies; key properties, accounting books, the company seal, and minutes of board meetings and shareholders meetings; and half or more of the senior management or directors having voting rights. Although the circular only applies to offshore enterprises controlled by PRC enterprises and not those controlled by PRC individuals, the determining criteria set forth in the circular may reflect the State Administration of Taxation's general position on how the "place of effective management" test should be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC enterprises or individuals.

We believe that we are not a PRC resident enterprise. However, if the PRC tax authorities determine we are a PRC resident enterprise for EIT purposes, we may be required to withhold tax at the rate of 10% (or a lower rate under an applicable tax treaty, if any) from dividends we pay to our non-PRC resident enterprise shareholders (20% for non-PRC individual shareholders), including the holders of our ADSs. In addition, non-PRC holders of shares and ADSs may be subject to PRC tax on gains realized on the sale or other disposition of ADSs or Class A ordinary shares at the same rates if such income is treated as sourced from within the PRC. It is unclear whether our non-PRC holders of shares and ADSs would be able to claim the benefits of any tax treaties between their jurisdictions of tax residence and the PRC in the event that we are treated as a PRC resident enterprise. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Under the New PRC Enterprise Income Tax Law, we may be classified as a "resident enterprise" of China. Such classification could result in unfavorable tax consequences to us and our non-PRC holders of shares and ADSs."

U.S. Federal Income Tax Considerations

The following is a summary of the principal U.S. federal income tax considerations of the ownership and disposition of our ADSs or Class A ordinary shares by a U.S. Holder, as defined below, that holds our ADSs or Class A ordinary shares as "capital assets" (generally, property held for investment) under the U.S. Internal Revenue Code of 1986, as amended (the "Code"). This summary is based on the tax laws of the United States as in effect on the date of this annual report on Form 20-F and on U.S. Treasury regulations in effect or, in some cases, proposed, as of the date of this annual report on Form 20-F, as well as judicial and administrative interpretations thereof available on or before such date. All of the foregoing authorities are subject to change, which change could apply retroactively and could affect the tax considerations described below. No ruling has been sought from the United States Internal Revenue Service (the "IRS") with respect to any U.S. federal income tax considerations described below, and there can be no assurance that the IRS or a court will not take a contrary position. This summary does not discuss all aspects of U.S. federal income taxation that may be important to particular investors in light of their individual investment circumstances, including investors subject to special tax rules (for example, banks, certain financial institutions, insurance companies, regulated investment companies, real estate investment trusts, broker-dealers, traders in securities that elect mark-to-market treatment, partnerships and their partners, tax-exempt entities (including private foundations), investors who are not U.S. Holders, investors liable for the alternative minimum tax, investors who acquired their ADSs or Class A ordinary shares pursuant to the exercise of any employee share option or otherwise as compensation, investors who own (directly, indirectly, or constructively) 10% or more of our stock (by vote or value), investors that hold their ADSs or Class A ordinary shares as part of a straddle, hedge, conversion, constructive sale or other integrated transaction for U.S. federal income tax purposes, investors subject the 3.8% Medicare tax on their net investment income, or investors that have a functional currency other than the U.S. dollar), all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, this summary does not discuss any state, local, or non-U.S. tax considerations. Each potential investor is urged to consult its tax advisor regarding the U.S. federal, state, local and non-U.S. income and other tax considerations of an investment in our ADSs or Class A ordinary shares.

General

For purposes of this summary, a "U.S. Holder" is a beneficial owner of our ADSs or Class A ordinary shares that is, for U.S. federal income tax purposes, (i) an individual who is a citizen or resident of the United States, (ii) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created in, or organized under the law of, the United States or any state thereof or the District of Columbia, (iii) an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source, or (iv) a trust (A) the administration of which is subject to the primary supervision of a United States court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (B) that has otherwise elected to be treated as a U.S. person under the Code.

If a partnership (or other entity treated as a partnership for U.S. federal income tax purposes) is a beneficial owner of our ADSs or Class A ordinary shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships and partners of a partnership holding our ADSs or Class A ordinary shares are urged to consult their tax advisors regarding an investment in our ADSs or Class A ordinary shares.

The discussion below assumes that the representations contained in the deposit agreement are true and that the obligations in the deposit agreement and any related agreement have been and will be complied with in accordance with their terms. U.S. Holders who hold ADSs will be treated as the holder of the underlying ordinary shares represented by those ADSs for U.S. federal income tax purposes.

Passive Foreign Investment Company Considerations

A non-U.S. corporation, such as our company, will be a "passive foreign investment company," or PFIC, for U.S. federal income tax purposes for any taxable year, if either (i) 75% or more of its gross income for such year consists of certain types of "passive" income or (ii) 50% or more of the value of its assets (determined on the basis of a quarterly average) during such year produce or are held for the production of passive income (the "asset test"). Passive income generally includes dividends, interest, certain non-active royalties, rents, annuities, net gains from the sale or exchange of property producing such income and net foreign currency gains. For this purpose, cash and assets readily convertible into cash are categorized as passive assets and the company's unbooked intangibles are taken into account for determining the value of its assets. We will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, more than 25% (by value) of the stock.

Although the law in this regard is not entirely clear, we treat our variable interest entities as being owned by us for U.S. federal income tax purposes because we control their management decisions and we are entitled to substantially all of their economic benefits and, as a result, we consolidate their results of operations in our consolidated U.S. GAAP financial statements. If it were determined, however, that we are not the owner of our variable interest entities for U.S. federal income tax purposes, we would likely be treated as a PFIC for our taxable year ended December 31, 2019 and for subsequent taxable years.

Assuming that we are the owner of our variable interest entities for U.S. federal income tax purposes, we believe that we primarily operate as an active provider of managed hosting and cloud services in China. Based on the market price of our ADSs and Class A ordinary shares, the value of our assets, and the composition of our assets and income, we believe that we were not a PFIC for U.S. federal income tax purposes for our taxable year ended December 31, 2019 and we do not expect to be a PFIC in subsequent years.

While we do not anticipate becoming a PFIC, because the value of our assets for purposes of the asset test may be determined, in part, by reference to the market price of our ADSs or Class A ordinary shares, fluctuations in the market price of our ADSs and Class A ordinary shares may cause us to become a PFIC for the current or any subsequent taxable year. Under circumstances where revenues from activities that produce passive income significantly increase relative to our revenues from activities that produce non-passive income, or where we determine not to deploy significant amounts of cash for active purposes, our risk of becoming a PFIC may substantially increase.

Furthermore, because there are uncertainties in the application of the relevant rules, it is possible that the IRS may challenge our classification of certain income and assets as non-passive or our valuation of our tangible and intangible assets, each of which may result in our becoming a PFIC for the current taxable year or any future taxable years. If we are a PFIC for any year during which a U.S. Holder holds our ADSs or Class A ordinary shares, we generally will continue to be treated as a PFIC as to such U.S. Holder for all succeeding years during which such U.S. Holder holds our ADSs or Class A ordinary shares unless we cease to be a PFIC and the U.S. Holder makes a "deemed sale" election with respect to the ADSs or Class A ordinary shares.

If we are a PFIC for any taxable year during which a U.S. Holder holds our ADSs or Class A ordinary shares, unless the U.S. Holder makes a mark-to-market election (as described below), the U.S. Holder will generally be subject to special tax rules that have a penalizing effect, regardless of whether we remain a PFIC, on (i) any excess distribution that we make to the U.S. Holder (which generally means any distribution paid during a taxable year to a U.S. Holder that is greater than 125% of the average annual distributions paid in the three preceding taxable years or, if shorter, the U.S. Holder's holding period for the ADSs or Class A ordinary shares), and (ii) any gain realized on the sale or other disposition, including, under certain circumstances, a pledge, of ADSs or Class A ordinary shares. Under the PFIC rules:

- the excess distribution and/or gain will be allocated ratably over the U.S. Holder's holding period for the ADSs or Class A ordinary shares;
- the amount allocated to the current taxable year and any taxable years in the U.S. Holder's holding period prior to the first taxable year in which we are a PFIC, or pre-PFIC year, will be taxable as ordinary income;
- the amount allocated to each of the other taxable years would be subject to tax at the highest rate of tax in effect for the applicable class of taxpayer for such year and would be increased by an additional tax equal to interest on the resulting tax deemed deferred with respect to each such other taxable year.

The tax liability for amounts allocated to years prior to the year of disposition or "excess distribution" cannot be offset by any net operating losses for such years, and gains (but not losses) realized on the sale of the ADSs or ordinary shares cannot be treated as capital, even if such ADSs or ordinary shares are held as capital assets.

If we are a PFIC for any taxable year during which a U.S. Holder holds our ADSs or Class A ordinary shares and any of our non-U.S. subsidiaries is also a PFIC, such U.S. Holder would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC and would be subject to the rules described above on certain distributions by a lower-tier PFIC and a disposition of shares of a lower-tier PFIC even though such U.S. holder would not receive the proceeds of those distributions or dispositions. U.S. Holders should consult their tax advisors regarding the application of the PFIC rules to any of our subsidiaries.

As an alternative to the foregoing rules, if we are a PFIC, a U.S. Holder of "marketable stock" (as defined below) may make a mark-to-market election with respect to our ADSs, but not our Class A ordinary shares, provided that the ADSs continue to be listed on the Nasdaq Global Select Market and are regularly traded. The mark-to-market election is available only for "marketable stock," which is stock that is traded in other than de minimis quantities on at least 15 days during each calendar quarter, or "regularly traded," on a qualified exchange or other market, as defined in applicable Treasury regulations. If a U.S. Holder makes this election, the holder will generally (i) include as ordinary income for each taxable year that we are a PFIC the excess, if any, of the fair market value of ADSs held at the end of the taxable year over the adjusted tax basis of such ADSs and (ii) deduct as an ordinary loss the excess, if any, of the adjusted tax basis of the ADSs over the fair market value of such ADSs held at the end of the taxable year, but such deduction will only be allowed to the extent of the net amount previously included in income as a result of the mark-to-market election. The U.S. Holder's adjusted tax basis in the ADSs would be adjusted to reflect any income or loss resulting from the mark-to-market election. If a U.S. Holder makes a mark-to-market election and we cease to be a PFIC, the holder will not be required to take into account the mark-to-market gain or loss described above during any period that we are not a PFIC. If a U.S. Holder makes a mark-to-market election, any gain such U.S. Holder recognizes upon the sale or other disposition of our ADSs in a year when we are a PFIC will be treated as ordinary income and any loss will be treated as ordinary loss, but such loss will only be treated as ordinary loss to the extent of the net amount previously included in income as a result of the mark-to-market election. In the case of a U.S. Holder who has held ADSs during any taxable year in respect of which we were classified as a PFIC and continues to hold such ADSs (or any portion thereof) and has not previously determined to make a mark-to-market election, and who is now considering making a mark-to-market election, special tax rules may apply relating to purging the PFIC taint of such ADSs.

Because, as a technical matter, a mark-to-market election cannot be made for any lower-tier PFICs that we may own, a U.S. Holder may continue to be subject to the general PFIC rules described above with respect to such U.S. Holder's indirect interest in any investments held by us that are treated as an equity interest in a PFIC for U.S. federal income tax purposes, notwithstanding a market-to-market election.

We do not intend to provide information necessary for U.S. Holders to make qualified electing fund elections, which, if available, would result in tax treatment different from the general tax treatment for PFICs described above.

If a U.S. Holder owns our ADSs or Class A ordinary shares during any taxable year that we are a PFIC, the holder must file an annual report with the U.S. Internal Revenue Service. Each U.S. Holder is urged to consult its tax advisor concerning the U.S. federal income tax considerations of purchasing, holding, and disposing ADSs or Class A ordinary shares if we are or become a PFIC, including the possibility of making a mark-to-market election.

Dividends

Subject to the PFIC discussion above, any cash distributions (including the amount of any PRC tax withheld) paid on our ADSs or Class A ordinary shares out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles, will generally be includible in the gross income of a U.S. Holder as dividend income on the day actually or constructively received by the U.S. Holder, in the case of Class A ordinary shares, or by the depositary bank, in the case of ADSs. Because we do not intend to determine our earnings and profits on the basis of U.S. federal income tax principles, any distribution paid will generally be treated as a "dividend" for U.S. federal income tax purposes.

Individuals and other non-corporate recipients of dividend income generally will be subject to tax on dividend income from a "qualified foreign corporation" at a lower applicable capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that certain holding period and other requirements are met. We will be considered to be a qualified foreign corporation with respect to any dividend we pay on our ADSs or Class A ordinary shares provided that (i) our ADSs or Class A ordinary shares are readily tradable on an established securities market in the United States, or we are eligible for the benefits of a comprehensive tax treaty with the United States that the Secretary of Treasury of the United States determines is satisfactory for this purpose and includes an exchange of information program, (ii) we are not treated as a PFIC for U.S. federal income tax purposes for the taxable year in which the dividend was paid or the preceding taxable year, and (iii) certain holding period requirements are met. Because (i) U.S. Treasury guidance indicates that ADSs representing ordinary shares, such as ours, listed on the Nasdaq Global Select Market are considered to be readily tradable on an established securities market in the United States, and (ii) we believe that we were not a PFIC for U.S. federal income tax purposes for our taxable year ended December 31, 2019 and we do not expect to be a PFIC in subsequent years, we believe that we are a qualified foreign corporation with respect to dividends paid on the ADSs, but not with respect to dividends paid on our Class A ordinary shares. In the event we are deemed to be a resident enterprise under the PRC Enterprise Income Tax Law, we believe that we would be eligible for the benefits under the United States-PRC income tax treaty (which the U.S. Treasury Department has determined is satisfactory for this purpose) and that we would be treated as a qualified foreign corporation with respect to dividends paid on both our Class A ordinary shares or ADSs. U.S. Holders should consult their tax advisors regarding the availability of the reduced tax rate on dividends in their particular circumstances. Dividends received on our ADSs or Class A ordinary shares will not be eligible for the dividends received deduction allowed to corporations.

For U.S. foreign tax credit purposes, dividends paid on our ADSs or Class A ordinary shares generally will be treated as income from foreign sources and generally will constitute passive category income. In the event that we are deemed to be a PRC resident enterprise under the PRC Enterprise Income Tax Law, a U.S. Holder may be subject to PRC withholding taxes on dividends paid, if any, on our ADSs or Class A ordinary shares. A U.S. Holder may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of any nonrefundable foreign withholding taxes imposed on dividends received on our ADSs or Class A ordinary shares. A U.S. Holder who does not elect to claim a foreign tax credit for foreign tax withheld may instead claim a deduction for U.S. federal income tax purposes in respect of such withholding, but only for a year in which such holder elects to do so for all creditable foreign income taxes. The rules governing the foreign tax credit are complex. U.S. Holders are urged to consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

Sale or Other Disposition of ADSs or Class A Ordinary Shares

Subject to the PFIC discussion above, a U.S. Holder will generally recognize capital gain or loss upon the sale or other disposition of ADSs or Class A ordinary shares in an amount equal to the difference between the amount realized upon the disposition and the holder's adjusted tax basis in such ADSs or Class A ordinary shares. The gain or loss will generally be capital gain or loss. Any capital gain or loss will be long-term if the ADSs or Class A ordinary shares have been held for more than one year. An individual U.S. Holder or other non-corporate U.S. Holder who has held the ADS or ordinary share for more than one year, will generally be eligible for reduced tax rates. The deductibility of capital losses is subject to limitations. Any such gain or loss that recognized by a U.S. Holder will generally be treated as U.S. source income or loss for foreign tax credit limitation purposes, which will generally limit the availability of foreign tax credits. However, in the event we are deemed to be a PRC "resident enterprise" under PRC tax law, we may be eligible for the benefits of the income tax treaty between the United States and the PRC. In such event, if PRC tax were to be imposed on any gain from the disposition of the ADSs or ordinary shares, a U.S. Holder that is eligible for the benefits of the income tax treaty between the United States and the PRC may elect to treat such gain as PRC source income. U.S. holders are urged to consult their tax advisors regarding the tax considerations if a foreign tax is imposed on a disposition of our ADSs or Class A ordinary shares, including the availability of the foreign tax credit under their particular circumstances.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We have filed with the SEC a registration statement on Form F-1, including relevant exhibits and securities under the Securities Act with respect to underlying ordinary shares represented by the ADSs.

We are subject to the periodic reporting and other informational requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F no later than four months after the close of each fiscal year, which is December 31. Copies of reports and other information, when so filed, may be inspected without charge and may be obtained at prescribed rates at the public reference facilities maintained by the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549, and at the regional office of the SEC located at Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site at www.sec.gov that contains reports, proxy and information statements, and other information regarding registrants that make electronic filings with the SEC using its EDGAR system.

Our internet website is www.21vianet.com. We make available free of charge on our website our annual reports on Form 20-F and any amendments to such reports as soon as reasonably practicable following the electronic filing of such report with the SEC. In addition, we provide electronic or paper copies of our filings free of charge upon request. The information contained on our website is not part of this or any other report filed with or furnished to the SEC.

As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. Our financial statements have been prepared in accordance with U.S. GAAP.

We will furnish hard copies of our annual report which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP free of charge to our shareholders and ADS holders upon request.

I. Subsidiary Information

For a listing of our subsidiaries, see “Item 4. Information on the Company—C. Organizational Structure.”

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Our exposure to interest rate risk primarily relates to interest expenses incurred in respect of bonds payable, bank borrowings, finance lease liabilities as well as interest income generated by excess cash, which is mostly held in interest-bearing bank deposits. As of December 31, 2019, we had: (i) short-term and long-term bank borrowings (current portions) with an aggregate outstanding balance of RMB267.0 million (US$38.4 million); (ii) long-term bank borrowings (excluding current portions) with an aggregate outstanding balance of RMB79.5 million (US$11.4 million); and (iii) an outstanding principal balance of US$131.2 million with respect to the 2020 Notes payable.

The short-term bank borrowings bore a weighted average interest rate of 4.56% per annum. The long-term bank borrowings bore weighted-average interest rate of 5.28% per annum. The 2020 Notes bore an interest rate of 7.000% per annum and an effective interest rate of 6.98% per annum. We also had RMB363.9 million (US$52.3 million) in short-term investments with original maturities of greater than 90 days but less than 365 days. A hypothetical one percentage point (100 basis-point) decrease in interest rates would have resulted in a decrease of approximately RMB173,567 (US$24,931) in interest expense for the year ended December 31, 2019. We have not used derivative financial instruments in our investment portfolio. Interest earning instruments and interest-bearing obligations carry a degree of interest rate risk. We have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in market interest rates. However, our future interest income and interest expenses may fluctuate due to changes in market interest rates.

Foreign Exchange Risk

We earn most of our revenues and incur most of our expenses in Renminbi, and most of our sales and purchase contracts are denominated in Renminbi. We have not used any derivative financial instruments to hedge our exposure to foreign exchange risk. The Renminbi depreciated by 5.0% against the U.S. dollar in 2018 and then further depreciated 1.6% in 2019. The Company intends to hold U.S. dollar-denominated financial assets and will convent to RMB according to the trend of exchange rate changes. As of December 31, 2019, we had total U.S. dollar-denominated cash and cash equivalent, restricted cash and short-term investments in the amount of US$213.8 million. A hypothetical 10% increase in the exchange rate of the U.S. dollar against the RMB would have resulted in increase of RMB148.8 million (US$21.4 million) in the value of our U.S. dollar-denominated financial assets at December 31, 2019.

The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. Since June 2010, the RMB has fluctuated against the U.S. dollar, at times significantly and unpredictably, and in recent years the RMB has depreciated significantly against the U.S. dollar. It is difficult to predict whether the depreciation will continue and how market forces or PRC or U.S. government policy may impact the exchange rate between the RMB and the U.S. dollar in the future. As our costs and expenses are mostly denominated in RMB, the appreciation of the RMB against the U.S. dollar would increase our costs in U.S. dollar terms. In addition, as our operating subsidiaries and VIEs in China receive revenues in RMB, any significant depreciation of the RMB against the U.S. dollar may have a material and adverse effect on our revenues in U.S. dollar terms and financial condition, and the value of, and any dividends payable on, our ordinary shares. For example, to the extent that we need to convert U.S. dollars into Renminbi for capital expenditures and working capital and other business purposes, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the RMB amount we would receive from the conversion. Conversely, if we decide to convert Renminbi into U.S. dollars for the purpose of making payments for dividends on our ordinary shares or ADSs, strategic acquisitions or investments or other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollar amount available to us.

Inflation Risk

In the last three years, inflation in China has not materially impacted our results of operations. According to the National Bureau of Statistics of China, the annual average percent changes in the consumer price index in China for 2017, 2018 and 2019 were 1.6%, 2.1% and 2.9%, respectively. The year -over-year percent changes in the consumer price index for January 2018, 2019 and 2020 were increases of 1.5%, 1.7% and 5.4%, respectively. Although we have not been materially affected by inflation in the past, we cannot assure you that we will not be affected in the future by higher rates of inflation in China.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

Fees and Charges Our ADS holders May Have to Pay

Citibank, N.A., the depositary of our ADS program, collects fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deductions from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid. Citibank's principal executive office is located at 388 Greenwich Street, New York, New York, 10013. The depositary bank typically appoints a custodian to safeguard the securities on deposit. In this case, the custodian is Citibank Hong Kong, located at 10/F, Harbour Front (II), 22, Tak Fung Street, Hung Hom, Kowloon, Hong Kong. As an ADS holder, you will be required to pay the following service fees to the depositary bank:

Ÿ	Service	Fees
Ÿ	Issuance of ADSs	Up to US$0.05 per ADS issued
Ÿ	Cancellation of ADSs	Up to US$0.05 per ADS canceled
Ÿ	Distribution of cash dividends or other cash distributions	Up to US$0.05 per ADS held
Ÿ	Distribution of ADSs pursuant to stock dividends, free stock distributions or exercise of rights.	Up to US$0.05 per ADS held
Ÿ	Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to US$0.05 per ADS held
Ÿ	Depositary services	Up to US$0.05 per ADS held on the applicable record date(s) established by the Depositary
Ÿ	Transfer of ADRs	US$1.50 per certificate presented for transfer

As an ADS holder, you will also be responsible to pay certain fees and expenses incurred by the depositary bank and certain taxes and governmental charges such as:

- fees for the transfer and registration of Class A ordinary shares charged by the registrar and transfer agent for the Class A ordinary shares in the Cayman Islands (i.e., upon deposit and withdrawal of Class A ordinary shares);

- expenses incurred for converting foreign currency into U.S. dollars;

- expenses for cable, telex and fax transmissions and for delivery of securities;

- taxes and duties upon the transfer of securities (i.e., when Class A ordinary shares are deposited or withdrawn from deposit); and

- fees and expenses incurred in connection with the delivery or servicing of Class A ordinary shares on deposit.

Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary bank by the brokers (on behalf of their clients) receiving the newly issued ADSs from the depositary bank and by the brokers (on behalf of their clients) delivering the ADSs to the depositary bank for cancellation. The brokers in turn charge these fees to their clients. Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary bank to the record holders of ADSs as of the applicable ADS record date.

The depositary fees payable for cash distributions are generally deducted from the cash being distributed. In the case of distributions other than cash (i.e., stock dividends, rights), the depositary bank charges the applicable fee to the record date ADS holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or uncertificated in the direct registration system), the depositary bank sends invoices to the applicable record date ADS holders. In the case of ADSs held in brokerage and custodian accounts (via DTC), the depositary bank generally collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients' ADSs in DTC accounts in turn charge their clients' accounts the amount of the fees paid to the depositary banks.

In the event of refusal to pay the depositary fees, the depositary bank may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary fees from any distribution to be made to the ADS holder.

Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary bank. You will receive prior notice of such changes.

The depositary bank may reimburse us for certain expenses incurred by us in respect of the ADR program established pursuant to the deposit agreement, by making available a portion of the depositary fees charged in respect of the ADR program or otherwise, upon such terms and conditions as we and the depositary bank may agree from time to time.

Fees and Other Payments Made by the Depositary to Us

Our depositary has agreed to reimburse us for certain expenses we incur that are related to establishment and maintenance of the ADS program, including investor relations expenses and exchange application and listing fees. There are limits on the amount of expenses for which the depositary will reimburse us, but the amount of reimbursement available to us is not related to the amounts of fees the depositary collects from investors. For the year ended December 31, 2019, we were entitled to US$994,706 from the depositary as reimbursement for our expenses incurred in connection with the establishment and maintenance of the ADS program.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

See “Item 10. Additional Information” for a description of the rights of security holders, which remain unchanged since our initial public offering.

The following “Use of Proceeds” information relates to the registration statement on Form F-1 (File number 333-173292) for our initial public offering of 14,950,000 ADSs, representing 89,700,000 Class A ordinary shares, which registration statement was declared effective by the SEC on April 21, 2011. We issued and sold all registered ADSs at an initial offering price of US$15.00 per ADS.

We received net proceeds of US$204.3 million from our initial public offering. We used all of the net proceeds received from our initial public offering on data center infrastructure expansion, network infrastructure expansion and general corporate purposes.

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this annual report, as required by Rule 13a-15(b) under the Exchange Act. Based on such evaluation, our management has concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were effective.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, with the participation of our chief executive officer and chief financial officer, conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2019. In making this assessment, we used the criteria established within the Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment, our management has concluded that, as of December 31, 2019, our internal control over financial reporting was effective.

Our independent registered public accounting firm, Ernst & Young Hua Ming LLP, has audited our internal control over financial reporting as of December 31, 2019 and has issued an attestation report set forth below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
To the Shareholders and the Board of Directors of 21Vianet Group, Inc.:

Opinion on Internal Control over Financial Reporting

We have audited 21Vianet Group, Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, 21Vianet Group, Inc. (the "Company") maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated April 2, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young Hua Ming LLP

Shanghai, the People's Republic of China

April 2, 2020

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting that occurred during the period covered by this annual report that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that Mr. Sean Shao, an independent director (under the standards set forth in Nasdaq Stock Market Rule 5605(a)(2) and Rule 10A-3 under the Exchange Act) and a member of our audit committee, is an audit committee financial expert.

ITEM 16B. CODE OF ETHICS

Our board of directors has adopted a code of ethics that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officer, chief financial officer, chief operating officer, vice presidents and any other persons who perform similar functions for us. We have filed our code of business conduct and ethics as an exhibit to our registration statement on Form F-1 (No. 333-173292).

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by Ernst & Young Hua Ming LLP for the periods indicated. We did not pay any other fees to Ernst & Young Hua Ming LLP during the periods indicated below.

	For the Years Ended December 31,	
	2018	2019
	(in US$ thousands)	
Audit fees[1]	1,252	915
Audit-related fees[2]	—	203
Tax fees	32	19
Other fees[3]	—	45

Notes:

(1) “Audit fees” means the aggregate fees billed for professional services rendered by Ernst & Young Hua Ming LLP for the audit of our annual financial statements.

(2) “Audit-related fees” means, for the year ended December 31, 2019, the aggregate fees billed for services provided in connection with offering of the 2021 Notes.

(3) “Other fees” means the aggregate fees billed for professional services in connection with the review of ASC842 in 2019.

The policy of our audit committee is to pre-approve all audit and non-audit services provided by Ernst & Young Hua Ming LLP, including audit, audit-related and tax services as described above, prior to the commencement of such services.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

On December 2, 2019, our board of directors approved a share repurchase program to repurchase up to US$20 million worth of our ADSs during a 13-month period ending on December 31, 2020. The share repurchase program permitted us to purchase its ADSs through various means, including open market transactions, privately negotiated transactions, any combination thereof or other legally permissible means in accordance with applicable rules and regulations. The number of ADSs repurchased and the timing of repurchases will depend on a number of factors, including, but not limited to, price, trading volume and general market conditions, along with our working capital requirements, general business conditions and other factors.

For the period from December 4, 2019 to December 31, 2019, we repurchased 242,830 ADSs for a consideration of US$1.7 million under our share repurchase program.

The following table sets forth a summary of our repurchase of our ADSs made in the year 2019 under the share repurchase programs described in the paragraph above.

Period	Total Number of ADSs Purchased[2]	Average Price Paid Per ADS[2]	Total Number of ADSs Purchased as Part of Publicly Announced Program[1]	Maximum Dollar Value of ADSs that May Yet Be Purchased Under the Program (US$)
(December 4, 2019—December 31, 2019)	242,830	7.00	242,830	18,325,030

(1) On December 2, 2019, our board of directors approved a share repurchase program under which we may repurchase up to US$20 million worth of our American depositary shares, representing Class A ordinary shares, during a 13-month period ending on December 31, 2020.

(2) Each ADS represents six Class A ordinary shares.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

Certain corporate governance practices in the Cayman Islands, which is our home country, are considerably different than the standards applied to U.S. domestic issuers. Nasdaq Stock Market Rules provide that foreign private issuers are exempt from certain corporate governance requirements of Nasdaq and may follow their home country practices, subject to certain exceptions and requirements to the extent that such exemptions would be contrary to U.S. federal securities laws and regulations. We currently follow our home country practice that: (i) does not require us to solicit proxy and hold meetings of our shareholders every year, (ii) does not restrict a company's transactions with directors, requiring only that directors exercise a duty of care and owe certain fiduciary duties to the companies for which they serve, (iii) does not require us to obtain shareholder approval for issuing additional securities exceeding 20% of our outstanding ordinary shares, and (iv) does not require us to seek shareholders' approval for amending our share incentive plan. In the future, we may rely on other exemptions provided by Nasdaq.

In accordance with NASDAQ Stock Market Rule 5250(d)(1), we will post this annual report on Form 20-F on our company website at http://ir.21vianet.com. In addition, we will provide hard copies of our annual report free of charge to shareholders and ADS holders upon request.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

We have elected to provide financial statements pursuant to Item 18.

ITEM 18. FINANCIAL STATEMENTS

The consolidated financial statements of 21Vianet Group, Inc. and its subsidiaries and consolidated affiliated entities are included at the end of this annual report.

ITEM 19. EXHIBITS

Exhibit Number	Description of Document
1.1	Fourth Amended and Restated Memorandum and Articles of Incorporation of the Registrant (incorporated by reference to Exhibit 3.2 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the U.S. Securities and Exchange Commission (the "Commission") on April 4, 2011)
2.1	Specimen American Depositary Receipt of the Registrant (incorporated by reference to Exhibit 4.1 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
2.2	Specimen Certificate for Class A Ordinary Shares of the Registrant (incorporated by reference to Exhibit 4.2 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
2.3	Deposit Agreement among the Registrant, the depositary and holders and beneficial holders of the American Depositary Shares (incorporated by reference to Exhibit 4.3 from our registration statement on Form S-8 (File No. 333-177273), as amended, filed with the Commission on October 13, 2011)
2.4	Amended and Restated Shareholders Agreement between the Registrant and other parties therein dated January 14, 2011 (incorporated by reference to Exhibit 4.4 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
2.5*	Description of securities
2.6*	Indenture dated April 15, 2019 constituting US$300 million 7.875% Senior Notes due 2021 between the Registrant and Citicorp International Limited, as trustee
4.1	Form of Indemnification Agreement between the Registrant and its Directors (incorporated by reference to Exhibit 10.3 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.2	Form of Employment Agreement between the Registrant and an Executive Officer of the Registrant (incorporated by reference to Exhibit 10.4 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)

Exhibit Number	Description of Document
4.3	English translation of Loan Agreement dated January 28, 2011, between 21Vianet Data Center Co., Ltd. and the shareholders of Beijing aBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) (incorporated by reference to Exhibit 4.7 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 19, 2013)
4.4	English translation of Share Pledge Agreement dated February 23, 2011, among 21Vianet Data Center Co., Ltd., Beijing aBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) and the shareholders of Beijing aBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) (incorporated by reference to Exhibit 10.6 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.5	English translation of Form Irrevocable Power of Attorney, by the shareholders of Beijing aBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) (incorporated by reference to Exhibit 10.7 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.6	English Translation of Power of Attorney dated September 30, 2010, by 21Vianet Data Center Co., Ltd. (incorporated by reference to Exhibit 10.8 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.7	Exclusive Technical Consulting and Services Agreement dated December 19, 2006, between 21Vianet Data Center Co., Ltd. and BeijingaBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) (incorporated by reference to Exhibit 10.9 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.8	Optional Share Purchase Agreement dated December 19, 2006, among 21Vianet Data Center Co., Ltd., 21Vianet System Limited (which later changed its name to Beijing aBitCool Network Technology Co., Ltd. and then to Beijing Yiyun Network Technology Co., Ltd.), Beijing 21Vianet Broad Band Data Center Co., Ltd. and the shareholders of Beijing aBitCool Network Technology Co., Ltd. (which later changed its name to Beijing Yiyun Network Technology Co., Ltd.) (incorporated by reference to Exhibit 10.10 from our registration statement on Form F-1 (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
4.9	Commitment Letter dated September 30, 2010, by AsiaCloud Inc. (which later changed its name to 21Vianet Group, Inc.), 21Vianet Data Center Co., Ltd., Sheng Chen and Jun Zhang (incorporated by reference to Exhibit 4.13 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 19, 2013)
4.10	2010 Share Incentive Plan, as amended on January 14, 2011 and July 6, 2012 (incorporated by reference to Exhibit 10.12 from our Form S-8 (File No. 333-187695), initially filed with the Commission on April 3, 2013)
4.11	English summary of Property Lease Agreement dated February 4, 2013, between Beijing Xingguang Tuocheng Investment Co., Ltd. and Beijing 21Vianet Broad Band Data Center Co., Ltd. (incorporated by reference to Exhibit 4.18 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 19, 2013)

Exhibit Number	Description of Document
4.12	Investor Rights Agreement dated January 15, 2015, among 21Vianet Group, Inc., King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein (incorporated by reference to Exhibit 7.04 from Form Schedule 13D (File No. 005-86326), initially filed by King Venture Holdings Limited and other filers with the Commission on January 20, 2015)
4.13	Registration Rights Agreement dated January 15, 2015, among 21Vianet Group, Inc., King Venture Holdings Limited and Xiaomi Ventures Limited (incorporated by reference to Exhibit 7.05 from Form Schedule 13D (File No. 005-86326), initially filed by King Venture Holdings Limited and other filers with the Commission on January 20, 2015)
4.14	English translation of Loan Agreement dated July 1, 2014, among Abitcool (China) Broadband Inc., Sheng Chen and Jun Zhang (incorporated by reference to Exhibit 4.25 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.15	English translation of Equity Pledge Agreement dated July 1, 2014, among Abitcool (China) Broadband Inc., Sheng Chen and Jun Zhang (incorporated by reference to Exhibit 4.26 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.16	English translation of Form Irrevocable Power of Attorney, by the shareholders of aBitcool Small Micro Network Technology (BJ) Co., Ltd. (incorporated by reference to Exhibit 4.27 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.17	English translation of Power of Attorney dated July 1, 2014, by Abitcool (China) Broadband Inc. (incorporated by reference to Exhibit 4.28 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.18	English translation of Exclusive Technology Consulting and Services Agreement dated July 1, 2014, between Abitcool (China) Broadband Inc. and aBitcool Small Micro Network Technology (BJ) Co., Ltd. (incorporated by reference to Exhibit 4.29 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.19	English translation of Exclusive Services Agreement dated July 1, 2014, between Abitcool (China) Broadband Inc. and aBitcool Small Micro Network Technology (BJ) Co., Ltd. (which later changed its name to WiFire Network Technology (Beijing) Co., Ltd.) (incorporated by reference to Exhibit 4.30 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)

Exhibit Number	Description of Document
4.20	English translation of Exclusive Call Option Agreement dated July 1, 2014, among aBitCool Broadband Inc. (which later changed its name to WiFire Group Inc.), Sheng Chen, Jun Zhang and aBitcool Small Micro Network Technology (BJ) Co., Ltd. (which later changed its name to WiFire Network Technology (Beijing) Co., Ltd.) (incorporated by reference to Exhibit 4.31 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.21	English translation of Commitment Letter dated July 1, 2014 by Sheng Chen, Jun Zhang and aBitcool Small Micro Network Technology (BJ) Co., Ltd. (which later changed its name to WiFire Network Technology (Beijing) Co., Ltd.) (incorporated by reference to Exhibit 4.32 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 10, 2015)
4.22	2014 Share Incentive Plan, as amended on April 1, 2015 and December 22, 2017 (incorporated by reference to Exhibit 10.1 from our Form S-8 (File No. 333-222521), initially filed with the Commission on January 12, 2018)
4.23	Share Subscription Agreement, dated May 23, 2016, between 21Vianet Group Inc. and Tuspark Innovation Venture Limited (incorporated by reference to Exhibit 7.02 from Form Schedule 13D (File No. 005-86326), initially filed by Tuspark Innovation Venture Limited and other filers with the Commission on July 13, 2016)
4.24	English translation of the Supplemental Agreement to the Optional Share Purchase Agreement, dated December 19, 2016, by and among 21Vianet Data Center Co., Ltd., Beijing Yiyun Network Technology Co., Ltd., Beijing 21Vianet Broad Band Data Center Co., Ltd. and the shareholders of Beijing Yiyun Network Technology Co., Ltd. (incorporated by reference to Exhibit 4.37 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 12, 2017)
4.25	English translation of the Supplemental Agreement to the Exclusive Technical Consulting and Services Agreement, dated December 19, 2016, by and among 21Vianet Data Center Co., Ltd., Beijing Yiyun Network Technology Co., Ltd., and Beijing 21Vianet Broad Band Data Center Co., Ltd. (incorporated by reference to Exhibit 4.38 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 12, 2017)
4.26	English translation of the equity interest purchase agreement dated September 27, 2017, by and among Beijing TUS Yuanchuang Technology Development Co., Ltd., a company wholly owned by Tus-Holdings, Beijing 21Vianet Broad Band Data Center Co., Ltd., WiFire Network Technology (Beijing) Co., Ltd., WiFire (Beijing) Technology Co., Ltd., Guangzhou Gehua Network Technology and Development Company Limited, Beijing Chengyishidai Network Technology Co., Ltd., Zhiboxintong (Beijing) Network Technology Co., Ltd., Beijing Fastweb Network Technology Co., Ltd. and Guangzai Wuxian (Shanghai) Network Technology Co., Ltd (incorporated by reference to Exhibit 4.30 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on April 12, 2018)

Exhibit Number	Description of Document
4.27	English translation of the lease dated August 15, 2018 by and between the 21ViaNet Broad Band Data Center Co., Ltd. and Beijing Tuspark Harmonious Investment Development Co., Ltd. (incorporated by reference to Exhibit 4.33 from our annual report on Form 20-F (File No. 001-35126), initially filed with the Commission on March 27, 2019)
4.28*	Amended and Restated Investment Agreement dated July 24, 2019 by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited
4.29*	Restructuring Agreement dated July 24, 2019 by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited
4.30*	Amendment to Restructuring Agreement dated January 15, 2020 by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited
4.31*	Share Subscription Agreement dated October 14, 2019 by and between 21Vianet Group, Inc. and Personal Group Limited
4.32	Form of Note Purchase Agreement by and between 21Vianet Group, Inc. and a purchaser (incorporated by reference to Exhibit 99.2 from our Form 6-K (File No. 001-35126), initially furnished with the Commission on February 20, 2020)
8.1*	List of Subsidiaries and Principal Consolidated Affiliated Entities
11.1	Code of Business Conduct and Ethics of Registrant (incorporated by reference to Exhibit 99.1 from our F-1 registration statement (File No. 333-173292), as amended, initially filed with the Commission on April 4, 2011)
12.1*	Chief Executive Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2*	Chief Financial Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	Chief Executive Officer Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2**	Chief Financial Officer Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1*	Consent of Ernst & Young Hua Ming LLP, Independent Registered Public Accounting Firm
15.2*	Consent of Han Kun Law Offices
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document

Exhibit Number	Description of Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed with this Annual Report on Form 20-F.

* * Furnished with Annual Report on Form 20-F.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

21Vianet Group, Inc.

By: /s/ Sheng Chen
Name: Sheng Chen
Title: Executive Chairman of Board of Directors

Date: April 2, 2020

21VIANET GROUP, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of 21Vianet Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of 21Vianet Group, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive loss, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2019 and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated April 2, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 2 to the consolidated financial statements, the Company changed its method for accounting for lease in the year ended December 31, 2019 and its method for accounting for revenue from contracts with customers, the presentation of the cash flows and its method for accounting for certain equity securities in the year ended December 31, 2018.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young Hua Ming LLP

We have served as the Company's auditor since 2010.

Shanghai, the People's Republic of China

April 2, 2020

21VIANET GROUP, INC.
CONSOLIDATED BALANCE SHEETS
(Amounts in thousands of Renminbi ("RMB") and US dollars ("US$"))

	Notes	As of December 31, 2018 RMB	As of December 31, 2019 RMB	As of December 31, 2019 US$
ASSETS				
Current assets:				
Cash and cash equivalents		2,358,556	1,808,483	259,772
Restricted cash		265,214	478,873	68,786
Accounts and notes receivable (net of allowance for doubtful debt of RMB70,970 and RMB67,828 (US$9,743) as of December 31, 2018 and 2019, respectively)	5	524,305	657,158	94,395
Short-term investments	6	245,014	363,856	52,265
Prepaid expenses and other current assets	7	1,159,574	1,618,149	232,433
Amounts due from related parties	23	125,446	301,665	43,331
Total current assets		4,678,109	5,228,184	750,982
Non-current assets:				
Property and equipment, net	8	4,031,242	5,443,565	781,919
Intangible assets, net	9	355,313	410,595	58,978
Land use rights, net	10	147,493	233,154	33,490
Operating lease right-of-use assets, net	15	—	1,221,616	175,474
Goodwill	11	989,530	989,530	142,137
Restricted cash		37,251	69,821	10,029
Deferred tax assets	22	159,441	209,366	30,074
Long-term investments	12	544,323	169,653	24,369
Amounts due from related parties	23	34,424	20,654	2,967
Other non-current assets		173,591	277,568	39,870
Total non-current assets		6,472,608	9,045,522	1,299,307
Total assets		11,150,717	14,273,706	2,050,289

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(Amounts in thousands of RMB and US$)

	Notes	As of December 31, 2018 RMB	As of December 31, 2019 RMB	As of December 31, 2019 US$
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities:				
Short-term bank borrowings (including short-term bank borrowings of the Consolidated VIEs without recourse to the primary beneficiaries of RMB50,000 and RMB232,323 (US$33,371) as of December 31, 2018 and 2019, respectively)	13	50,000	234,500	33,684
Accounts and notes payable (including accounts and notes payable of the Consolidated VIEs without recourse to the primary beneficiaries of RMB258,048 and RMB211,710 (US$30,410) as of December 31, 2018 and 2019, respectively)		389,508	303,128	43,542
Accrued expenses and other payables (including accrued expenses and other payables of the Consolidated VIEs without recourse to the primary beneficiaries of RMB392,619 and RMB622,160 (US$89,368) as of December 31, 2018 and 2019, respectively)	14	659,320	978,935	140,613
Advances from customers (including advances from customers of the Consolidated VIEs without recourse to the primary beneficiaries of RMB670,037 and RMB1,068,692 (US$153,508) as of December 31, 2018 and 2019, respectively)		670,037	1,068,692	153,508
Deferred revenue (including deferred revenue of the Consolidated VIEs without recourse to the primary beneficiaries of RMB51,026 and RMB52,088 (US$7,482) as of December 31, 2018 and 2019, respectively)		57,754	57,625	8,277
Income taxes payable (including income taxes payable of the Consolidated VIEs without recourse to the primary beneficiaries of RMB8,519 and RMB8,175 (US$1,174) as of December 31, 2018 and 2019, respectively)		13,111	48,032	6,899
Amounts due to related parties (including amounts due to related parties of the Consolidated VIEs without recourse to the primary beneficiaries of RMB51,763 and RMB56,977 (US$8,184) as of December 31, 2018 and 2019, respectively)	23	52,328	166,935	23,979
Current portion of long-term bank borrowings (including current portion of long-term bank borrowings of the Consolidated VIEs without recourse to the primary beneficiaries of RMB75,284 and RMB32,500 (US$4,668) as of December 31, 2018 and 2019, respectively)	13	75,284	32,500	4,668
Current portion of finance lease liabilities (including current portion of finance lease liabilities of the Consolidated VIEs without recourse to the primary beneficiaries of RMB219,695 and RMB220,363 (US$31,653) as of December 31, 2018 and 2019, respectively)	15	219,695	227,115	32,623
Deferred government grants (including deferred government grants of the Consolidated VIEs without recourse to the primary beneficiaries of RMB4,173 and RMB2,595 (US$373) as of December 31, 2018 and 2019, respectively)	17	4,173	2,595	373
Current portion of bonds payable	16	—	911,147	130,878
Current portion of operating lease liabilities (including current portion of operating lease liabilities of the Consolidated VIEs without recourse to the primary beneficiaries of nil and RMB410,422 (US$58,953) as of December 31, 2018 and 2019, respectively)	15	—	437,817	62,888
Total current liabilities		2,191,210	4,469,021	641,932

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(Amounts in thousands of RMB and US$)

	Notes	As of December 31, 2018 RMB	As of December 31, 2019 RMB	As of December 31, 2019 US$
Non-current liabilities:				
Long-term bank borrowings (including long-term bank borrowings of the Consolidated VIEs without recourse to the primary beneficiaries of RMB112,000 and RMB79,500 (US$11,419) as of December 31, 2018 and 2019, respectively)	13	112,000	79,500	11,419
Bonds payable	16	2,037,836	2,060,708	296,002
Non-current portion of finance lease liabilities (including non-current portion of finance lease liabilities of the Consolidated VIEs without recourse to the primary beneficiaries of RMB852,287 and RMB549,669 (US$78,955) as of December 31, 2018 and 2019, respectively)	15	765,993	896,927	128,836
Unrecognized tax benefits (including unrecognized tax benefits of the Consolidated VIEs without recourse to the primary beneficiaries of RMB4,938 and RMB1,991 (US$286) as of December 31, 2018 and 2019, respectively)	22	6,677	2,443	351
Deferred tax liabilities (including deferred tax liabilities of the Consolidated VIEs without recourse to the primary beneficiaries of RMB84,568 and RMB82,725 (US$11,883) as of December 31, 2018 and 2019, respectively)	22	157,720	202,572	29,098
Deferred government grants (including deferred government grants of the Consolidated VIEs without recourse to the primary beneficiaries of RMB11,619 and RMB5,906 (US$848) as of December 31, 2018 and 2019, respectively)	17	11,619	5,906	848
Amounts due to related parties (including amounts due to related parties of the Consolidated VIEs without resource to the primary beneficiaries of RMB504,478 and RMB745,899 (US$107,142) as of December 31, 2018 and 2019, respectively)	23	504,478	745,899	107,142
Non-current portion of operating lease liabilities (including non-current portion of operating lease liabilities of the Consolidated VIEs without resource to the primary beneficiaries of nil and RMB529,546 (US$76,064) as of December 31, 2018 and 2019, respectively)	15	—	579,102	83,183
Total non-current liabilities		3,596,323	4,573,057	656,879
Total liabilities		5,787,533	9,042,078	1,298,811
Commitments and contingencies	30			

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(Amounts in thousands of RMB and US$)

	Notes	As of December 31, 2018 RMB	As of December 31, 2019 RMB	As of December 31, 2019 US$
Shareholders' equity:				
Class A Ordinary shares (par value of US$0.00001 per share; 1,200,000,000 and 1,200,000,000 shares authorized; 499,706,628 and 505,253,850 issued and outstanding as of December 31, 2018 and 2019, respectively)	27	34	34	5
Class B Ordinary Shares (par value of US$0.00001 per share; 300,000,000 and 300,000,000 shares authorized; 174,649,638 and 174,649,638 issued and outstanding as of December 31, 2018 and 2019, respectively)	27	12	12	2
Class C Ordinary Shares (par value of US$0.00001 per share; nil and 60,000 shares authorized; nil and 60,000 shares issued and outstanding as of December 31, 2018 and 2019, respectively)	27	—	—	—
Additional paid-in capital		9,141,494	9,202,567	1,321,866
Accumulated other comprehensive income	19	85,979	77,904	11,190
Statutory reserves		42,403	60,469	8,687
Accumulated deficit		(3,838,032)	(4,038,390)	(580,078)
Treasury stock	18	(337,683)	(349,523)	(50,206)
Total 21Vianet Group, Inc. shareholders' equity		5,094,207	4,953,073	711,466
Noncontrolling interest		268,977	278,555	40,012
Total shareholders' equity		5,363,184	5,231,628	751,478
Total liabilities and shareholders' equity		11,150,717	14,273,706	2,050,289

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in thousands of RMB and US$, except for number of shares and per share data)

	Notes	For the years ended December 31, 2017 RMB	2018 RMB	2019 RMB	2019 US$
Net revenues					
Hosting and related services		2,975,178	3,401,037	3,788,967	544,251
Managed network services		417,527	—	—	—
Total net revenues		3,392,705	3,401,037	3,788,967	544,251
Hosting and related services		(2,130,279)	(2,456,166)	(2,849,518)	(409,308)
Managed network services		(504,016)	—	—	—
Total cost of revenues		(2,634,295)	(2,456,166)	(2,849,518)	(409,308)
Gross profit		758,410	944,871	939,449	134,943
Operating income (expenses)					
Operating income		5,439	5,027	6,862	986
Sales and marketing expenses		(256,682)	(172,176)	(206,309)	(29,634)
Research and development expenses		(149,143)	(92,109)	(88,792)	(12,754)
General and administrative expenses		(519,950)	(462,637)	(415,277)	(59,651)
(Allowance) reversal for doubtful debt		(37,427)	598	(1,557)	(224)
Impairment of receivables from equity investees		—	—	(52,142)	(7,490)
Changes in the fair value of contingent purchase consideration payables		(937)	13,905	—	—
Impairment of long-lived assets		(401,808)	—	—	—
Impairment of goodwill		(766,440)	—	—	—
Total operating expenses		**(2,126,948)**	**(707,392)**	**(757,215)**	**(108,767)**
Operating (loss) profit		(1,368,538)	237,479	182,234	26,176
Interest income		32,925	45,186	54,607	7,844
Interest expense		(185,313)	(236,066)	(345,955)	(49,693)
Impairment of long-term investment		(20,258)	—	—	—
Gain on disposal of subsidiaries	4	497,036	4,843	—	—
Loss on debt extinguishment		—	—	(18,895)	(2,714)
Other income		16,764	58,033	36,380	5,226
Other expenses		(17,060)	(4,103)	(5,632)	(809)
Foreign exchange loss, net		(17,153)	(81,055)	(27,995)	(4,021)
(Loss) income before income taxes and gain (loss) from equity method investments		(1,061,597)	24,317	(125,256)	(17,991)
Income tax benefits (expenses)	22	90,170	(24,411)	(5,437)	(781)
Gain (loss) from equity method investments		53,783	(186,642)	(50,553)	(7,261)
Net loss		(917,644)	(186,736)	(181,246)	(26,033)
Net loss (income) attributable to noncontrolling interest and redeemable noncontrolling interest		144,914	(18,329)	(1,046)	(150)
Net loss attributable to the Company's ordinary shareholders		(772,730)	(205,065)	(182,292)	(26,183)
Loss per share:					
Basic	26	RMB (1.36)	RMB (0.30)	RMB (0.27)	US$ (0.04)
Diluted	26	RMB (1.36)	RMB (0.30)	RMB (0.27)	US$ (0.04)
Shares used in loss per share computation:					
Basic	26	672,836,226	674,732,130	668,833,756	668,833,756
Diluted	26	672,836,226	674,732,130	668,833,756	668,833,756

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Amounts in thousands of RMB and US$)

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Net loss	(917,644)	(186,736)	(181,246)	(26,033)
Other comprehensive (loss) income, net of tax of nil:				
Foreign currency translation adjustments, net of tax of nil	(120,963)	88,652	(8,075)	(1,160)
Other comprehensive (loss) income, net of tax of nil	(120,963)	88,652	(8,075)	(1,160)
Comprehensive loss	(1,038,607)	(98,084)	(189,321)	(27,193)
Comprehensive loss (income) attributable to noncontrolling interest and redeemable noncontrolling interest	144,914	(18,329)	(1,046)	(150)
Comprehensive loss attributable to the Company's ordinary shareholders	(893,693)	(116,413)	(190,367)	(27,343)

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands of RMB and US$)

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
CASH FLOWS FROM OPERATING ACTIVITIES				
Net loss	(917,644)	(186,736)	(181,246)	(26,033)
Adjustments to reconcile net loss to net cash generated from operating activities:				
Foreign exchange loss, net	17,153	81,055	27,995	4,021
Changes in the fair value of contingent purchase consideration payables	937	(13,905)	—	—
Gain from settlement of contingent purchase consideration	—	(500)	—	—
Depreciation and amortization	667,102	634,606	772,205	110,920
(Gain) loss on disposal of property and equipment and intangible assets	(3,285)	(7,981)	271	39
Allowance (reversal) for doubtful debt	37,427	(598)	1,557	224
Share-based compensation expense	47,129	59,538	43,916	6,308
Impairment of receivables from equity investees	—	—	52,142	7,490
Deferred income tax benefits	(128,026)	(19,776)	(64,887)	(9,320)
(Gain) loss from equity method investments	(53,783)	186,642	50,553	7,261
Distribution received from an equity method investment	—	—	20,200	2,902
Gain from disposal of equity investments without readily determinable fair value	—	(20,496)	(5,536)	(795)
Gain from disposal of equity method investment	—	(16,509)	(17,853)	(2,564)
Dividend income of equity investments without readily determinable fair values	(1,821)	(406)	—	—
Gain from disposal of subsidiaries	(497,036)	(4,843)	—	—
Impairment of long-lived assets	401,808	—	—	—
Impairment of goodwill	766,440	—	—	—
Impairment of long-term investment	20,258	—	—	—
Loss on debt extinguishment	—	—	18,895	2,714
Changes in operating assets and liabilities, net of effects of acquisitions and disposals:				
Accounts and notes receivable	18,277	(68,809)	(156,134)	(22,427)
Prepaid expenses and other current assets	(311,324)	(262,445)	(328,224)	(47,148)
Amounts due from related parties	4,436	(38,047)	11,352	1,631
Accounts and notes payables	42,468	41,380	9,185	1,319
Unrecognized tax benefits	(3,939)	(9,834)	(4,234)	(608)
Accrued expenses and other payables	270,082	77,744	77,275	11,098
Deferred revenue	(65,415)	2,001	(129)	(19)
Advances from customers	201,847	266,793	398,655	57,263
Income taxes payable	(6,548)	(198)	34,917	5,016
Deferred government grants	(4,985)	(6,643)	500	72
Amounts due to related parties	(14,356)	12,933	6,044	868
Operating lease right-of-use assets	—	—	35,503	5,100
Net cash generated from operating activities	487,202	704,966	802,922	115,332

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(Amounts in thousands of RMB and US$)

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
CASH FLOWS FROM INVESTING ACTIVITIES				
Purchases of property and equipment	(395,998)	(435,220)	(1,248,834)	(179,384)
Purchases of intangible assets	(18,957)	(17,874)	(26,515)	(3,809)
Purchases of land use rights	—	—	(24,460)	(3,513)
Proceeds from disposal of property and equipment	5,719	15,429	2,484	357
Disposal of subsidiaries, net	(77,719)	3,389	—	—
Payments for short-term investments	(755,876)	(98,905)	(436,737)	(62,733)
Payment of loan to a third party	—	(20,000)	—	—
Payment of loans to related parties	—	—	(66,704)	(9,581)
Receipt of loans to third parties	100,000	20,413	—	—
Proceeds received from maturity of short-term investments	484,932	417,643	312,198	44,844
Proceeds from disposal of long-term investments	—	75,653	18,955	2,722
Proceeds from dividend income of equity investments without readily determinable fair values	1,821	406	—	—
Payments for long-term investments	(162,176)	(252,780)	(9,330)	(1,340)
Payments for deposit to acquire data center	—	(13,000)	(82,536)	(11,857)
Collection of deposit for acquiring data center	—	—	30,000	4,308
Receipt of deposit for disposal of subsidiaries	10,000	—	—	—
Payments for assets acquisition, net of cash acquired	(25,053)	—	(148,067)	(21,269)
Cash receipt from an assets acquisition	—	—	67,563	9,705
Net cash used in investing activities	(833,307)	(304,846)	(1,611,983)	(231,550)
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from loan from a related party	—	44,038	—	—
Repayment of loan from a related party	—	—	(47,893)	(6,879)
Proceeds from exercise of stock options	926	435	429	62
Proceeds from issuance of ordinary shares	—	—	572	82
Repayment of 2017 Notes	(420,600)	—	—	—
Proceeds from issuance of 2020/2021 Notes (Note 16)	1,936,154	—	2,012,084	289,018
Payment of issuance cost of 2020/2021 Notes (Note 16)	(9,735)	—	(35,610)	(5,115)
Repurchase of 2020 Notes (Note 16)	—	—	(1,148,092)	(164,913)
Proceeds from long-term bank borrowings	44,440	—	—	—
Proceeds from short-term bank borrowings	70,000	69,999	234,500	33,685
Repayment of long-term bank borrowings	(94,037)	(70,643)	(85,110)	(12,224)
Repayment of short-term bank borrowings	(1,673,676)	(69,999)	(50,000)	(7,182)
Payments for purchase of property and equipment through finance leases	(199,126)	(279,886)	(333,614)	(47,921)
Repayment of loan from a third party	(100,000)	—	(67,659)	(9,719)
Rental prepayment and deposits for sales and leaseback transactions	(164,698)	(48,401)	(19,399)	(2,786)
Contribution from noncontrolling interest in subsidiaries	134,633	196,281	8,532	1,226
Prepayment for future share repurchase plan	(3,866)	—	(9,778)	(1,405)
Refund of prepayment for share repurchase plan	—	42,710	—	—
Payments for share repurchase plan	(133,066)	—	(11,840)	(1,701)
Proceeds from sales and leaseback transactions	—	—	110,000	15,801
Proceeds from discounted notes	—	95,565	—	—
Repayment of notes payable	—	—	(95,565)	(13,727)
Net cash (used in) generated from financing activities	(612,651)	(19,901)	461,557	66,302
Effect of foreign exchange rate changes on cash and cash equivalents and restricted cash	(140,298)	85,333	43,660	6,271
Net (decrease) increase in cash and cash equivalents and restricted cash	(1,099,054)	465,552	(303,844)	(43,645)
Cash and cash equivalents and restricted cash at beginning of year	3,294,523	2,195,469	2,661,021	382,232
Cash and cash equivalents and restricted cash at end of year	2,195,469	2,661,021	2,357,177	338,587

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(Amounts in thousands of RMB and US$)

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Reconciliation of cash and cash equivalents and restricted cash to the consolidated balance sheets				
Cash and cash equivalents	1,949,631	2,358,556	1,808,483	259,772
Restricted cash-current	242,494	265,214	478,873	68,786
Restricted cash-non-current	3,344	37,251	69,821	10,029
Total cash and cash equivalents and restricted cash	2,195,469	2,661,021	2,357,177	338,587
Supplemental disclosures of cash flow information:				
Income taxes paid	(55,076)	(57,407)	(41,684)	(5,988)
Interest paid	(96,846)	(160,984)	(215,889)	(31,011)
Interest received	28,857	50,793	59,054	8,483
Supplemental disclosures of non-cash activities:				
Right-of-use assets obtained in exchange for new operating lease liabilities	—	—	618,126	88,788
Purchase of property and equipment through finance leases	453,786	884,871	357,573	51,362
Purchase of property and equipment included in accrued expenses and other payables	(15,750)	21,918	344,248	49,448
Purchase of intangible assets included in accrued expenses and other payables	1,354	870	(1,642)	(236)
Contingent consideration related to the acquisitions included in amounts due to related parties and accrued expenses and other payables	(937)	36,734	—	—

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(Amounts in thousands of RMB and US$, except for number of shares)

	Notes	Number of ordinary shares	Treasury Stock	Ordinary shares	Additional paid-in capital	Accumulated other comprehensive (loss) income	Statutory reserves	Accumulated deficit	Total 21Vianet Group, Inc. shareholders' equity	Noncontrolling interest	Total shareholders' equity
Balance as of January 1, 2017		679,857,606	(204,557)	45	9,015,846	118,290	64,622	(2,869,031)	6,125,215	25,802	6,151,017
Consolidated net loss		—	—	—	—	—	—	(772,730)	(772,730)	(3,018)	(775,748)
Cumulative adjustment for changes in accounting principles		—	—	—	—	—	—	(13,425)	(13,425)	—	(13,425)
Contribution from noncontrolling interest in a subsidiary		—	—	—	—	—	—	—	—	134,633	134,633
Foreign exchange difference		—	—	—	—	(120,963)	—	—	(120,963)	—	(120,963)
Issuance of new shares for share option exercise and restricted share units vested	27	3,119,052	—	—	—	—	—	—	—	—	—
Share-based compensation		—	—	—	105,532		—	—	105,532	—	105,532
Share issued to depository bank	26	9,000,000	—	1	(1)	—	—	—	—	—	—
Appropriation of statutory reserves	25	—	—	—	—	—	2,083	(2,083)	—	—	—
Appropriation of dividend		—	—	—	—	—	—	—	—	(5,946)	(5,946)
Disposal of subsidiaries		—	—	—	—	—	(27,969)	27,969	—	—	—
Increase in accretion of redeemable noncontrolling interests	28	—	—	—	(141,896)	—	—	—	(141,896)	—	(141,896)
Share repurchase	18	(20,690,892)	(133,126)	—	—	—	—	—	(133,126)	—	(133,126)
Share options exercised	21	332,754	—	—	926	—	—	—	926	—	926
Restricted share units vested		10,576,398	—	—	—	—	—	—	—	—	—
Settlement of share options with shares held by depository bank		(10,909,152)	—	—	—	—	—	—	—	—	—
Balance as of December 31, 2017		671,285,766	(337,683)	46	8,980,407	(2,673)	38,736	(3,629,300)	5,049,533	151,471	5,201,004

The accompanying notes are an integral part of these consolidated financial statement

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (CONTINUED)
(Amounts in thousands of RMB and US$, except for number of shares)

	Notes	Number of ordinary shares	Treasury Stock	Ordinary shares	Additional paid-in capital	Accumulated other comprehensive (loss) income	Statutory reserves	Accumulated deficit	Total 21Vianet Group, Inc. shareholders' equity	Noncontrolling interest	Total shareholders' equity
Balance as of January 1, 2018		671,285,766	(337,683)	46	8,980,407	(2,673)	38,736	(3,629,300)	5,049,533	151,471	5,201,004
Consolidated net loss		—	—	—	—	—	—	(205,065)	(205,065)	18,329	(186,736)
Foreign exchange difference		—	—	—	477	88,652	—	—	89,129	—	89,129
Issuance of new shares for share option exercise and restricted share units vested	27	3,070,500	—	—	—	—	—	—	—	—	—
Share-based compensation		—	—	—	67,009	—	—	—	67,009	—	67,009
Disposal of 49% interest in a subsidiary		—	—	—	93,166	—	—	—	93,166	103,115	196,281
Appropriation of statutory reserves	5	—	—	—	—	—	3,667	(3,667)	—	—	—
Disposal of subsidiaries		—	—		—	—	—	—	—	(3,938)	(3,938)
Share options exercised	21	219,972	—	—	435	—	—	—	435	—	435
Restricted share units vested		5,115,558	—	—	—	—	—	—	—	—	—
Settlement of share options with shares held by depository bank		(5,335,530)	—	—	—	—	—	—	—	—	—
Balance as of December 31, 2018		674,356,266	(337,683)	46	9,141,494	85,979	42,403	(3,838,032)	5,094,207	268,977	5,363,184

The accompanying notes are an integral part of these consolidated financial statement

21VIANET GROUP, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (CONTINUED)
(Amounts in thousands of RMB and US$, except for number of shares)

	Notes	Number of ordinary shares	Treasury Stock	Ordinary shares	Additional paid-in capital	Accumulated other comprehensive income (loss)	Statutory reserves	Accumulated deficit	Total 21Vianet Group, Inc. shareholders' equity	Noncontrolling interest	Total shareholders' equity
Balance as of January 1, 2019		674,356,266	(337,683)	46	9,141,494	85,979	42,403	(3,838,032)	5,094,207	268,977	5,363,184
Consolidated net loss		—	—	—	—	—	—	(182,292)	(182,292)	1,046	(181,246)
Contribution by noncontrolling interest		—	—	—	—	—	—	—	—	8,532	8,532
Foreign exchange difference		—	—	—	24	(8,075)	—	—	(8,051)	—	(8,051)
Issuance of new shares	27	60,000	—	—	572	—	—	—	572	—	572
Issuance of new shares for share option exercise and restricted share units vested	27	304,200	—	—	—	—	—	—	—	—	—
Share-based compensation		—	—	—	60,048	—	—	—	60,048	—	60,048
Appropriation of statutory reserves	5	—	—	—	—	—	18,066	(18,066)	—	—	—
Share issued to depository bank		6,700,002	—	—	—	—	—	—	—	—	—
Share repurchase		(1,456,980)	(11,840)	—	—	—	—	—	(11,840)	—	(11,840)
Share options exercised	21	33,869	—	—	429	—	—	—	429	—	429
Restricted share units vested		5,136,306	—	—	—	—	—	—	—	—	—
Settlement of share options with shares held by depository bank		(5,170,175)	—	—	—	—	—	—	—	—	—
Balance as of December 31, 2019		679,963,488	(349,523)	46	9,202,567	77,904	60,469	(4,038,390)	4,953,073	278,555	5,231,628
Balance as of December 31, 2019 US$			(50,206)	7	1,321,866	11,190	8,687	(580,078)	711,466	40,012	751,478

The accompanying notes are an integral part of these consolidated financial statements

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION

21Vianet Group, Inc. was incorporated under the laws of the Cayman Islands on October 16, 2009 and its principal activity is investment holding. The Company through its consolidated subsidiaries and variable interest entities (the "VIEs") are principally engaged in the provision of hosting and related services after the disposal of subsidiaries which are engaged in managed network services in September 2017 (Note 4).

(a) As of December 31, 2019, the significant subsidiaries of the Company and consolidated variable interest entities are as follows:

Entity	Date of incorporation/ acquisition	Place of incorporation	Percentage of direct ownership by the Company	Principal activities
			Direct	
Subsidiaries:				
21ViaNet Group Limited ("21Vianet HK")	May 25, 2007	Hong Kong	100%	Investment holding
21Vianet Data Center Co., Ltd. ("21Vianet China") [1]	June 12, 2000	PRC	100%	Provision of technical and consultation services and rental of long-lived assets
21Vianet (Foshan) Technology Co., Ltd. ("FS Technology") [1]	December 20,2011	PRC	100%	Trading of network equipment, provision of technical and internet data center services
21Vianet Anhui Suzhou Technology Co., Ltd. ("SZ Technology") [1]	November 16, 2011	PRC	100%	Trading of network equipment
21Vianet Hangzhou Information Technology Co., Ltd. ("HZ Technology") [1]	March 4, 2013	PRC	100%	Provision of internet data center services
21Vianet Mobile Limited ("21V Mobile")	April 30, 2013	Hong Kong	100%	Investment holding and provision of telecommunication services
Joytone Infotech Co., Ltd. ("SZ Zhuoaiyi") [1]	April 30, 2013	PRC	100%	Provision of technical and consultation services
21Vianet Ventures Limited ("Ventures")	March 6, 2014	Hong Kong	100%	Investment holding
Abitcool (China) Broadband Inc. ("aBitCool DG") [1]	June 13, 2014	PRC	100%	Dormant company
Diyixian.com Limited ("DYX")	August 10, 2014	Hong Kong	100%	Provision of virtual private network services
21Vianet Zhuhai Financial Leasing Co., Ltd. ("Zhuhai Financial Leasing") [1]	April 9, 2015	PRC	100%	Provision of finance leasing business services
21Vianet DRP Investment Holdings Limited ("DRP investment")	January 10, 2017	Hong Kong	100%	Investment holding
Shihua DC Investment Holdings Limited ("Shihua Investment")	March 14, 2017	Cayman Islands	51%	Investment holding
21Vianet (Xi'an) Technology Co., Ltd. ("Xi'an Tech") [1]	July 5, 2012	PRC	51%	Provision of technical and internet data center services
Foshan Zhuoyi Intelligence Data Co., Ltd. ("FS Zhuoyi") [1]	July 7, 2017	PRC	51%	Provision of internet data center services
Beijing Hongyuan Network Technology Co., Ltd. ("BJ Hongyuan") [1]	December 8, 2014	PRC	51%	Provision of internet data center services
Dermot Holdings Limited ("Dermot BVI") [3]	August 8, 2014	British Virgin Islands	100%	Investment holding
Shihua DC Investment Holdings 2 Limited ("Shihua Holdings 2") [4]	August 20, 2019	Cayman Islands	100%	Investment holding
Shanghai Waigaoqiao Free Trade Zone Hongming Logistics Co., Ltd. ("Hongming Logistics") [1][4]	August 20, 2019	PRC	100%	Provision of internet data center services

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

Entity	Date of incorporation/ acquisition	Place of incorporation	Percentage of direct ownership by the Company	Principal activities
			Direct	
Variable Interest Entities (the "VIEs"):				
Beijing Yiyun Network Technology Co., Ltd. ("21Vianet Technology") (1) /(2)	October 22, 2002	PRC	—	Provision of internet data center services
Beijing iJoy Information Technology Co., Ltd. ("BJ iJoy") (1) / (2)	April 30, 2013	PRC	—	Provision of internet data center, content delivery network services
WiFire Network Technology (Beijing) Co., Ltd. ("WiFire Network") (1) / (2)	April 1, 2014	PRC	—	Provision of telecommunication services
Held directly by 21Vianet Technology:				
Beijing 21Vianet Broad Band Data Center Co., Ltd. ("21Vianet Beijing") (1) / (2)	March 15, 2006	PRC	—	Provision of internet data center services
Held directly by 21Vianet Beijing:				
21Vianet (Xi'an) Information Outsourcing Industry Park Services Co., Ltd. ("Xi'an Sub") (1) / (2)	June 23, 2008	PRC	—	Provision of internet data center services
Langfang Xunchi Computer Data Processing Co., Ltd. ("LF Xunchi") (1) / (2)	December 19, 2011	PRC	—	Dormant company
Shanghai Blue Cloud Technology Co., Ltd. ("SH Blue Cloud") (1) / (2)	March 21, 2013	PRC	—	Provision of Office 365 and Windows Azure platform services
Beijing Yichengtaihe Investment Co., Ltd. ("BJ Yichengtaihe") (1)/ (2)	September 30, 2014	PRC	—	Provision of internet data center services
Guangzhou Lianyun Big Data Co. Ltd.(1)/(2)	April 14, 2016	PRC	—	Provision of internet data center services
Beijing Xianghu Yunlian Technology Co., Ltd. ("Xianghu Yunlian")(1)/(2)	November 7, 2018	PRC	—	Provision of internet data center services
Shanghai Hujiang Songlian Technology Co., Ltd. ("Hujiang Songlian")(1)/(2)	December 17, 2018	PRC	—	Provision of internet data center services
Beijing Shuhai Hulian Technology Co., Ltd. ("BJ Shuhai")(1)/(2)	January 2, 2019	PRC	—	Provision of internet data center services
Nantong Chenghong Cloud Computing Co., Ltd. ("NT Chenghong") (1)/(2)	December 19, 2019	PRC	—	Provision of internet data center services
Held directly by DYX and LF Xunchi:				
Shenzhen Diyixian Telecommunication Co., Ltd. ("SZ DYX") (1)	August 10, 2014	PRC	100%	Provision of virtual private network services

(1) Collectively, the "PRC Subsidiaries".
(2) Collectively, the "Consolidated VIEs".
(3) On August 10, 2014, the Company and its subsidiary, LF Xunchi, acquired 100% equity interest of Dermot BVI and its subsidiaries (collectively referred to as "Dermot Entities").
(4) On August 20, 2019, the Company through its subsidiary, DRP Investment, became the sole shareholder in Shihua Holding 2 and its subsidiaries (Note 4).

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

(b) PRC laws and regulations prohibit foreign ownership of internet and telecommunications-related businesses. To comply with these foreign ownership restrictions, the Company conducts its businesses in the PRC through its VIEs using contractual agreements (the "VIE Agreements"). The equity interests of 21Vianet Technology are legally held by certain PRC individuals, including Chen Sheng, the Executive Chairman of Board of Directors of the Company and Zhang Jun (collectively the "Nominee Shareholders"). The following is a summary of the key terms of the VIE Agreements:

Exclusive option agreement

Pursuant to the exclusive option agreement entered into amongst 21Vianet China and the Nominee Shareholders of 21Vianet Technology, the Nominee Shareholders granted the Company or its designated party, an exclusive irrevocable option to purchase all or part of the equity interests held by the Nominee Shareholders in 21Vianet Technology, when and to the extent permitted under the PRC laws, at an amount equal to RMB1. 21Vianet Technology cannot declare any profit distributions or grant loans in any form without the prior written consent of 21Vianet China. The Nominee Shareholders must remit in full any funds received from 21Vianet Technology to 21Vianet China, in the event any distributions are made by 21Vianet Technology. The term of this agreement is 10 years, expiring on December 18, 2016, which is renewable at the sole discretion of 21Vianet China. On December 19, 2016, this agreement was renewed for another 10 years, expiring on December 18, 2026.

Exclusive technical consulting and service agreement

Pursuant to the exclusive technical consulting and service agreement entered into between 21Vianet China and 21Vianet Technology, 21Vianet China is to provide exclusive management consulting services and internet technical services in return for fees based on of a predetermined hourly rate of RMB1, which is adjustable at the sole discretion of 21Vianet China. The term of this agreement is 10 years, expiring on December 18, 2016, which is renewable at the sole discretion of 21Vianet China. On December 19, 2016, this agreement was renewed for another 10 years, expiring on December 18, 2026.

Loan agreement

In January 2011, 21Vianet China and the Nominee Shareholders entered into a loan agreement. Pursuant to the agreement, 21Vianet China has provided interest-free loan facilities of RMB7,000 and RMB3,000, respectively, to the Nominee Shareholders of 21Vianet Technology for the purpose of providing capital to 21Vianet Technology to develop its data center and telecommunications value-added business and related businesses. There is no fixed term for the loan.

Power of attorney agreement

The Nominee Shareholders entered into the power of attorney agreement whereby they granted an irrevocable proxy of the voting rights underlying their respective equity interests in 21Vianet Technology to 21Vianet China, which includes, but are not limited to, all the shareholders' rights and voting rights empowered to the Nominee Shareholders by the company law and 21Vianet Technology's Articles of Association. The power of attorney remains valid and irrevocable from the date of execution, so long as each Nominee Shareholder remains as a shareholder of 21Vianet Technology.

The power of attorney agreement was subsequently reassigned to 21Vianet Group, Inc. in September 2010.

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

Share pledge agreement

Pursuant to the share pledge agreement entered into amongst 21Vianet China, 21Vianet Technology and the Nominee Shareholders, the Nominee Shareholders have contemporaneously pledged all their equity interests in 21Vianet Technology to guarantee the repayment of the loan under the Loan Agreement between 21Vianet China and the Nominee Shareholders.

On August 10, 2015, a Notification of Cancellation of share pledge registration was issued by Beijing Administration for Industry and Commerce, Pinggu Branch to cancel the registration of the share pledge by one of the Nominee Shareholders, Zhang Jun. Such cancellation does not affect the effectiveness of the share pledge agreement and does not lessen the control imposed on the contractual parties of the Company.

If 21Vianet Technology breaches its respective contractual obligations under the Share pledge agreement and the loan agreement, 21Vianet China, as pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests. The Nominee Shareholders agreed not to transfer, sell, pledge, dispose of or otherwise create any new encumbrance on their equity interests in 21Vianet Technology without the prior written consent of 21Vianet China.

Financial support letter

Pursuant to the financial support letter, 21Vianet Group, Inc. agreed to provide unlimited financial support to 21Vianet Technology for its operations and agreed to forego the right to seek repayment in the event 21Vianet Technology is unable to repay such funding.

The Company also controls two other VIEs, namely BJ iJoy and WiFire Network through their primary beneficiary, aBitCool DG and SZ Zhuoaiyi, wholly owned subsidiaries of the Company. The key terms of the VIE Agreements in relation to BJ iJoy and WiFire Network are similar to those summarized above.

Despite the lack of technical majority ownership, there exists a parent-subsidiary relationship between the Company and 21Vianet Technology through the irrevocable power of attorney agreement, whereby the Nominee Shareholders effectively assigned all of their voting rights underlying their equity interests in 21Vianet Technology to the Company. In addition, the Company, through 21Vianet China, obtained effective control over 21Vianet Technology through the ability to exercise all the rights of 21Vianet Technology's shareholders pursuant to the share pledge agreement and exclusive option agreement. The Company demonstrates its ability and intention to continue to exercise the ability to absorb substantially all of the expected losses through the financial support letter. In addition, the Company also demonstrates its ability to receive substantially all of the economic benefits of 21Vianet Technology through 21Vianet China through the consulting and service agreement. Thus, the Company is the primary beneficiary of 21Vianet Technology and consolidates 21Vianet Technology and its subsidiaries under Accounting Standards Codification ("ASC") Subtopic 810-10, *Consolidation: Overall* ("ASC 810-10"). Similar conclusion has been reached with respect to the VIE structures with aBitCool DG and SZ Zhuoaiyi as the primary beneficiary.

In the opinion of the Company's management and PRC counsel, (i) the ownership structure of the VIEs is in compliance with applicable PRC laws and regulations in any material respect, and (ii) each of the VIE Agreements is valid, legally binding and enforceable to each party of such agreements under the existing PRC laws and will not violate any PRC laws or regulations currently in effect.

However, there are substantial uncertainties regarding the interpretation and application of current and future PRC laws and regulations. Accordingly, the Company cannot be assured that PRC regulatory authorities will not ultimately take a contrary view to its opinion. If the current ownership structure of the Company and its contractual arrangements with the VIEs are found to be in violation of any existing or future PRC laws and regulations, the Company may be required to restructure its ownership structure and operations in the PRC to comply with the changing and new PRC laws and regulations. To the extent that changes and new PRC laws and regulations prohibit the Company's VIE arrangements from complying with the principles of consolidation, the Company would have to deconsolidate the financial position and results of operations of its VIEs. In the opinion of management, the likelihood of loss in respect of the Company's current ownership structure or the contractual arrangements with the VIEs is remote based on current facts and circumstances.

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

(c) VIE disclosures

Except for certain property with carrying amounts of RMB219,736 (US$31,564) that were pledged to secure banking borrowings granted to the Company (Note 13), there were no pledges or collateralization of the Consolidated VIEs' assets. Creditors of the Consolidated VIEs have no recourse to the general credit of the primary beneficiaries of the Consolidated VIEs, and such amounts have been parenthetically presented on the face of the consolidated balance sheets. The Consolidated VIEs operate the data centers and own facilities including data center buildings, leasehold improvements, fiber optic cables, computers and network equipment, which are recognized in the Company's consolidated financial statements. They also hold certain value-added technology licenses, registered copyrights, trademarks and registered domain names, including the official website, which are also considered as revenue-producing assets. However, none of such assets was recorded on the Company's consolidated balance sheets as such assets were all acquired or internally developed with insignificant cost and expensed as incurred. In addition, the Company also hires data center operation and marketing workforce for its daily operations and such costs are expensed when incurred. The Company has not provided any financial or other support that it was not previously contractually required to provide to the Consolidated VIEs during the periods presented.

(d) Cooperation with Waburg Pincus

In March 2017, the Company entered into an investment agreement with Warburg Pincus to establish a multi-stage joint venture and build a digital real estate platform in China. The Company seeded the initial JV with four existing high-performing IDC assets, and Warburg Pincus contributed direct capital and extensive industry network and resources in the real estate sector. The Company owns 51% of the equity interests in the four existing internet data center ("IDC") assets while Warburg Pincus owns the remaining 49%. On March 14, 2017, Shihua Investment was established by the Company and a subsidiary of Warburg Pincus, with the equity interest of 51% and 49%, respectively.

In March 2017, the Company and Warburg Pincus set up two joint ventures, Shihua Holdings 2 and Shihua DC Investment Management Limited ("Shihua Investment Management") (collectively, "Shihua DC Holdings") (Note 12), with the equity interest of 49% and 51%, respectively. The Company accounted for the investment in the two joint ventures under equity method investments for its ability to exercise significant influence.

In July 2019, the Company entered into restructuring agreements with Warburg Pincus. Pursuant to the restructuring agreement, Shihua Holdings 2 transferred 100% of the equity interest in some subsidiaries at the consideration equivalent to the subsidiaries' paid-in capital to Warburg Pincus. Thereafter, Shihua Holdings 2 repurchased and cancelled all Warburg Pincus's shares in Shihua Holdings 2. Upon completion of restructuring on August 20, 2019, the Company became the sole shareholder in Shihua Holdings 2, which was accounted for as an asset acquisition (Note 4).

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

The following tables represent the financial information of the Consolidated VIEs as of December 31, 2018 and 2019 and for the years ended December 31, 2017, 2018 and 2019 before eliminating the intercompany balances and transactions between the Consolidated VIEs and other entities within the Company:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
ASSETS			
Current assets:			
Cash and cash equivalents	548,921	591,503	84,964
Restricted cash	203,103	260,961	37,485
Accounts receivable (net of allowance for doubtful debt of RMB69,723 and RMB66,416 (US$9,540) as of December 31, 2018 and 2019, respectively)	375,515	513,440	73,751
Short-term investments	94,000	—	—
Prepaid expenses and other current assets	1,013,563	1,371,564	197,013
Amounts due from related parties	123,726	57,982	8,328
Total current assets	2,358,828	2,795,450	401,541
Non-current assets:			
Property and equipment, net	3,103,995	3,580,341	514,284
Intangible assets, net	47,121	151,722	21,794
Land use rights, net	60,078	58,588	8,416
Operating lease right-of-use assets, net	—	1,144,846	164,447
Goodwill	302,647	302,647	43,473
Restricted cash	33,729	66,119	9,497
Deferred tax assets	156,412	180,959	25,993
Amounts due from related parties	13,514	20,654	2,967
Other non-current assets	162,392	262,685	37,732
Long-term investments	219,005	189,571	27,230
Total non-current assets	4,098,893	5,958,132	855,833
Total assets	6,457,721	8,753,582	1,257,374
Current liabilities:			
Short-term bank borrowings	50,000	232,323	33,371
Accounts and notes payable	258,048	211,710	30,410
Accrued expenses and other payables	392,619	622,160	89,368
Advance from customers	670,037	1,068,692	153,508
Deferred revenue	51,026	52,088	7,482
Income tax payable	8,519	8,175	1,174
Amounts due to inter-companies [(1)]	2,117,097	2,786,838	400,304
Amounts due to related parties	51,763	56,977	8,184
Current portion of finance lease liabilities	219,695	220,363	31,653
Current portion of long-term bank borrowings	75,284	32,500	4,668
Deferred government grants	4,173	2,595	373
Current portion of operating lease liabilities	—	410,422	58,953
Total current liabilities	3,898,261	5,704,843	819,448

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

1. ORGANIZATION (CONTINUED)

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Non-current liabilities:			
Amounts due to inter-companies [(1)]	1,020,972	1,020,972	146,653
Amounts due to related parties	504,478	745,899	107,142
Long-term bank borrowings	112,000	79,500	11,419
Non-current portion of finance lease liabilities	852,287	549,669	78,955
Unrecognized tax benefits	4,938	1,991	286
Deferred tax liabilities	84,568	82,725	11,883
Deferred government grants	11,619	5,906	848
Non-current portion of operating lease liabilities	—	529,546	76,064
Total non-current liabilities	2,590,862	3,016,208	433,250
Total liabilities	6,489,123	8,721,051	1,252,698

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Net revenues	2,578,893	2,532,854	2,858,176	410,551
Net (loss) profit	(567,395)	52,986	111,592	16,029

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Net cash generated from operating activities	448,051	693,620	495,308	71,147
Net cash (used in) generated from investing activities	(604,507)	132,522	(1,247,764)	(179,230)
Net cash generated from (used in) financing activities	230,921	(423,467)	885,286	127,163
Net increase in cash and cash equivalents and restricted cash	74,465	402,705	132,830	19,080

(1) Amounts due to inter-companies consist of intercompany payables to the other companies within the Company for the purchase of telecommunication resources and property and equipment on behalf of the Consolidated VIEs.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP").

(b) Principles of consolidation

The consolidated financial statements include the financial statements of the Company, its subsidiaries and the Consolidated VIEs for which the Company or a subsidiary of the Company is the primary beneficiary. All significant inter-company transactions and balances between the Company, its subsidiaries and the Consolidated VIEs are eliminated upon consolidation. Results of acquired subsidiaries and its Consolidated VIEs are consolidated from the date on which control is transferred to the Company.

(c) Use of estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. Significant estimates and assumptions reflected in the Company's financial statements include, but are not limited to, estimating the useful lives of long-lived assets, determining the fair value of equity investments, accounting for investments and the subsequent impairment assessment, determining the provision for accounts and other receivables, determining the valuation allowance for deferred tax assets, accounting for share-based compensation arrangements, goodwill and long-lived assets impairment assessment, measurement of right-of-use assets and lease liabilities and determining the standalone lease price. Changes in facts and circumstances may result in revised estimates. Actual results could differ from those estimates, and as such, differences may be material to the consolidated financial statements.

(d) Foreign currency

The functional currency of the Company and its overseas subsidiaries is the United States dollar ("US$"), whereas the functional currency of the Company's PRC subsidiaries and its Consolidated VIEs is the Chinese Renminbi ("RMB") as determined based on the criteria of ASC Topic 830, *Foreign Currency Matters* ("ASC 830"). The Company uses the RMB as its reporting currency.

The financial statements of the Company and its overseas subsidiaries are translated from the functional currency to the reporting currency, RMB. Transactions denominated in foreign currencies are re-measured into the functional currency at the exchange rates prevailing on the transaction dates. Monetary assets and liabilities denominated in foreign currencies are re-measured at the exchange rates prevailing at the balance sheet date. Non-monetary items that are measured in terms of historical costs in foreign currency are re-measured using the exchange rates at the dates of the initial transactions. Exchange gains and losses are included in the consolidated statements of operations.

The Company uses the average exchange rate for the year and the exchange rate at the balance sheet date to translate the operating results and financial position, respectively. Translation differences are recorded in accumulated other comprehensive income (loss) within the statements of comprehensive loss.

(e) Convenience translation

Amounts in US$ are presented for the convenience of the reader and are translated at the noon buying rate of US$1.00 to RMB6.9618 on December 31, 2019, the last business day in fiscal year 2019, representing the noon buying rate set forth in the H.10 statistical release of the U.S. Federal Reserve Board. No representation is made that the RMB amounts could have been, or could be converted, realized or settled into US$ at such rate or at any other rate.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(f) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and demand deposits placed with banks which are unrestricted as to withdrawal and use and have original maturities less than three months. All highly liquid investments with a stated maturity of 90 days or less from the date of purchase are classified as cash equivalents.

(g) Restricted cash

Restricted cash mainly represents amounts held by a few banks in escrow as security for credit facilities, the guarantee of compliance with the network and service requirements of the radio spectrum license awarded by the Hong Kong Telecommunication Authority, the deposits for finance lease, the deposits for a lawsuit with a third party, the deposits held in escrow for the advances received from end customers subscribing Office 365 and Windows Azure services (the disbursement of which shall be agreed by both Microsoft (China) Co., Ltd. (“Microsoft”) and the Company), the deposits for business operation.

The Company adopted ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*, effective January 1, 2018 using the retrospective transition method and included all restricted cash with cash and cash equivalent when reconciling beginning-of-period and end-of-period total amounts presented in the consolidated statements of cash flows.

(h) Short-term investments

All highly liquid investments with original maturities of greater than three months but less than twelve months, are classified as short-term investments. Interest income is included in earnings.

(i) Accounts receivable and allowance for doubtful debt

Accounts receivable are carried at net realizable value. An allowance for doubtful debt is recorded in the period when loss is probable based on an assessment of specific evidence indicating troubled collection, historical experience, accounts aging and other factors. An accounts receivable is written off after all collection effort has ceased.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(j) Property and equipment

Property and equipment are stated at cost less accumulated depreciation and any recorded impairment. Property and equipment acquired in a business combination are recognized initially at fair value at the data of acquisition. Property and equipment are depreciated using the straight-line method over the estimated useful lives of the assets, as follows:

Category	Estimated useful life
Property	25-46 years
Leasehold improvements	Over the shorter of lease term or the estimated useful lives of the assets
Optical fibers	10-20 years
Computer and network equipment	1-10 years
Office equipment	2-8 years
Motor vehicles	2-8 years

Repair and maintenance costs are charged to expense as incurred, whereas the costs of betterments that extend the useful life of property and equipment are capitalized as additions to the related assets. Retirements, sale and disposals of assets are recorded by removing the cost and accumulated depreciation with any resulting gain or loss reflected in the consolidated statements of operations.

Property and equipment that are purchased or constructed which require a period of time before the assets are ready for their intended use are accounted for as construction-in-progress. Construction-in-progress is recorded at acquisition cost, including installation costs. Construction-in-progress is transferred to specific property and equipment accounts and commences depreciation when these assets are ready for their intended use.

(k) Intangible assets

Intangible assets are carried at cost less accumulated amortization and any recorded impairment. Intangible assets acquired in a business combination are recognized initially at fair value at the date of acquisition. Intangible assets with finite useful lives are amortized using a straight-line method. These amortization methods reflect the estimated pattern in which the economic benefits of the respective intangible assets are to be consumed.

The Company has capitalized certain internal use software development costs in accordance with ASC Subtopic 350-40, *Intangibles-Goodwill and Other: Internal-Use Software* ("ASC 350-40"), amounting to RMB9,238, RMB6,093, and RMB13,189 (US$1,894) for the years ended December 31, 2017, 2018 and 2019, respectively. The Company capitalizes certain costs relating to software acquired, developed, or modified solely to meet the Company's internal requirements and for which there are no substantive plans to market the software. These costs mainly include the research staff costs directly associated with the internal-develop software projects during the application development stage. Capitalized internal-use software costs are included in "intangible assets, net".

Intangible assets have weighted average useful lives from the date of purchase/ acquisition as follows:

Purchased software	5.1 years
Radio spectrum license	15 years
Operating permits*	31.9 years
Contract backlog*	4.9 years
Customer relationships*	8.8 years
Licenses*	15 years
Supplier relationships*	10 years
Trade Names*	20 years
Platform software*	5 years
Non-complete agreements*	5 years
Internal use software	4 years

* Acquired in the acquisitions of subsidiaries.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(l) Leases

Effective January 1, 2019, the Company adopted ASC Topic 842, *Lease* ("ASC 842") using the modified retrospective method and did not restate the comparable periods. The Company determines if an arrangement is a lease at inception. Leases are classified as operating or finance leases in accordance with the recognition criteria in ASC 842-20-25. The Company's leases do not contain any material residual value guarantees or material restrictive covenants.

The Company has elected the package of practical expedients, which allows the Company not to reassess (1) whether any expired or existing contracts as of the adoption date are or contain a lease, (2) lease classification for any expired or existing leases as of the adoption date and (3) initial direct costs for any expired or existing leases as of the adoption date. The Company has lease agreements with lease and non lease components, which are generally accounted for separately. Lastly, the Company elected the short-term lease exemption for all contracts with lease term of 12 months or less.

At the commencement date of a lease, the Company determines the classification of the lease based on the relevant factors present and records a right-of-use ("ROU") asset and lease liability for operating lease, and records property and equipment and finance lease liability for finance lease. ROU assets and property and equipment acquired through lease represent the right to use an underlying asset for the lease term, and operating lease liabilities and finance lease liabilities represent the obligation to make lease payments arising from the lease. ROU assets and lease liabilities are calculated as the present value of the lease payments not yet paid. If the rate implicit in the Company's leases is not readily available, the Company uses an incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. This incremental borrowing rate reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. ROU assets include any lease prepayments and are reduced by lease incentives. Operating lease expense for lease payments is recognized on a straight-line basis over the lease term. Lease terms are based on the non-cancelable term of the lease and may contain options to extend the lease when it is reasonably certain that the Company will exercise that option.

Leases with an initial lease term of 12 months or less are not recorded on the consolidated balance sheet. Lease expense for these leases is recognized on a straight-line basis over the lease term.

(m) Land use right

The land use rights represent the operating lease prepayments for the rights to use the land in the PRC under ASC 842. Amortization of the prepayments is provided on a straight-line basis over the terms of the respective land use rights certificates.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(n) Long-term investments

The Company's long-term investments consist of equity investments without readily determinable fair value, equity method investments and available-for-sale debt investments.

Prior to adopting ASC Topic 321, *Investments—Equity Securities* ("ASC 321") on January 1, 2018, the Company carries at cost its investments in investees that do not have readily determinable fair value and over which the Company does not have significant influence, in accordance with ASC Subtopic 325-20, *Investments-Other: Cost Method Investments* ("ASC 325-20"). The Company only adjusts the carrying value of such investments for other-than-temporary decline in fair value and for distribution of earnings that exceed the Company's share of earnings since its investment.

Management regularly evaluates the impairment of equity investments without readily determinable fair value based on the performance and financial position of the investee as well as other evidence of market value. Such evaluation includes, but is not limited to, reviewing the investee's cash position, recent financing, projected and historical financial performance, cash flow forecasts and financing needs. An impairment loss is recognized in earnings equal to the excess of the investment's cost over its fair value at the balance sheet date of the reporting period for which the assessment is made. The fair value would then become the new cost basis of the investment.

The Company adopted ASC 321 on January 1, 2018 and the cumulative effect of adopting the new standard on opening retained deficit is nil. Pursuant to ASC 321, equity investments, except for those accounted for under the equity method and those that result in consolidation of the investee and certain other investments, are measured at fair value, and any changes in fair value are recognized in earnings. For equity securities without readily determinable fair value and do not qualify for the existing practical expedient in ASC Topic 820, *Fair Value Measurements and Disclosures* ("ASC 820"), to estimate fair value using the net asset value per share (or its equivalent) of the investment, the Company elected to use the measurement alternative to measure those investments at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer, if any. Equity securities with readily determinable fair value are measured at fair values, and any changes in fair value are recognized in earnings.

Pursuant to ASC 321, for equity investments measured at fair value with changes in fair value recorded in earnings, the Company does not assess whether those securities are impaired. For those equity investments that the Company elects to use the measurement alternative, the Company makes a qualitative assessment of whether the investment is impaired at each reporting date. If a qualitative assessment indicates that the investment is impaired, the entity has to estimate the investment's fair value in accordance with the principles of ASC 820. If the fair value is less than the investment's carrying value, the entity has to recognize an impairment loss in net loss equal to the difference between the carrying value and fair value.

Available-for-sale debt investments are convertible debt instruments issued by private companies, which are measured at fair value, with unrealized gains or losses recorded in accumulated other comprehensive income.

Investments in equity investees represent investments in entities in which the Company can exercise significant influence but does not own a majority equity interest or control are accounted for using the equity method of accounting in accordance with ASC Subtopic 323-10, *Investments-Equity Method and Joint Ventures: Overall* ("ASC 323-10"). The Company applies the equity method of accounting that is consistent with ASC 323-10 in limited partnerships in which the Company holds a three percent or greater interest. Under the equity method, the Company initially records its investment at cost and prospectively recognizes its proportionate share of each equity investee's net profit or loss into its consolidated statements of operations. The difference between the cost of the equity investee and the amount of the underlying equity in the net assets of the equity investee is recognized as equity method goodwill included in equity method investments on the consolidated balance sheets. The Company evaluates its equity method investments for impairment under ASC 323-10. An impairment loss on the equity method investments is recognized in the consolidated statements of operations when the decline in value is determined to be other-than-temporary.

(o) Goodwill

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business. In accordance with ASC Topic 350, *Goodwill and Other Intangible Assets* ("ASC 350"), recorded goodwill amounts are not amortized, but rather are tested for impairment annually or more frequently if there are indicators of impairment present.

In accordance with ASC 350, the Company assigned and assessed goodwill for impairment at the reporting unit level. A reporting unit is an operating segment or one level below the operating segment. In 2017, there were two reporting units consisting of two service lines namely hosting and related services and managed network services. The goodwill was reassigned to the two reporting units using a relative fair value allocation approach. After the disposal of WiFire Entities and Aipu Group as defined in Note 4 in September 2017, the Company determined that there is only hosting and related services remained and hence the Company as a whole is one reporting unit as of December 31, 2018 and 2019.

The Company early adopted ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), which simplifies the accounting for goodwill impairment by eliminating Step two from the goodwill impairment test. Under the new guidance, if a reporting unit's carrying amount exceeds its fair value, an entity will record an impairment charge based on that difference. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit. Fair value is primarily determined by computing the future discounted cash flows expected to be generated by the reporting unit.

Immediately before the disposal of WiFire Entities and Aipu Group in September 2017, the Company completed its impairment test for goodwill in managed network services. The Company determined the fair value of the reporting unit using the income approach based on the discounted expected cash flows associated with the reporting unit. The discounted cash flows for the reporting unit were based on five-year projections. Cash flow projections were based on past experience, actual operating results and management best estimates about future developments as well as certain market assumptions. Cash flows after five years were estimated using a terminal value calculation, which considered terminal value growth at 3%, considering the long-term revenue growth for entities in a similar industry in the PRC. The discount rate of approximately 13% was derived and used in the valuations which reflect the market assessment of the risks specific to the Company and its industry and is based on its weighted average cost of capital. The resulting fair value of the reporting unit significant lower than its carrying value, the Company fully impaired goodwill in managed network services and recorded an amount of RMB766 million for impairment loss of goodwill as of December 31, 2017.

Pursuant to ASC 350, in 2018 and 2019, the Company performed a qualitative assessment for hosting and related services and completed its annual impairment test for goodwill that has arisen out of its acquisitions. The Company evaluated all relevant factors including, but not limited to, macroeconomic conditions, industry and market conditions, financial performance, and the share price of the Company. The Company weighed all factors in their entirety and concluded that it was not more-likely-than-not the fair value was less than the carrying amount of the reporting unit, and further impairment testing on goodwill was unnecessary. No impairment loss of goodwill in hosting and related services was recognized for the years ended December 31, 2018 and 2019.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(p) Impairment of long-lived assets

The Company evaluates its long-lived assets or asset group, including intangible assets with finite lives, for impairment whenever events or changes in circumstances (such as a significant adverse change to market conditions that will impact the future use of the assets) indicate that the carrying amount of an asset or a group of long-lived assets may not be recoverable. When these events occur, the Company evaluates for impairment by comparing the carrying amount of the assets to future undiscounted net cash flows expected to result from the use of the assets and their eventual disposition. If the sum of the expected undiscounted cash flow is less than the carrying amount of the assets, the Company would recognize an impairment loss based on the excess of the carrying amount of the asset group over its fair value. Fair value is generally determined by discounting the cash flows expected to be generated by the assets, when the market prices are not readily available for the long-lived assets.

As of December 31, 2017, due to continued operational losses, the Company recorded the long-lived assets impairment amounting to RMB170,695 and RMB231,113 for the asset groups of Aipu Group and WiFire Entities, respectively, resulting from excess of the carrying amount of the asset groups over their fair values of the two asset groups, respectively. The Company determined the fair value of the asset groups using the income approach based on the discounted expected cash flows associated with the respective asset groups. The discounted cash flows for the asset groups were based on seven year projections for Aipu and five years for WiFire Entities, which are consistent with the remaining useful lives of its principal assets. Cash flow projections were based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The discount rate of approximately 13% was derived and used in the valuations which reflect the market assessment of the risks specific to the Company and its industry and is based on its weighted average cost of capital. No impairment was recognized in other assets groups as there was no impairment indicator identified.

The impairment loss reduced the carrying amount of the long-lived assets of a group on a pro-rata basis using the relative carrying amount of those assets.

In 2018 and 2019, the Company performed a qualitative assessment for impairment on whether events or changes in circumstances indicate that the carrying amount of an asset or a group of long-lived assets might not be recoverable. No impairment was recognized for the year ended December 31, 2018 and 2019 as there was no impairment indicator identified.

The Company recorded impairment charges associated with its long-lived assets and acquired intangibles as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Impairment of equipment	237,956	—	—	—
Impairment of intangible assets	163,852	—	—	—

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(q) Fair value of financial instruments

The Company's financial instruments include cash and cash equivalents, restricted cash, short-term investments, accounts receivable and payable, other receivables and payables, bonds payable, short-term and long-term bank borrowings, available-for-sale investments, liability classified restricted share units ("RSU"). Other than the bonds payable and long-term bank borrowings, the carrying values of these financial instruments approximate their fair values due to their short-term maturities.

The carrying amounts of bonds payable and long-term bank borrowings approximate their fair values since they bear interest rates which approximate market interest rates.

(r) Revenue recognition

The Company provides hosting and related services including hosting of customers' servers and networking equipment, connecting customers' servers with internet backbones ("Hosting service"), virtual private network services providing encrypted secured connection to public internet ("VPN service") and other value-added services and public cloud service through strategic partnership with Microsoft.

On January 1, 2018, the Company adopted ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASC 606"), which supersedes the revenue recognition requirements in ASC Topic 605, *Revenue Recognition* ("ASC 605"), using the modified retrospective transition method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts have not been adjusted and continue to be reported in accordance with historic accounting under ASC 605. The impact of adopting the new revenue standard was not material to consolidated financial statements and there was no adjustment to beginning retained earnings on January 1, 2018.

Under ASC 606, an entity recognizes revenue as the Company satisfies a performance obligation when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price, including variable consideration, if any; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration to which it is entitled in exchange for the goods or services it transfers to the customer.

Once a contract is determined to be within the scope of ASC 606 at contract inception, the Company reviews the contract to determine which performance obligations it must deliver and which of these performance obligations are distinct. The Company recognizes revenue based on the amount of the transaction price that is allocated to each performance obligation when that performance obligation is satisfied or as it is satisfied.

The Company is a principal and records revenue on a gross basis when the Company is primarily responsible for fulfilling the service, has discretion in establish pricing and controls the promised service before transferring that service to customers. Otherwise, the Company records revenue at the net amounts as commissions.

The Company's revenue recognition policies effective on the adoption date of ASC 606 are as follows:

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(r) Revenue recognition (continued)

Hosting services are services that the Company dedicates data center space to house customers' servers and networking equipment and provides tailored server administration services including operating system support and assistance with updates, server monitoring, server backup and restoration, server security evaluation, firewall services, and disaster recovery. The Company also provides interconnectivity services to connect customers with each other, internet backbones in China and other networks through Border Gateway Protocol, or BGP, network, or single-line, dual-line or multiple-line networks. Hosting services are typically provided to customers for a fixed amount over the contract service period and the related revenues are recognized on a straight-line basis over the term of the contract. For certain contracts where considerations are based on the usage of the Hosting services, the related revenues are recognized based on the consumption at the predetermined rate as the services are rendered throughout the contact term. The Company is a principal and records revenue for Hosting service on a gross basis.

VPN services are services that the Company extends customers' private networks by setting up secure and dedicated connections through the public internet. VPN services are provided to customers for a fixed amount over the contract service period and revenue are recognized on a straight-line basis over the term of the contract. The Company is a principal and records revenue for VPN service on a gross basis.

Cloud services allow businesses to run their applications over the internet using the IT infrastructure. Revenue from Cloud services consisted of incentive revenue from Microsoft upon completion of certain conditions and a fixed percentage amount based on gross sales price generated from Cloud services provided to end customers. Cloud services are generally provided to end customers for a fixed amount over the contract period and the related revenues are recognized on a straight-line basis over the contract period. For certain contracts where considerations are based on the usage of the cloud resources, the related revenues are recognized based on the consumption at the predetermined rate as the services are rendered throughout the contract term. The Company records revenue for Cloud service on a net basis.

For certain arrangements, customers are required to pay the Company before the services are delivered. When either party to a revenue contract has performed, the Company recognizes a contract asset or a contract liability in the consolidated balance sheets, depending on the relationship between the Company's performance and the customer's payment. Contract liabilities were mainly related to fee received for Hosting services to be provided over the contract period, which were presented as deferred revenue on the consolidated balance sheets.

Deferred revenue represented the Company's obligation to transfer the goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer. As of December 31, 2018 and 2019, the Company has deferred revenue amounting up to RMB57,754 and RMB57,625 (US$8,277), respectively. Revenue recognized from opening deferred revenue balance was RMB46,996 (US$6,751) for the year ended December 31, 2019.

The Company does not disclose the value of unsatisfied performance obligations as the Company's revenue contracts are (i) contracts with an original expected length of one year or less or (ii) contracts for which the Company recognizes revenue at the amount to which it has the right to invoice for services performed.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(s) Cost of revenues

Cost of revenues consists primarily of telecommunication costs, depreciation of the Company's long-lived assets, amortization of acquired intangible assets, maintenance, data center rental expenses directly attributable to the provision of the IDC services, payroll and other related costs of operations.

(t) Advertising expenditures

Advertising expenditures are expensed as incurred and are included in sales and marketing expenses, which amounted to RMB7,773, RMB7,968 and RMB6,095 (US$875) for the years ended December 31, 2017, 2018 and 2019, respectively.

(u) Research and development expenses

Research and development expenses consist primarily of payroll and related personnel costs for routine upgrades and related enhancements of the Company's services and network. Research and development expenses are expensed as incurred.

(v) Government grants

Government grants are provided by the relevant PRC municipal government authorities to subsidize the cost of certain research and development projects. The amount of such government grants are determined solely at the discretion of the relevant government authorities and there is no assurance that the Company will continue to receive these government grants in the future. Government grants are recognized when it is probable that the Company will comply with the conditions attached to them, and the grants are received. When the grant relates to an expense item, it is recognized in the consolidated statement of operations over the period necessary to match the grant on a systematic basis to the costs that it is intended to compensate, as a reduction of the related operating expense. When the grant relates to an asset, it is recognized as deferred government grants and released to the consolidated statement of operations in equal amounts over the expected useful life of the related asset, when operational, as a reduction of the related depreciation expense.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(w) Capitalized interest

Interest costs are capitalized if they are incurred during the acquisition, construction or production of a qualifying asset and such costs could have been avoided if expenditures for these assets have not been made.

As a result of total interest costs capitalized during the period, the interest expense for the years ended December 31, 2017, 2018 and 2019, was as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Interest expense and amortization cost of bonds payable	63,354	150,098	223,832	32,151
Interest expense on bank borrowings	87,916	19,395	14,212	2,041
Interest expense on finance lease	63,757	79,935	120,185	17,263
Total interest costs	215,027	249,428	358,229	51,455
Less: Total interest costs capitalized	(29,714)	(13,362)	(12,274)	(1,762)
Interest expense, net	185,313	236,066	345,955	49,693

(x) Income taxes

The Company accounts for income taxes using the liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial reporting and tax bases of assets and liabilities using enacted tax rates that will be in effect in the period in which the differences are expected to reverse. The Company records a valuation allowance against deferred tax assets if, based on the weight of available evidence, it is more-likely-than-not that some portion, or all, of the deferred tax assets will not be realized. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date of the change in tax rate. All deferred income tax assets and liabilities are classified as non-current on the consolidated balance sheets.

The Company applies ASC Topic 740, *Accounting for Income Taxes* (“ASC 740”), to account for uncertainty in income taxes. ASC 740 prescribes a recognition threshold a tax position is required to meet before being recognized in the financial statements.

The Company has elected to classify interest and penalties related to unrecognized tax benefits, if and when required, as part of “income tax benefits (expenses)” in the consolidated statements of operations.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(y) Share-based compensation

Share options and Restricted Share Units ("RSUs") granted to employees are accounted for under ASC Topic 718, *Compensation—Stock Compensation* ("ASC 718"), which requires that share-based awards granted to employees be measured based on the grant date fair value and recognized as compensation expenses over the requisite service period and/or performance period (which is generally the vesting period) in the consolidated statements of operations. The Company accounts for forfeitures as they occur.

The Company has elected to recognize compensation expenses using the straight-line method for share-based awards granted with service conditions that have a graded vesting schedule. For share-based awards granted with performance conditions, the Company recognizes compensation expenses using the accelerated method. The Company commences recognition of the related compensation expenses if it is probable that the defined performance condition will be met. To the extent that the Company determines that it is probable that a different number of share-based awards will vest depending on the outcome of the performance condition, the cumulative effect of the change in estimate is recognized in the period of change. For share-based awards with market conditions, the probability to achieve market conditions is reflected in the grant date fair value. The Company recognized the related compensation expenses when the requisite service is rendered using the accelerate method.

On November 26, 2016, the Board approved a new incentive program to certain individuals with a new bonus scheme which will be settled by issuing a variable number of shares with a fair value equal to fixed dollar amount on the settlement date. The Company remeasures the fair value of such liability at each reporting period end through earnings until the actual settlement date, which is the date when the number of underlying shares were fixed and recorded the compensation cost over the remaining vesting term.

For the performance bonuses that the employees can elect to settle in cash and/or restricted shares of the Company ("Share-Settled Bonus"), the Company estimates the portion of the arrangement to be settled in shares based on its past settlement practices and classifies such portion as a liability in accordance with ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480") as the Company can only settle the Share-Settled Bonus by issuing variable number of shares until the settlement date. The Company remeasures the fair value of such liability at each reporting period end through earnings until the underlying shares were approved and granted to the employees and accounted for the granted restricted shares unit as equity award. The original cash bonus amount continues to be classified as a liability within "Accrued expenses and other payables" in the consolidated balance sheets.

A cancellation of the terms or conditions of an equity award under original award in exchange for a new award should be treated as modification. The compensation costs associated with the modified awards are recognized if either the original vesting conditions or the new vesting conditions have been achieved. Total recognized compensation cost for the awards is at least equal to the fair value of the original awards at the grant date unless at the date of the modification the performance or service conditions of the original awards are not expected to be satisfied. The incremental compensation cost is measured as the excess of the fair value of the replacement awards over the fair value at the modification date. Therefore, in relation to the modified awards, the Company recognizes share-based compensation over the vesting periods of the new awards, which comprises (i) the amortization of the incremental portion of share-based compensation over the remaining vesting term, and (ii) any unrecognized compensation cost of original awards, using either the original term or the new term, whichever results in higher expenses for each reporting period. For modification of a liability award that remains a liability after modification, the liability award continues to be remeasured at fair value at each reporting date.

In January, 2017, the Company made revisions to the Share-Settled Bonus to remove the option to settle bonus accrued in 2017. For the Share-Settled Bonus accrued in 2016 which were elected to be settled in shares, the Company issued shares to settle all the Share-Settled Bonus as of December 31, 2017.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(z) Loss per share

In accordance with ASC Topic 260, *Earnings per Share* ("ASC 260"), basic loss per share is computed by dividing net loss attributable to ordinary shareholders by the weighted average number of unrestricted ordinary shares outstanding during the year. Diluted loss per share is calculated by dividing net loss attributable to ordinary shareholders as adjusted for the effect of dilutive ordinary equivalent shares, if any, by the weighted average number of ordinary and dilutive ordinary equivalent shares outstanding during the period. Contingently issuable shares, including performance-based share awards and contingent considerations to be settled in shares, are included in the computation of basic earnings per share only when there is no circumstance under which those shares would not be issued. Contingently issuable shares are included in the denominator of the diluted loss per share calculation as of the beginning of the period or as of the inception date of the contingent share arrangement, if later, only when dilutive and when all the necessary conditions have been satisfied as of the reporting period end. For contracts that may be settled in ordinary shares or in cash at the election of the Company, share settlement is presumed, pursuant to which incremental shares relating to the number of shares that would be required to settle the contract are included in the denominator of diluted loss per share calculation if the effect is more dilutive. For the contracts that may be settled in ordinary shares or in cash at the election of the counterparty, the more dilutive option of cash or share settlement is used for the purposes of diluted loss per share calculation, pursuant to which share settlement requires the number of shares that would be required to settle the contract be included in the denominator whereas cash settlement requires an adjustment to be made to the numerator for any changes in income or loss that would result as if the contract had been classified as an asset or a liability for accounting purposes during the period for a contract that is classified as equity for accounting purposes, if the effect is more dilutive. Ordinary equivalent shares consist of the ordinary shares issuable upon the exercise of the share options, using the treasury stock method. Ordinary share equivalents are excluded from the computation of diluted loss per share if their effects would be anti-dilutive.

(aa) Share repurchase program

Pursuant to the Board of Directors' resolutions on December 2, 2019, the Company's management is authorized to repurchase, in one or more tranches, up to an aggregate of US$20,000 of its own outstanding shares (including shares represented by ADSs) (each such transaction a "Repurchase") over a period of 13 months ending on December 31, 2020.

The Company accounted for the repurchased shares as Treasury Stock at cost in accordance to ASC Subtopic 505-30, *Treasury Stock* ("ASC 505-30"), and the share repurchase is shown separately in the consolidated statement of shareholder's equity, as the Company has not yet decided on the ultimate disposition of those ADSs acquired. When the Company decides to retire the treasury stock, the difference between the original issuance price and the repurchase price is debited into accumulated deficit.

For the years ended December 31, 2017, 2018 and 2019, the Company repurchased 3,448,482, nil and 242,830 ADSs for a consideration of RMB133,126, nil and RMB11,840 (US$1,701), respectively.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(bb) Comprehensive loss

Comprehensive loss is defined as the decrease in equity of the Company during a period from transactions and other events and circumstances excluding transactions resulting from investments by owners and distributions to owners. Accumulated other comprehensive income of the Company includes only foreign currency translation adjustments related to the Company and its overseas subsidiaries, whose functional currency is US$.

(cc) Segment reporting

In accordance with ASC Topic 280, *Segment Reporting* ("ASC 280"), the Company historically had two reportable segment since the Company's chief executive officer, who has been identified as the Company's chief operating decision-maker ("CODM") formerly relied on the results of operations of hosting and related services and managed network services separately when making decisions on allocating resources and assessing performance of the Company. Hosting and related services business focuses primarily on colocation, interconnectivity, cloud, VPN, hybrid IT and other value-added services. Managed network services focuses on businesses that primarily utilize bandwidth such as content delivery network ("CDN") service, hosting area network services and last-mile wired broadband service.

In September 2017, the Company disposed WiFire Entities and Aipu Group, which are primarily engaged in the managed network services. After the disposal, the Company has only one hosting and related services remained and the CODM reviews the operation result of the Company as a whole. As of December 31, 2018 and 2019, the Company only had one reporting segment.

(dd) Employee benefits

The full-time employees of the Company's PRC subsidiaries are entitled to staff welfare benefits including medical care, housing fund, pension benefits and unemployment insurance, which are governmental mandated defined contribution plans. These entities are required to accrue for these benefits based on certain percentages of the employees' respective salaries, subject to certain ceilings, in accordance with the relevant PRC regulations, and make cash contributions to the state-sponsored plans out of the amounts accrued.

(ee) Comparatives

Certain items reported in the prior year's consolidated financial statements have been reclassified to conform with the current year's presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(ff) Recent accounting pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments — Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. The standard will replace "incurred loss" approach with an "expected loss" model for instruments measured at amortized cost. For available-for-sale debt securities, entities will be required to record allowances rather than reduce the carrying amount, as they do today under the other-than-temporary impairment model. The standard is effective for public business entities for annual periods beginning after December 15, 2019, and interim periods therein. The Company does not currently anticipate the adoption of this ASU to have a material impact to its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* ("ASU 2018-13"). ASU 2018-13 modifies the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. The amendments in ASU 2018-13 will be effective for the Company beginning after January 1, 2020 including interim periods within the year. Early adoption is permitted. An entity is permitted to early adopt any removed or modified disclosures upon issuance of ASU No. 2018-13 and delay adoption of the additional disclosures until their effective date. The Company does not expect the impact of this guidance to have a material impact on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. This update simplifies the accounting for income taxes as part of the FASB's overall initiative to reduce complexity in accounting standards. The amendments include removal of certain exceptions to the general principles of ASC 740, Income taxes, and simplification in several other areas such as accounting for a franchise tax (or similar tax) that is partially based on income. The update is effective in fiscal years beginning after December 15, 2020, and interim periods therein, and early adoption is permitted. Certain amendments in this update should be applied retrospectively or modified retrospectively, all other amendments should be applied prospectively. The Company does not expect the impact of this guidance to have a material impact on the Company's consolidated financial statements.

3. CONCENTRATION OF RISKS

(a) Credit risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments, accounts receivable, other receivables and amounts due from related parties. As of December 31, 2018 and 2019, the aggregate amount of cash and cash equivalents, restricted cash and short-term investments of RMB1,131,588 and RMB1,171,075 (US$168,214), respectively, were held at major financial institutions located in the PRC, and US$ 258,083 and US$222,638 (RMB1,549,958), respectively, were deposited with major financial institutions located outside the PRC. Management believes that these financial institutions are of high credit quality and continually monitors the credit worthiness of these financial institutions. Historically, deposits in Chinese banks are secure due to the state policy on protecting depositors' interests. However, China promulgated a new Bankruptcy Law in August 2006 that came into effect on June 1, 2007, which contains a separate article expressly stating that the State Council may promulgate implementation measures for the bankruptcy of Chinese banks based on the Bankruptcy Law. Under the new Bankruptcy Law, a Chinese bank may go into bankruptcy. In addition, since China's concession to the World Trade Organization, foreign banks have been gradually permitted to operate in China and have been significant competitors against Chinese banks in many aspects, especially since the opening of the Renminbi business to foreign banks in late 2006. Therefore, the risk of bankruptcy of those Chinese banks in which the Company has deposits has increased. In the event of bankruptcy of one of the banks which holds the Company's deposits, the Company is unlikely to claim its deposits back in full since the bank is unlikely to be classified as a secured creditor based on PRC laws.

3. CONCENTRATION OF RISKS (CONTINUED)

(b) Business, supplier, customer, and economic risk

The Company participates in a relatively dynamic and competitive industry that is heavily reliant operation excellence of the services. The Company believes that changes in any of the following areas could have a material adverse effect on the Company's future financial position, result of operations or cash flows:

(i) Business Risk—Third parties may develop technological or business model innovations that address data center and network requirements in a manner that is, or is perceived to be, equivalent or superior to the Company's services. If competitors introduce services that compete with, or surpass the quality, price or performance of the Company's services, the Company may be unable to renew its agreements with existing customers or attract new customers at the prices and levels that allow the Company to generate reasonable rates of return on its investment.

(ii) Supplier Risk—The Company's operations are dependent upon bandwidth and cabinet capacity provided by the third-party telecom carriers. There can be no assurance that the Company will be able to secure the cabinet and bandwidth supply from the third-party telecom carriers, neither the Company is adequately prepared for unexpected increases in bandwidth demands by its customers. The communications capacity the Company has leased, include cabinet and bandwidth, may become unavailable for a variety of reasons, such as physical interruption, technical difficulties, contractual disputes, or the financial health of its third-party providers. Any failure of these network providers to provide the capacity the Company requires may result in a reduction in, or interruption of, service to its customers. A significant portion of the Company's total bandwidth and cabinet resources are purchased from its five largest suppliers, who collectively accounted for 21%, 19% and 21% of the Company's total bandwidth and cabinet resources for the years ended December 31, 2017, 2018 and 2019, respectively.

(iii) Customer Risk—The success of the Company's business going forward will rely in part on Group's ability to continue to obtain and expand business from existing customers while also attracting new customers. The Company has a diversified base of customers covering its services and the revenue from the largest single entity customer accounted for less than 8% of the Company's total net revenues in the year ended December 31, 2019. Certain customers are local subsidiaries of a telecommunication carrier in China, which the Company views as separate customers as it negotiates with, maintain and support each of these entities given that each of them has the separate decision-making authority and services procurement budget. None of these customers on a stand-alone basis contributed more than 3% of the Company's revenues in any given year but in the aggregate, they contributed approximately 2%, 4% and 4% of the Company's total revenues for the years ended December 31, 2017, 2018 and 2019, respectively.

(iv) Political, economic and social uncertainties—The Company's operations could be adversely affected by significant political, economic and social uncertainties in the PRC. Although the PRC government has been pursuing economic reform policies for more than 20 years, no assurance can be given that the PRC government will continue to pursue such policies or that such policies may not be significantly altered, especially in the event of a change in leadership, social or political disruption or unforeseen circumstances affecting the PRC political, economic and social conditions. There is also no guarantee that the PRC government's pursuit of economic reforms will be consistent or effective.

(v) Regulatory restrictions—The applicable PRC laws, rules and regulations currently prohibit foreign ownership of companies that provide internet related services, including hosting and related services. Accordingly, the Company's subsidiary, 21Vianet China, is currently ineligible to apply for the required licenses for providing IDC services in China. As a result, the Company operates its IDC services in the PRC through its Consolidated VIEs which holds the licenses and permits required to provide IDC services in the PRC. The PRC Government may also choose at anytime to block access to certain website operators which could also materially impact the Company's ability to generate revenue.

3. CONCENTRATION OF RISKS (CONTINUED)

(c) Currency convertibility risk

The Company transacts substantially all its business in RMB, which is not freely convertible into foreign currencies. On January 1, 1994, the PRC government abolished the dual-rate system and introduced a single rate of exchange as quoted daily by the People's Bank of China (the "PBOC"). However, the unification of the exchange rates does not imply that the RMB may be readily convertible into US$ or other foreign currencies. All foreign exchange transactions continue to take place either through the PBOC or other banks authorized to buy and sell foreign currencies at the exchange rates quoted by the PBOC. Approval of foreign currency payments by the PBOC or other institutions requires submitting a payment application form together with suppliers' invoices, shipping documents and signed contracts.

(d) Foreign currency exchange rate risk

From July 21, 2005, the RMB is permitted to fluctuate within a narrow and managed band against a basket of certain foreign currencies. The (appreciation) depreciation of the RMB against US$ was approximately (5.8)%, 5.0% and 1.6% in the years ended December 31, 2017, 2018 and 2019, respectively.

(e) Interest rate risk

The Company is exposed to interest rate risk on its interest-bearing assets and liabilities. As part of its asset and liability risk management, the Company reviews and takes appropriate steps to manage its interest rate exposures on its interest-bearing assets and liabilities. The Company has not been exposed to material risks due to changes in market interest rates, and not used any derivative financial instruments to manage the interest risk exposure during the periods presented.

4. ACQUISITION AND DISPOSAL OF SUBSIDIARIES

Acquisitions in 2019

BJ Shuhai

On January 2, 2019, the Company through its subsidiary, 21Vianet Beijing acquired 100% equity interests in BJ Shuhai at a total cash consideration of RMB98,255 (US$14,113) in installment upon achievement of certain conditions which is accounted as contingent consideration and the corresponding asset will only be recognized when the contingency is resolved. The purpose is to establish a new data center with the acquired property. As BJ Shuhai does not possess all the elements that are necessary to conduct normal operations as a business and had not yet commenced operations, such acquisition is accounted for as an acquisition of assets. As of December 31, 2019, the condition of the last payment of the total consideration was not yet met. RMB30,000 (US$4,309) in relation to the last payment was considered as a contingent consideration. The carrying amounts of the net identifiable assets of BJ Shuhai were as follows:

	RMB	US$
Net assets acquired:		
Operating permits (Note 9)	100,380	14,419
Cash and cash equivalents	59	8
Other current assets	9,625	1,383
Right-of-use assets	129,937	18,664
Other current liabilities	(16,714)	(2,401)
Lease liabilities	(129,937)	(18,664)
Deferred tax liabilities	(25,095)	(3,605)
Total consideration in cash	68,255	9,804

4. ACQUISITION AND DISPOSAL OF SUBSIDIARIES (CONTINUED)

Acquisitions in 2019 (continued)

Shihua Holdings 2

In March 2017, the Company and Warburg Pincus set up a joint venture, Shihua Holdings 2, with the equity interest of 49% and 51%, respectively (Note 12). The Company accounted for the investment in the joint venture under equity method investments for its ability to exercise significant influence.

In July 2019, the Company entered into restructuring agreements with Warburg Pincus and the transaction. Pursuant to the restructuring agreement, Shihua Holdings 2 transferred 100% of the equity interest in some subsidiaries at the consideration equivalent to the subsidiaries' paid-in capital to Warburg Pincus's wholly owned subsidiaries, Marble SH and Marble Holdings. Thereafter, Shihua Holdings 2 repurchased and cancelled all Warburg Pincus's shares in Shihua Holdings 2. Upon completion of restructuring on August 20, 2019, the Company became the sole shareholder in Shihua Holdings 2, including its wholly owned subsidiary, Hongming Logistics. As Shihua Holdings 2 and its subsidiaries do not possess all the elements that are necessary to conduct normal operations as a business and had not yet commenced operations, such acquisition is accounted for as an acquisition of assets. The carrying amounts of the net identifiable assets of Shihua Holdings 2 at the acquisition date were as follows:

	RMB	US$
Net assets acquired:		
Property and land use right	150,880	21,672
Construction-in-progress	465	67
Cash and cash equivalents	67,563	9,705
Other current assets	1,333,329	191,521
Other current liabilities	(1,203,894)	(172,929)
Deferred tax liabilities	(33,096)	(4,754)
Total consideration*	315,247	45,282

* Consideration transferred is the carrying amount of the previously held 49% of equity interest.

4. ACQUISITION AND DISPOSAL OF SUBSIDIARIES (CONTINUED)

Acquisitions in 2019 (continued)

NT Chenghong

On December 24, 2019, the Company through its subsidiary, 21Vianet Beijing acquired 100% equity interests in NT Chenghong with total cash consideration of RMB80,000 (US$11,491). The purpose of this transaction for the Company is to acquire the property to establish a new data center. As NT Chenghong does not possess all the elements that are necessary to conduct normal operations as a business and had not yet commenced operations, such acquisition is accounted for as an acquisition of assets. The carrying amounts of the net identifiable assets of NT Chenghong at the acquisition date were as follows:

	RMB	US$
Net assets acquired:		
Construction-in-progress	158,471	22,763
Equipment	13	2
Cash and cash equivalents	129	18
Other current assets	11,840	1701
Other current liabilities	(88,830)	(12,760)
Deferred tax liabilities	(1,623)	(233)
Total consideration in cash	80,000	11,491

Disposals in 2017

In September 2017, six wholly-owned subsidiaries engaged in CDN, hosting area network services and route optimization businesses, namely Guangzhou Gehua Network Technology Development Co., Ltd., CYSD, Zhiboxintong (Beijing) Network Technology Co., Ltd., WiFire BJ, BJ Fastweb and SH Guotong (collectively, the “Wifire Entities”) and Sichuan Aipu Network Co., Ltd. (“SC Aipu”) and its affiliates (collectively, the “Aipu Group”), which are engaged in the last-mile broadband business, were deconsolidated by the Company.

Disposal of WiFire Entities

In September 2017, the Company transferred 66.67% of the equity interest in the WiFire Entities for a nominal consideration of RMB6 yuan for each of the WiFire Entities to Beijing TUS Yuanchuang Technology Development Co., Ltd., a wholly-owned subsidiary of Tus-Holdings, the controlling shareholder of the Company. Upon completion of disposal, the Company accounted for the remaining 33.33% of equity interest in the WiFire Entities as equity method investments under ASC 323-10 for its ability to exercise significant influence in the WiFire Entities.

Disposal of Aipu Group

In September 2017, the Company transferred two shares in SC Aipu to Mr. Jian Li, the Co-CEO and a director of SC Aipu, for a nominal consideration of RMB1 yuan. Immediately after the disposal, the Company’s ownership in SC Aipu changed from 50% equity interest plus one share to 50% equity interest minus one share and lost control. The Company accounted for the remaining equity interest as equity method investment for its ability to exercise significant influence in the Aipu Group.

Subsequently in December 2017, the Company transferred all the remaining 50% equity interest minus one share in SC Aipu to Tibet Xingtao Culture Communications Co., Ltd., one of SC Aipu’s shareholders, for a nominal consideration of RMB1 yuan.

In addition to the impairment losses for long-lived assets and goodwill of RMB401,808 and RMB766,440, respectively, recognized in relation to Wifire Entities and Aipu Group before the disposal, the Company recognized a gain on disposal of WiFire Entities and Aipu Group of RMB497,036 for the year ended December 31, 2017.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
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5. ACCOUNTS AND NOTES RECEIVABLE, NET

Accounts and notes receivable and the allowance for doubtful debt consisted of the following:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Accounts receivable	592,669	722,840	103,830
Notes receivable	2,606	2,146	308
Allowance for doubtful debt	(70,970)	(67,828)	(9,743)
	524,305	657,158	94,395

As of December 31, 2018 and 2019, all accounts and notes receivable were due from third party customers. An analysis of the allowance for doubtful debt was as follows:

	For the years ended December 31,		
	2018	2019	
	RMB	RMB	US$
Balance at beginning of the year	73,656	70,970	10,194
Additional provision charged to expense	315	485	70
Write-off of accounts receivable	(3,001)	(3,627)	(521)
Balance at the end of the year	70,970	67,828	9,743

6. SHORT-TERM INVESTMENTS

Short-term investments consisted of the following as of December 31, 2018 and 2019:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Time deposits	245,014	363,856	52,265

The Company recorded interest income related to its short-term investments amounting to RMB4,021, RMB7,303 and RMB8,687 (US$1,248) for the years ended December 31, 2017, 2018 and 2019, respectively, in the consolidated statements of operations.

7. PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets consisted of the following:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Prepaid expenses	565,710	878,155	126,139
Tax recoverables	421,654	570,913	82,007
Staff advances	10,730	1,866	268
Interest receivables	12,037	14,359	2,063
Deposits	39,971	17,391	2,498
Loan to third parties	58,909	73,557	10,565
Others	50,563	61,908	8,893
	1,159,574	1,618,149	232,433

Prepaid expenses mainly represented the unamortized portion of prepayments made to Microsoft for the cloud computing services, the prepayments to telecommunication operators for bandwidth, data centers or cabinets and the prepayments for office expense.

8. PROPERTY AND EQUIPMENT, NET

Property and equipment, including those held under finance leases, consisted of the following:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
At cost:			
Property	753,319	899,609	129,221
Leasehold improvements	932,896	1,458,749	209,536
Computer and network equipment	3,260,336	3,539,709	508,447
Optical fibers	142,723	142,723	20,501
Office equipment	24,390	22,102	3,175
Motor vehicles	1,841	2,308	331
	5,115,505	6,065,200	871,211
Less: Accumulated depreciation	(1,870,640)	(2,514,800)	(361,228)
	3,244,865	3,550,400	509,983
Construction-in-progress	786,377	1,893,165	271,936
	4,031,242	5,443,565	781,919

8. PROPERTY AND EQUIPMENT, NET (CONTINUED)

Depreciation expense was RMB523,500, RMB566,491 and RMB696,528 (US$100,050) for the years ended December 31, 2017, 2018 and 2019, respectively, and were included in the following captions:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Cost of revenues	458,655	520,791	644,108	92,520
Sales and marketing expenses	3,188	986	2,107	303
General and administrative expenses	41,675	28,727	30,110	4,325
Research and development expenses	19,982	15,987	20,203	2,902
	523,500	566,491	696,528	100,050

The carrying amounts of the Company's property and equipment held under finance leases at respective balance sheet dates were as follows:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Property	365,353	365,353	52,480
Computer and network equipment	719,676	639,311	91,831
Optical fibers	142,723	142,723	20,501
	1,227,752	1,147,387	164,812
Less: Accumulated depreciation	(291,579)	(408,196)	(58,634)
	936,173	739,191	106,178
Construction-in-progress	576,022	659,014	94,661
	1,512,195	1,398,205	200,839

Depreciation of property, computer and network equipment and optical fibers under finance leases was RMB92,920, RMB170,264 and RMB216,664 (US$31,122) for the years ended December 31, 2017, 2018 and 2019, respectively.

The carrying amounts of property and equipment pledged by the Company to secure banking borrowings (Note 13) granted to the Company at the respective balance sheet dates were as follows:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Property	140,393	137,585	19,763
Leasehold improvements	71,337	66,162	9,504
Computer and network equipment	74,822	—	—
Office equipment	44	—	—

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9. INTANGIBLE ASSETS, NET

The following table presented the Company's intangible assets as of the respective balance sheet dates:

	Purchased software	Radio spectrum license	Operating Permits	Contract backlog	Customer relationships	Licenses	Supplier relationships	Trade names	Platform software	Non-compete agreements	Internal use software	Total
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Intangible assets, net January 1, 2018	50,629	77,141	—	11,750	137,882	4,268	20,144	96,404	683	154	2,060	401,115
Additions	18,744	—	—	—	—	—	—	—	—	—	6,093	24,837
Disposals	(6,772)	—	—	—	—	—	—	—	—	—	—	(6,772)
Foreign currency translation difference	364	3,884	—	—	—	—	—	—	—	—	—	4,248
Amortization expense	(15,711)	(8,117)	—	(6,588)	(24,921)	(385)	(3,074)	(5,813)	(683)	(110)	(2,713)	(68,115)
Intangible assets, net December 31, 2018	47,254	72,908	—	5,162	112,961	3,883	17,070	90,591	—	44	5,440	355,313
Additions	11,128	—	100,380	—	—	—	—	—	—	—	13,189	124,697
Foreign currency translation difference	413	1,200	—	—	—	—	—	—	—	—	—	1,613
Amortization expense	(16,068)	(8,985)	(3,136)	(5,162)	(24,921)	(385)	(3,074)	(5,813)	—	(44)	(3,440)	(71,028)
Intangible assets, net December 31, 2019	42,727	65,123	97,244	—	88,040	3,498	13,996	84,778	—	—	15,189	410,595
Intangible assets, net December 31, 2019 (US$)	6,137	9,354	13,968	—	12,646	503	2,010	12,178	—	—	2,182	58,978

9. INTANGIBLE ASSETS, NET (CONTINUED)

Contract backlog relate to the order placed by the customers that have yet to be delivered at the acquisition date. Customer relationships relate to the relationships that arose as a result of existing customer agreements acquired and is derived from the estimated net cash flows that are expected to be derived from the expected renewal of these existing customer agreements after subtracting the estimated net cash flows from other contributory assets. Licenses mainly represented the telecommunication service license in relation to virtual private network services. Supplier relationships relate to the relationships that arose as a result of existing bandwidth supply agreements with certain network operators, which were valued using a replacement cost method given the relative ease of replacement. Trade names mainly relate to the trade names of Dermot Entities. Operating permits relate to the government authorized high-capacity utilities in the assets acquisition of BJ Shuhai (Note 4).

The intangible assets are amortized using the straight-line method, which is the Company's best estimate of how these assets will be economically consumed over their respective estimated useful lives ranging from 1 to 32 years.

Amortization expenses were approximately RMB143,602, RMB68,115 and RMB71,028 (US$10,203) for the years ended December 31, 2017, 2018 and 2019, respectively.

The annual estimated amortization expenses for the intangible assets for each of the next five years are as follows:

	RMB	US$
2020	59,115	8,491
2021	55,400	7,958
2022	50,005	7,183
2023	34,274	4,923
2024	13,820	1,985
	212,614	30,540

10. LAND USE RIGHTS, NET

Land use rights held by the Company represent operating lease prepayments and are amortized over the remaining term of the respective rights.

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Cost	159,494	249,804	35,882
Accumulated amortization	(12,001)	(16,650)	(2,392)
Land use rights, net	147,493	233,154	33,490

The carrying amounts of land use rights pledged by the Company to secure banking borrowings (Note 13) granted to the Company at the respective balance sheet dates were as follows:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Land use rights	16,403	15,989	2,297

11. GOODWILL

The changes in the carrying amount of goodwill were as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Balance as of January 1	1,755,970	989,530	989,530	142,137
Impairment	(766,440)	—	—	—
Balance as of December 31	989,530	989,530	989,530	142,137

In September 2017, goodwill included in managed network services reporting unit was fully impaired immediately before disposal of WiFire Entities and Aipu Group. As of December 31, 2017, no impairment loss of goodwill in hosting and related services was recorded.

As of December 31, 2018 and 2019, the Company has performed a qualitative assessment for hosting and related services and no impairment loss was recorded for this year.

12. LONG-TERM INVESTMENTS

The Company's long-term investments consisted of the following:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Equity investments without readily determinable fair values	51,410	43,824	6,295
Equity method investments	490,376	124,116	17,828
Available-for-sale debt investments	2,537	1,713	246
	544,323	169,653	24,369

Equity investments without readily determinable fair values

The Company disposed equity investments without readily determinable fair value at a consideration of RMB26,653 and RMB13,122 (US$1,885) in 2018 and 2019, respectively.

The investment income comprised of dividend income of RMB406 and RMB461 (US$66), and disposal gain of RMB20,496 and RMB5,536 (US$795) for the years ended December 31, 2018 and 2019, respectively.

The Company recorded an impairment loss of long-term investment amounting RMB20,258, nil and nil for the years ended December 31, 2017, 2018 and 2019, respectively.

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12. LONG-TERM INVESTMENTS (CONTINUED)

Equity method investments:

	As of December 31, 2017			Increase (decrease) during the year ended December 31, 2018			As of December 31, 2018			
	Cost of investments	Share equity gain (loss)	Investments in equity investee	Cost of investments	Share equity loss	Derecognize of share equity loss	Cost of investments	Share equity gain (loss)	Investments in equity investee	Investments in equity investee
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	US$
Yizhuang Fund	101,000	176,036	277,036	—	(150,355)	—	101,000	25,681	126,681	18,425
Unis Tech	49,000	(12,961)	36,039	(49,000)	(3,548)	16,509	—	—	—	—
Shihua DC Holdings	147,176	(9,429)	137,747	219,447	(24,229)	—	366,623	(33,658)	332,965	48,428
Jingliang Inter Cloud	—	—	—	6,000	(34)	—	6,000	(34)	5,966	868
Jingliang Century Cloud	—	—	—	4,000	—	—	4,000	—	4,000	582
Huaye Cloud	—	—	—	23,333	(6,319)	—	23,333	(6,319)	17,014	2,474
ZJK Energy	—	—	—	5,907	(2,157)	—	5,907	(2,157)	3,750	545
WiFire Entities	15,000	(15,000)	—	—	—	—	15,000	(15,000)	—	—
	312,176	138,646	450,822	209,687	(186,642)	16,509	521,863	(31,487)	490,376	71,322

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12. LONG-TERM INVESTMENTS (CONTINUED)

Equity method investments (continued):

	As of December 31, 2018			Increase (decrease) during the year ended December 31, 2019			As of December 31, 2019			
	Cost of investments	Share equity gain (loss)	Investments in equity investee	Cost of investments	Share equity gain (loss)	Distribution/ derecognize of share equity (gain) loss	Cost of investments	Share equity gain (loss)	Investments in equity investee	Investments in equity investee
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	US$
Yizhuang Fund	101,000	25,681	126,681	—	1,671	(20,200)	101,000	7,152	108,152	15,535
Shihua DC Holdings	366,623	(33,658)	332,965	(337,555)	(17,718)	22,308	29,068	(29,068)	—	—
Jingliang Inter Cloud	6,000	(34)	5,966	—	(1,894)	—	6,000	(1,928)	4,072	585
Jingliang Century Cloud	4,000	—	4,000	—	—	—	4,000	—	4,000	575
Huaye Cloud	23,333	(6,319)	17,014	(23,333)	(11,534)	17,853	—	—	—	—
ZJK Energy	5,907	(2,157)	3,750	—	212	—	5,907	(1,945)	3,962	569
WiFire Entities	15,000	(15,000)	—	5,000	(5,000)	—	20,000	(20,000)	—	—
Qidi Chengxin	—	—	—	3,930	—	—	3,930	—	3,930	564
	521,863	(31,487)	490,376	(351,958)	(34,263)	19,961	169,905	(45,789)	124,116	17,828

12. LONG-TERM INVESTMENTS (CONTINUED)

In April 2012, the Company through its subsidiary, 21Vianet Beijing, entered into an agreement to invest in the Yizhuang Venture Investment Fund ("Yizhuang Fund") as a limited partner with an amount of RMB50,500. In December 2013, the Company made the second tranche of investment of another amount of RMB50,500 in the Yizhuang Fund, and held 27.694% of the investee as of December 31, 2017, 2018 and 2019. Given the Company holds more than three percent interest in the Yizhuang Fund as a limited partner, the investment is accounted for under the equity method as prescribed in ASC Subtopic 323-10, *Investments — Equity Method* ("ASC 323-10"). In December 2019, the Company received distribution from Yizhuang Fund as return on investments with an amount of RMB20,200 (US$2,902).

In June 2016, the Company through its subsidiary, 21Vianet Beijing, and a related company jointly set up Unisplendour-Vianet Technology Inc. ("Unis Tech"). The Company injected capital of RMB49,000 to acquire 49% of equity interest in Unis Tech with the ability to exercise significant influence. In March 2018, the Company disposed all its equity interests in the Unis Tech with a total cash consideration of RMB49,000 and recognized investment loss with an amount of RMB3,548 and disposal gain with an amount of RMB16,509.

In March 2017, the Company through its subsidiary, 21Vianet HK, and Warburg Pincus jointly set up two JVs, Shihua Holdings 2 and Shihua Investment Management (collectively, "Shihua DC Holdings"). The Company injected capital of RMB133,639 and RMB13,537 to acquire 49% of equity interest in Shihua Holdings 2 and Shihua Investment Management, respectively. In the year of 2018, the Company increased the capital injection with the amount of RMB203,916 and RMB15,531 in Shihua Holdings 2 and Shihua Investment Management, respectively. In July 2019, the Company entered into restructuring agreements with Warburg Pincus. Pursuant to the restructuring agreements, Shihua Holdings 2 repurchased and cancelled Warburg Pincus's share in Shihua Holdings 2. Upon completion of restructuring on August 20, 2019, Shihua Holdings 2 became a wholly-owned subsidiary of the Company (Note 4), thus RMB337,555 (US$48,487) and RMB22,308 (US$3,204) of cost of investment and accumulative share equity loss in Shihua Holdings 2 were derecognized as of December 31, 2019. Pursuant to the restructuring agreements, the Company and Warburg Pincus would inject additional capital on pro-rata basis to liquidate and terminate Shihua Investment Management. Therefore, the Company recognized additional share equity loss in Shihua Investment Management with an amount of RMB16,290 (US$2,340) as of December 31, 2019.

In September 2017, after the disposal of 66.67% equity interest in the WiFire Entities, the Company held the remaining 33.33% equity interest in the WiFire Entities, which is accounted for equity method investment at fair value of RMB6 yuan at the disposal date. In December 2017, the Company injected capital of RMB15,000 in the WiFire Entities pursuant to the sale and purchase agreement. In 2019, the Company increased capital injection of RMB5,000 (US$716) in the WiFire Entities. As of December 31, 2019, the equity method investment balance is reduced to nil after the pickup of loss in the WiFire Entities.

In January 2018, the Company through its subsidiary, 21Vianet Beijing, and a third company jointly set up Beijing Jingliang Interconnected Cloud Technology Inc. ("Jingliang Inter Cloud") and Jingliang Century Cloud Technology Inc. ("Jingliang Century Cloud"). The Company injected capital of RMB6,000 and RMB4,000 and the Company held 60% and 40% of equity interest in Jingliang Inter Cloud and Jingliang Century Cloud, respectively. Based on the article of association, the Company cannot exercise control over relevant activities of the investee, but it has the ability to exercise significant influence over Jingliang Inter Cloud's operation and financial decisions.

In March 2018, the Company through its subsidiary, 21Vianet Beijing, acquired 50% equity interest in Guangdong Huaye Cloud Inc. ("Huaye Cloud") with an amount of RMB23,333, with the ability to exercise significant influence. In November 2019, the Company disposed all its equity interest in Huaye Cloud with a total cash consideration of RMB23,333 (US$3,352) and recognized investment loss with an amount of RMB17,853 (US$2,564) and disposal gain with an amount of RMB17,853 (US$2,564).

In December 2019, the Company through its subsidiary, 21Vianet Beijing, and a third company jointly set up Chengdu Qidi Chengxin Education Limit ("Qidi Chengxin"). The Company injected capital of RMB3,930 (US$564) and hold 59% of equity interest in Qidi Chengxin. Based on the article of association, the Company cannot exercise control over relevant activities of the investee, but it has the ability to exercise significant influence over operation and financial decisions.

Available-for-sale debt investments

Available-for-sale debt investments consist of investments in convertible notes with conversion option to preferred shares that are not readily convertible to cash and therefore the bifurcation of embedded derivative is not required as the conversion option did not qualify as derivatives in accordance with ASC 815 *"Derivatives and Hedging"*.

13. BANK BORROWINGS

Bank borrowings were as follows as of the respective balance sheet dates:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Short-term bank borrowings	50,000	234,500	33,684
Long-term bank borrowings, current portion	75,284	32,500	4,668
	125,284	267,000	38,352
Long-term bank borrowings, non-current portion	112,000	79,500	11,419
Total bank borrowings	237,284	346,500	49,771

The short-term bank borrowings outstanding as of December 31, 2018 and 2019 bore a weighted average interest rate of 4.05% and 4.56% per annum, respectively, and were denominated in RMB. These borrowings were obtained from financial institutions and have terms of one year. The long-term bank borrowings (including current portion) outstanding as of December 31, 2018 and 2019 bore a weighted average interest rate of 5.31% and 5.28% per annum, respectively, and were denominated in RMB. These loans were obtained from financial institutions located in the PRC.

As of December 31, 2018 and 2019, unused loan facilities for bank borrowings amounted to RMB21,375 and RMB326,068 (US$46,837), respectively.

Bank borrowings as of December 31, 2018 and 2019 were secured by the following:

December 31, 2018

Short-term bank borrowings (RMB)	Secured by
50,000	Secured by restricted cash of RMB60,796.
50,000	

Long-term bank borrowings (including current portion) (RMB)	Secured by
138,000	Secured by a subsidiary's fixed assets and land-use right with net book value of RMB286,596 and RMB16,403, respectively (Note 8/Note 10).
49,284	Unsecured borrowings.
187,284	

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13. BANK BORROWINGS (CONTINUED)

December 31, 2019

Short-term bank borrowings (RMB)	Secured by
34,500	Unsecured borrowings.
200,000	Secured by restricted cash of RMB215,816 (US$31,000).
234,500	

Long-term bank borrowings (including current portion) (RMB)	Secured by
112,000	Secured by a subsidiary's fixed assets and land-use right with net book value of RMB203,747 (US$29,267) and RMB15,989 (US$2,297), respectively (Note 8/Note 10).
112,000	

14 ACCRUED EXPENSES AND OTHER PAYABLES

The components of accrued expenses and other payables were as follows:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Payroll and welfare payables	224,265	179,195	25,740
Value-added tax and other taxes payable	16,931	14,523	2,086
Payables for office supplies and utilities	21,719	24,562	3,528
Payables for the purchase of property and equipment	207,512	551,759	79,255
Payables for the purchase of intangible assets	4,576	2,934	421
Accrued service fees	41,618	52,746	7,576
Interest payables	54,376	58,961	8,469
Liability classified RSU	4,970	2,109	303
Payables for acquisitions	47,755	47,805	6,867
Others	35,598	44,341	6,368
	659,320	978,935	140,613

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15. LEASES

Leases are classified as operating leases or finance leases in accordance with ASC 842. The Company's operating leases mainly related to building, office facilities and equipment and the rights to use the land in the PRC. For leases with terms greater than 12 months, the Company records the related asset and liability at the present value of lease payments over the term. Certain leases include rental escalation clauses, renewal options and/or termination options, which are factored into the Company's determination of lease payments when appropriate.

As of December 31, 2019, the operating lease's weighted average remaining lease term was 9.4 years and weighted average discount rate was 6.09%. The finance lease's weighted average remaining lease term was 15.3 years and weighted average discount rate was 8.43%. For the year ended December 31, 2019, lease cost for finance leases capitalized was immaterial.

	For the year ended December 31, 2019	
	RMB	US$
Lease cost		
Finance lease cost:		
Depreciation	216,664	31,122
Interest expenses	120,185	17,263
Operating lease cost	214,795	30,853
Total lease cost	551,644	79,238

Short-term lease cost and variable lease cost for operating leases and finance leases were immaterial for the year ended December 31, 2019.

Other information related to leases was as follows:

	2019	
	RMB	US$
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash payments for operating leases	193,174	27,748
Financing cash payments for finance leases	333,614	47,921

Future lease payments under operating leases and finance leases as of December 31, 2019 were as follows:

	Operating Leases		Finance Leases	
	RMB	US$	RMB	US$
2020	466,670	67,033	364,729	52,390
2021	373,552	53,657	386,027	55,449
2022	160,644	23,075	377,564	54,234
2023	87,028	12,501	122,947	17,660
2024	47,484	6,821	121,008	17,382
2025 and thereafter	647,419	92,996	1,880,687	270,144
Total future lease payments	1,782,797	256,083	3,252,962	467,259
Less: Imputed interest	(533,376)	(76,615)	(1,563,446)	(224,575)
Present value of future lease payments*	1,249,421	179,468	1,689,516	242,684

* Present value of future operating lease payments consisted of current portion of operating lease liabilities, non-current portion of operating lease liabilities and operating lease liabilities in amounts due to related parties, amounting to RMB437,817 (US$62,888), RMB579,102 (US$83,183) and RMB232,502 (US$33,397) for the year ended December 31, 2019, respectively.

Present value of future finance lease payments consisted of current portion of finance lease liabilities, non-current portion of finance lease liabilities and finance lease liabilities in amounts due to related parties, amounting to RMB227,115 (US$32,623), RMB896,927 (US$128,836) and RMB565,474 (US$81,225) for the year ended December 31, 2019, respectively.

16. BONDS PAYABLE

On August 17, 2017, the Company issued and sold bonds with an aggregate principle amount of US$200,000 at a coupon rate of 7% per annum or the Original Bonds. On September 29, 2017, the Company issued and sold follow-on bonds with an aggregate principle amount of US$100,000 at a coupon rate of 7% per annum, or the Bonds. The Bonds were priced at a slight premium of 100.04%, with an effective yield of 6.98% (together with the Original Bonds, "2020 Notes"). The 2020 Notes will mature on August 17, 2020. The 2020 Notes were listed and quoted on the Official List of the Singapore Exchange Securities Trading Limited (the "SGX-ST"). Interest on the 2020 Notes is payable semi-annually in arrears on August 17 and February 17 in each year, beginning from February 17, 2018.

Net proceeds from 2020 Notes after deducting issuance costs were RMB1,926,419. The 2020 Notes are unsecured and rank senior in right of payment to any of the Company's indebtedness that is expressly subordinated to the bonds; equal in right of payment to any of the Company's liabilities that are not so subordinated; but rank lower than any secured indebtedness of the Company and all liabilities (including accounts payable) of the Company's subsidiaries and Consolidated VIEs.

On April 15, 2019, the Company issued and sold bonds with an aggregate principle amount of US$300,000 at a coupon rate of 7.875% per annum ("2021 Notes"). The 2021 Notes will mature on October 15, 2021. The 2021 Notes were listed and quoted on the SGX-ST. Interest on the 2021 Notes is payable semi-annually in arrears on April 15 and October 15 in each year, beginning from October 15, 2019.

Net proceeds from 2021 Notes after deducting issuance costs were RMB1,976,474 (US$283,903). The 2021 Notes are unsecured and rank senior in right of payment to any of the Company's indebtedness that is expressly subordinated to the bonds; equal in right of payment to any of the Company's liabilities that are not so subordinated, including the 2020 Notes; effectively junior in the right of payment to any secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including accounts payables) of the Company's subsidiaries and Consolidated VIEs.

On April 16, 2019, the Company repurchased US$150,839 in principal amount of 2020 Notes, representing approximately 50.28% of the US$300,000 total aggregate principal amount of the 2020 Notes outstanding as at such date. On August 12, 2019, the Company repurchased US$18,000 in principal amount of 2020 Notes. The remaining outstanding 2020 Notes with principal amount of US$131,161 continue to be the obligation of the Company. The Company recognized loss on debt extinguishment of RMB18,895 (US$2,714) during the year ended December 31, 2019.

The following table summarizes the aggregate required repayments of the principal amounts of the Company's long-term borrowings, including the bonds payable and bank borrowings (Note 13) in the succeeding five years and thereafter:

	RMB	US$
For the years ending December 31,		
2020	947,505	136,100
2021	2,131,860	306,223
2022	40,500	5,817
2023 and thereafter	—	—

17. DEFERRED GOVERNMENT GRANTS

During the years ended December 31, 2017, 2018 and 2019, the Company received RMB2,877, RMB500 and nil, respectively, in government grants from the relevant PRC government authorities for the use in construction of property and equipment. These grants are initially deferred and subsequently recognized in the consolidated statements of operations when the Company has complied with the conditions or performance obligations attached to the related government grants, if any, and the grants are no longer refundable. Grants that subsidize the construction cost of property and equipment are amortized over the life of the related assets as a reduction of the associated depreciation expense.

Movements of deferred government grants were as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Balance at beginning of the year	30,993	22,435	15,792	2,268
Additions	2,877	500	—	—
Decrease due to disposal of subsidiaries	(3,573)	—	—	—
Recognized as a reduction of depreciation expense	(7,862)	(7,143)	(7,291)	(1,047)
Balance at end of the year	22,435	15,792	8,501	1,221

18. TREASURY STOCK

For the years ended December 31, 2017, 2018 and 2019, the Company repurchased the number of 3,448,482, nil and 242,830 ADSs pursuant to the share repurchase plans.

19. ACCUMULATED OTHER COMPREHENSIVE INCOME

The changes in accumulated other comprehensive income by component, net of tax of nil, were as follows:

	Foreign currency translation
	RMB
Balance as of January 1, 2017	118,290
Current year other comprehensive income	(120,963)
Balance as of December 31, 2017	(2,673)
Current year other comprehensive loss	88,652
Balance as of December 31, 2018	85,979
Current year other comprehensive income	(8,075)
Balance as of December 31, 2019	77,904
Balance as of December 31, 2019, in US$	11,190

20. MAINLAND CHINA EMPLOYEE CONTRIBUTION PLAN

As stipulated by the regulations of the PRC, full-time employees of the Company in the PRC participate in a government-mandated multiemployer defined contribution plan organized by municipal and provincial governments. Under the plan, certain pension benefits, medical care, unemployment insurance, employee housing fund and other welfare benefits are provided to employees. The Company is required to make contributions to the plan based on certain percentages of employees' salaries. The total expenses for the plan were RMB134,053, RMB122,362 and RMB121,266 (US$17,419) for the years ended December 31, 2017, 2018 and 2019, respectively.

21. SHARE-BASED COMPENSATION

(a) Option granted to employees

In order to provide additional incentives to employees and to promote the success of the Company's business, the Company adopted a share incentive plan in 2010 (the "2010 Plan"). Under the 2010 Plan, the Company may grant options and RSUs to its employees, directors and consultants to purchase an aggregate of no more than 39,272,595 ordinary shares of the Company. The 2010 Plan was approved by the Board of Directors and shareholders of the Company on July 16, 2010. The 2010 Plan is administered by the Board of Directors or the Compensation Committee of the Board as set forth in the 2010 Plan (the "Plan Administrator"). All share options to be granted under the 2010 Plan have a contractual term of ten years and generally vest over 3 to 4 years in the grantee's option agreement.

In order to further promote the success and enhance the value, the Company adopted a share incentive plan in 2014 (the "2014 Plan"). Under the 2014 Plan, the Company may issue an aggregate of no more than 20,461,380 shares ("Maximum Number") and such Maximum Number should be automatically increased by a number that is equal to 15% of the number of new shares issued by the Company from time to time. The maximum aggregate number of ordinary shares to be issued under 2014 Plan was subsequently amended to 39,606,817, as approved by the Board of Directors and shareholders of the Company on October 30, 2015. All share options, restricted shares and restricted share units to be granted under the 2014 Plan have a contractual term of ten years and generally vest over 3 to 4 years in the grantee's option agreement.

The Company granted 611,111, 487,368 and 464,120 RSUs in 2017, 2018 and 2019, respectively, with performance conditions whereby a predetermined number will vest upon the assignment of an annual performance review in accordance with predetermined performance targets for the grantees over a one or four-year period. As it is probable for the Company to estimate the annual performance review ratings for the individual grantees, the Company commenced recognition of the related compensation expenses using the accelerated recognition method.

The Company granted 2,188,226 and 64,000 RSUs in 2018 and 2019, respectively, with performance conditions whereby a predetermined number will vest upon with the achievement of predetermined operation performance targets for the Company. As it is probable for the Company to estimate the operation performance for the Company, the Company commenced recognition of the related compensation expenses using the accelerated recognition method.

The Company granted 547,056 and 16,000 RSUs in 2018 and 2019, respectively, with market conditions whereby a predetermined number will vest upon with the achievement of predetermined share price targets for the Company. The probability to achieve market condition is reflected in the grant date fair value of the award and thus compensation cost is recognized when the requisite service is rendered using the accelerated method.

21. SHARE-BASED COMPENSATION (CONTINUED)

(a) Option granted to employees (continued)

The compensation expenses related to remaining unvested share options shall be recognized over the remaining requisite service period or the performance review period. As of December 31, 2019, options to purchase 1,445,345 of ordinary shares were outstanding.

The following table summarized the Company's employee share option activity under the 2010 Plan:

	Number of options	Weighted average exercise price (US$)	Weighted average remaining contractual term (Years)	Aggregate intrinsic value (US$)
Outstanding, January 1, 2019	1,479,214	0.51	2.2	
Exercised	(33,869)	0.55		
Outstanding, December 31, 2019	1,445,345	0.51	1.3	1,005
Vested and expected to vest at December 31, 2019	1,445,345	0.51	1.3	1,005
Exercisable as of December 31, 2019	1,445,345	0.51	1.3	1,005

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the fair value of the underlying stock at each reporting date, for those awards that have an exercise price below the estimated fair value of the Company's shares. As of December 31, 2019, the Company had options outstanding to purchase an aggregate of 1,445,345 shares with an exercise price below the fair value of the Company's shares, resulting in an aggregate intrinsic value of RMB6,997 (US$1,005).

The aggregate fair value of the outstanding options at the grant date was determined to be RMB14,508 (US$2,084) as of December 31, 2019 and such amount is recognized as share-based compensation expenses using the straight-line method for all employee share options granted with graded vesting based on service conditions and the accelerated method for share options granted with graded vesting based on performance conditions. The total fair value of share options exercised during the years ended December 31, 2017, 2018 and 2019 was US$404, US$239 and US$42, respectively. The aggregate intrinsic value of options exercised during the years ended December 31, 2017, 2018 and 2019 was US$306, US$248, and US$22, respectively.

As of December 31, 2019, the Company has recorded all the share-based compensation expenses in relation to outstanding share options.

The following table summarized the Company's RSUs activity under the 2014 Plan:

	Number of RSUs	Weighted average grant date fair value (US$)	Weighted average remaining contractual life (Years)	Aggregate intrinsic value (US$)
Unvested, January 1, 2019	3,218,452	6.66	9	
Granted	544,120	7.67		
Vested	(856,051)	7.22		
Forfeited	(210,392)	6.52		
Unvested, December 31, 2019	2,696,129	6.83	7.8	19,547

21. SHARE-BASED COMPENSATION (CONTINUED)

(a) Option granted to employees (continued)

Share-based compensation expenses for RSUs are measured based on the closing fair market value of the Company's ADS on the date of grant and the reporting date for liability classified RSUs, respectively. The aggregate fair value of the unvested RSUs as of December 31, 2019 was RMB136,082 (US$19,547), and such amount is recognized as share-based compensation expenses using the straight-line method for the RSUs with graded vesting based on service conditions and the accelerated method for the RSUs with graded vesting based on performance conditions, market conditions and share-settled bonuses. The weighted average grant date fair value of RSUs granted during the years ended December 31, 2017, 2018 and 2019 was US$6.31, US$6.39 and US$7.67, respectively. The total fair value of RSUs vested during the years ended December 31, 2017, 2018 and 2019 was US$18,238, US$9,422 and US$6,185, respectively.

As of December 31, 2019, there was RMB59,913 (US$8,606) of unrecognized share-based compensation expenses related to RSUs which is expected to be recognized over a weighted average vesting period of 2.5 years. Total unrecognized share-based compensation expenses may be adjusted for future changes when actual forfeitures incurred.

(b) Shares issued to management of Dermot Entities

For the years ended December 31, 2017, 2018 and 2019, the Company recorded share-based compensation expenses of RMB5,752, nil and nil within the Company's consolidated statements of operations, respectively.

Total share-based compensation expenses relating to share options and RSUs granted to employees recognized for the years ended December 31, 2017, 2018 and 2019 were as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Cost of revenues	(277)	2,668	1,884	271
Sales and marketing expenses	(681)	2,139	354	51
General and administrative expenses	47,945	53,346	40,501	5,817
Research and development expenses	142	1,385	1,177	169
	47,129	59,538	43,916	6,308

22. TAXATION

Enterprise income tax ("EIT")

Cayman Islands

The Company is incorporated in the Cayman Islands and conducts its primary business operations through the subsidiaries and VIEs in the PRC and Hong Kong. Under the current laws of the Cayman Islands, the Company is not subject to tax on income or capital gain arising in Cayman Islands. Additionally, upon payments of dividends by the Company to its shareholders, no Cayman Islands withholding tax will be imposed.

British Virgin Islands

Subsidiaries in British Virgin Islands are not subject to tax on income or capital gains under the current laws of the British Virgin Islands. Additionally, upon payments of dividends by the Company to its shareholders, no British Virgin Islands withholding tax will be imposed.

Hong Kong

Subsidiaries in Hong Kong are subject to Hong Kong profits tax rate of 16.5% for the years ended December 31, 2017, 2018 and 2019. Additionally, upon payments of dividends by the Company to its shareholders, no HK withholding tax will be imposed.

Taiwan

DYX Taiwan branch is incorporated in Taiwan and is subject to Taiwan profits tax rate of 17%, 20% and 20% respectively for the years ended December 31, 2017, 2018 and 2019.

The PRC

The Company's PRC subsidiaries are incorporated in the PRC and subject to the statutory rate of 25% on the taxable income in accordance with the Enterprise Income Tax Law (The "EIT Law"), which was effective since January 1, 2008, except for certain entities eligible for preferential tax rates.

Dividends, interests, rent or royalties payable by the Company's PRC subsidiaries, to non-PRC resident enterprises, and proceeds from any such non-resident enterprise investor's disposition of assets (after deducting the net value of such assets) shall be subject to 10% withholding tax, unless the respective non-PRC resident enterprise's jurisdiction of incorporation has a tax treaty or arrangements with China that provides for a reduced withholding tax rate or an exemption from withholding tax.

21Vianet Beijing was qualified for a High and New Technology Enterprise ("HNTE") since 2008 and is eligible for a 15% preferential tax rate. In October 2014, 21Vianet Beijing obtained a new certificate and renewed the certificate in October 2018, which will expire in October 2020. In accordance with the PRC Income Tax Laws, an enterprise awarded with the HNTE certificate may enjoy a reduced EIT rate of 15%. For the years ended December 31, 2017, 2018 and 2019, 21Vianet Beijing enjoyed a preferential tax rate of 15%.

In April 2011, Xi'an Sub, a subsidiary located in Shaanxi Province, was qualified for a preferential tax rate of 15% and started to apply this rate from then on. The preferential tax rate is awarded to companies that are located in West Regions of China which operate in certain encouraged industries. For the years ended December 31, 2017, 2018 and 2019, the tax rate assessed for Xi'an Sub was 25%, 15% and 15%, respectively.

In 2013, BJ iJoy was qualified as a software enterprise which allows BJ iJoy to utilize a two-year 100% exemption for 2013 and 2014 followed by a three-year half-reduced EIT rate effective for the years from 2015 to 2017. For the years ended December 31, 2013 and 2014, BJ iJoy enjoyed the 100% tax exemption for its taxable income. For the year ended December 31, 2017, BJ iJoy enjoyed the half-reduced EIT rate for its taxable income. For the years ended December 31, 2018 and 2019, BJ iJoy was subject to the statutory rate of 25% for the taxable income.

In October 2015, SH Blue Cloud, a subsidiary located in Shanghai, was qualified for a HNTE and became eligible for 15% preferential tax rate effective for three consecutive years. The certificate was renewed in October 2018 which will expire in October 2021. Accordingly, for the years ended December 31, 2017, 2018 and 2019, SH Blue Cloud enjoyed a preferential tax rate of 15%.

In November 2016, SZ DYX, a subsidiary located in Guangdong Province, was qualified for a HNTE and became eligible for 15% preferential tax rate effective for three consecutive years, expiring in November 2019 and the certificate was renewed in November 2019 which will expire in November 2022. Accordingly, for the years ended December 31, 2017, 2018 and 2019, SZ DYX enjoyed a preferential tax rate of 15%.

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22. TAXATION (CONTINUED)

The New EIT Law also provides that enterprises established under the laws of foreign countries or regions and whose "place of effective management" is located within the PRC are considered PRC tax resident enterprises and subject to PRC income tax at the rate of 25% on worldwide income. The definition of "place of effective management" refers to an establishment that exercises, in substance, overall management and control over the production and business, personnel, accounting, properties, etc. of an enterprise. As of December 31, 2019, the administrative practice associated with interpreting and applying the concept of "place of effective management" is unclear. If the Company is deemed as a PRC tax resident, it will be subject to 25% PRC EIT under the New EIT Law on its worldwide income, meanwhile the dividend it receives from another PRC tax resident company will be exempted from 25% PRC income tax. The Company will continue to monitor changes in the interpretation or guidance of this law.

Loss before income taxes consisted of:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Non-PRC	(286,388)	(214,063)	(178,762)	(25,676)
PRC	(721,426)	51,738	2,953	424
	(1,007,814)	(162,325)	(175,809)	(25,252)

Income tax benefits (expenses) comprised of:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Current	(37,856)	(44,187)	(70,324)	(10,101)
Deferred	128,026	19,776	64,887	9,320
	90,170	(24,411)	(5,437)	(781)

The reconciliation of tax computed by applying the statutory income tax rate of 25% for the years ended December 31, 2017, 2018 and 2019 applicable to the PRC operations to income tax benefits (expenses) were as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Loss before income taxes	(1,007,814)	(162,325)	(175,809)	(25,252)
Income tax benefits computed at applicable tax rates (25%)	251,954	40,581	43,952	6,313
Non-deductible expenses	(5,468)	(2,834)	(23,082)	(3,316)
Research and development expenses	11,895	25,906	19,688	2,829
Preferential rate	(90,076)	11,701	20,213	2,903
Current and deferred tax rate differences	33,366	37,934	(8,699)	(1,250)
International rate differences	59,029	(63,525)	(77,066)	(11,069)
Tax exempted income	—	—	754	108
Unrecognized tax benefits	(6,259)	1,472	1,728	248
Deferred tax expense	2,851	—	—	—
Change in valuation allowance	(174,388)	(79,694)	25,423	3,652
Prior year provision to return true up	7,266	4,048	(8,348)	(1,199)
Income tax benefits (expenses)	90,170	(24,411)	(5,437)	(781)

22. TAXATION (CONTINUED)

Deferred Tax

The significant components of deferred taxes were as follows:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Deferred tax assets			
Non-current			
Allowance for doubtful debt	38,993	48,568	6,976
Accrued expenses	25,894	21,139	3,036
Tax losses	151,440	146,996	21,115
Property and equipment	15,299	20,567	2,955
Intangible assets	2,221	3,691	530
Finance lease	50,980	69,148	9,932
Deferred government grant	2,662	1,189	171
Loss picked up on equity method investments	56,616	56,706	8,145
Valuation allowance	(184,664)	(158,638)	(22,786)
Total deferred tax assets	159,441	209,366	30,074
Deferred tax liabilities			
Non-current			
Intangible assets	89,536	104,217	14,970
Property and equipment	48,496	81,424	11,696
Capitalized interest expense	15,837	15,146	2,176
Gain picked up from equity method investments	3,851	1,785	256
Total non-current deferred tax liabilities	157,720	202,572	29,098

Valuation allowance is considered for each of the entities. Realization of the net deferred tax assets is dependent on factors including future reversals of existing taxable temporary differences and adequate future taxable income, exclusive of reversing deductible temporary differences and tax loss or credit carry forwards. The Company evaluates the potential realization of deferred tax assets on an entity-by-entity basis. As of December 31, 2018 and 2019, valuation allowances were provided against deferred tax assets in entities where it was determined it was more likely than not that the benefits of the deferred tax assets will not be realized in future years.

As of December 31, 2019, the Company has net tax operating losses from its PRC subsidiaries and its Consolidated VIEs, as per filed tax returns, of RMB661,253 (US$94,983), which will expire between 2020 to 2029.

As of December 31, 2019, the Company intends to permanently reinvest the undistributed earnings from other foreign subsidiaries to fund future operations. As of December 31, 2019, the total amount of undistributed earnings from its PRC subsidiaries as well as VIEs was RMB1,317,809 (US$189,291). The amount of unrecognized deferred tax liabilities for temporary differences related to investments in foreign subsidiaries is not determined because such a determination is not practicable.

22. TAXATION (CONTINUED)

Unrecognized Tax Benefits

As of December 31, 2018 and 2019, the Company recorded unrecognized tax benefits of RMB6,677 and RMB2,443 (US$351), respectively.

The unrecognized tax benefits and its related interest are primarily related to non-deductible expenses and accrued expenses. RMB897 (US$129) of the total unrecognized tax benefits, ultimately recognized, will impact the effective tax rate. It is possible that the amount of uncertain tax benefits will change in the next 12 months, however, an estimate of the range of the possible outcomes cannot be made at this time.

A roll-forward of unrecognized tax benefits principle was as follows:

	For the years ended December 31,		
	2018	2019	
	RMB	RMB	US$
Balance at beginning of year	11,582	4,509	647
Reversal based on tax positions related to prior years	(9,070)	(3,266)	(469)
Additions based on tax positions related to the current year	1,997	479	69
Balance at end of year	4,509	1,722	247

For the years ended December 31, 2017, 2018 and 2019, the Company recorded (reversed) interest expense of RMB674, RMB(2,761) and RMB(1,447) (US$(211)), respectively. Accumulated interest expense recorded by the Company was RMB2,168 and RMB721 (US$104) as of December 31, 2018 and 2019, respectively. As of December 31, 2019, the tax years ended December 31, 2013 through 2019 for the PRC subsidiaries remain open for statutory examination by the PRC tax authorities.

23. RELATED PARTY TRANSACTIONS

a) Related parties *

Name of related parties	Relationship with the Company
Xiaomi Communication Technology Co., Ltd., and its subsidiary, Beijing Xiaomi Mobile Software Co., Ltd. (collectively, "Xiaomi Group") (2)	A group controlled by principal shareholder of the Company
Beijing Kingsoft Cloud Network Technology Co., Ltd. ("BJ Kingsoft") (1)	A company controlled by principal shareholder of the Company
Beijing Cheetah Mobile Technology Co., Ltd. ("BJ Cheetah") (1)	A company controlled by principal shareholder of the Company
Unisvnet Technology Co., Ltd. ("Unisvnet")	A company controlled by controlling shareholder of the Company
Beijing Tuspark Harmonious Investment Development Co., Ltd. ("Tuspark Harmonious")	A company controlled by controlling shareholder of the Company
Ziguang Financial Leasing Co., Ltd. ("Ziguang Finance Leasing")	A company controlled by controlling shareholder of the Company
Qidi Bus (Beijing) Technology Co., Ltd. ("Qidi Tech")	A company controlled by controlling shareholder of the Company
Dyxnet Internet Center Limited ("DIC")	A related party of seller of Dermot Entities
Dyxnet Data Centre Services Limited ("DCSS")	A related party of seller of Dermot Entities
WNT Technology Limited ("WNT Technology")	A related party of seller of Dermot Entities
Shanghai Shibei Hi-Tech Co., Ltd. ("SH Shibei")	Noncontrolling shareholder of a subsidiary
Marble Stone SH Group Limited ("Marble SH") (4)	A company controlled by minority shareholder of the Company
Marble Stone Holdings Limited ("Marble Holdings") (4)	A company controlled by minority shareholder of the Company
Shihua DC Investment Holdings 2 Limited ("Shihua Holdings 2")	Equity investee of the Company in 2017, 2018 and wholly-owned subsidiary since August 20, 2019 (Note 4)
Shihua DC Investment Management Limited ("Shihua Investment Management")	Equity investee of the Company
Shihua DC Investment Management Group Limited ("Shihua Investment Group")	Equity investee of the Company
Beijing Taiji Data Tech Co., Ltd. ("Taiji")	Equity investee of the Company
Beijing Chengyishidai Network Engineering Technology Co., Ltd.("CYSD") (3)	Equity investee of the Company
WiFire (Beijing) Technology Co., Ltd. ("WiFire BJ") (3)	Equity investee of the Company
Beijing Fastweb Network Technology Co., Ltd. ("BJ Fastweb") (3)	Equity investee of the Company
Shanghai Fawei Technology Co., Ltd. ("SH Fawei") (3)	Equity investee of the Company
Wuhan Fastweb Cloud Computing Co., Ltd. ("WH Fastweb") (3)	Equity investee of the Company
Beijing Bozhi Ruihai Network Technology Co., Ltd. ("BZRH") (3)	Equity investee of the Company
WiFire (Shanghai) Network Technology Co., Ltd. ("SH Guotong") (3)	Equity investee of the Company
Jingliang Interconnected Cloud Technology Co., Ltd. ("Jingliang Inter Cloud")	Equity investee of the Company

* These are the related parties that have engaged in significant transactions with the Company for the years ended December 31, 2017, 2018 and 2019.

(1) These companies and Kingsoft are ultimately controlled by the same party. Kingsoft made a significant investment in the Company in 2015.
(2) These companies and Xiaomi are ultimately controlled by the same party. Xiaomi made a significant investment in the Company in 2015.
(3) These entities were disposed by the Company in September 2017, included in WiFire Entities, and determined by the Company as related parties as of December 31, 2017, 2018 and 2019.
(4) These entities are controlled by Waburg Pincus, a significant minority shareholder of the Company.

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23. RELATED PARTY TRANSACTIONS (CONTINUED)

b) Other than disclosed elsewhere, the Company had the following significant related party transactions for the years ended December 31, 2017, 2018 and 2019:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Services provided to:				
- Xiaomi Group	220,110	374,085	437,694	62,871
- Taiji	—	13,681	7,899	1,135
- Qidi Tech	—	—	7,427	1,067
- BJ Kingsoft	8,046	6,281	3,475	499
- WiFire BJ	9,726	16,490	1,934	278
- BJ Cheetah	5,128	2,079	169	24
- Unisvnet	—	1,011	—	—
- Others	3,314	4,493	1,494	215
Services provided by:				
- CYSD	2,979	18,667	38,918	5,590
- Taiji	—	7,095	19,942	2,865
- Jingliang Inter Cloud	—	3,477	8,829	1,268
- BJ Kingsoft	7,775	13,204	3,492	502
- DCSS	6,424	5,238	—	—
- BZRH	—	4,239	—	—
- WiFire BJ	1,616	4,066	—	—
- Others	2,632	6,396	5,866	843
Sales of equipment to:				
- BJ Fastweb	1,021	—	—	—
Purchases of equipment from:				
- WNT Technology	2,629	—	—	—
- DIC	1,234	—	—	—

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

23. RELATED PARTY TRANSACTIONS (CONTINUED)

b) Other than disclosed elsewhere, the Company had the following significant related party transactions for the years ended December 31, 2017, 2018 and 2019 (continued):

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Loan to:				
-Taiji	—	—	1,500	215
- BJ Fastweb	20,000	—	—	—
Interest income from loan to:				
- BJ Fastweb	210	700	700	101
Lease deposit paid to:				
- Ziguang Finance Leasing	—	2,042	6,154	884
- Tuspark Harmonious	—	11,472	—	—
Lease payment paid to:				
- Tuspark Harmonious	—	—	68,832	9,887
- Ziguang Finance Leasing	—	4,897	17,156	2,464

23. RELATED PARTY TRANSACTIONS (CONTINUED)

c) The Company had the following related party balances as of December 31, 2018 and 2019:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Amounts due from related parties:			
Current:			
-Marble SH [2]	—	100,106	14,379
-Shihua Investment Group [3]	—	82,542	11,856
- Xiaomi Group	41,159	39,778	5,714
-Marble Holdings [2]	—	29,736	4,271
-Shihua Investment Management [3]	—	27,905	4,008
- SH Shibei	9,800	9,800	1,408
- Taiji	13,542	9,499	1,364
-Qidi Tech	—	1,249	179
- WiFire BJ [1]	36,578	—	—
- SH Fawei [1]	13,742	—	—
- WH Fastweb [1]	5,131	—	—
- Unisvnet	1,072	—	—
- BJ Kingsoft	982	—	—
- Others	3,440	1,050	152
	125,446	301,665	43,331
Non-current:			
- Tuspark Harmonious	11,472	11,863	1,704
- Ziguang Finance Leasing	2,042	8,195	1,177
- BJ Fastweb [1]	20,910	—	—
- Others	—	596	86
	34,424	20,654	2,967
Amounts due to related parties:			
Current:			
-Shihua Investment Group [3]	—	84,021	12,069
- Ziguang Finance Leasing	8,938	27,160	3,901
-Shihua Investment Management [3]	—	22,484	3,230
- Tuspark Harmonious	13,850	24,917	3,579
- WiFire BJ [1]	—	6,330	909
- BJ Kingsoft	609	1,073	154
- SH Guotong [1]	8,135	—	—
- CYSD [1]	7,158	—	—
- Taiji	6,724	—	—
- BZRH [1]	5,088	—	—
- Others	1,826	950	137
	52,328	166,935	23,979
Non-current:			
- Tuspark Harmonious	443,622	698,511	100,335
- Ziguang Finance Leasing	12,527	47,388	6,807
- Shihua Holdings 2	48,329	—	—
	504,478	745,899	107,142

(1) As of December 31, 2019, RMB20,367 (US$2,926) of amounts due from/to WiFire Entities were offset according to the multi-party debt offset agreement signed in 2019. The remaining RMB52,142 (US$7,490) of amounts due from WiFire Entities was fully impaired considering low collectability.
(2) Amounts due from Marble SH and Marble Holdings represented the unpaid cash consideration to the Company for acquiring the 100% equity interest in Shihua Holdings 2's some subsidiaries (Note 4).
(3) Amounts due from/to Shihua Investment Management and Shihua Invesetment Group were generated from the assets acquisition of Shihua Holdings 2 (Note 4).

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
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24. SEGMENT REPORTING

As of December 31, 2016, the operations of the Company are organized into two segments, consisting of the hosting and related services and managed network services. The Company derives the results of the segments directly from its internal management reporting system. The CODM measures the performance of each segment based on metrics of revenue and earnings from operations and uses these results to evaluate the performance of, and to allocate resources to, each of the segments. After disposal of WiFire Entities and Aipu Group in September 2017 (Note 4), the Company had only one reporting segment as of December 31, 2017, 2018 and 2019.

Because substantially all of the Company's long-lived assets and revenues are located in and derived from the PRC, geographical segments are not presented.

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Hosting and related services				
Revenues	2,975,178	3,401,037	3,788,967	544,251
Cost	(2,130,279)	(2,456,166)	(2,849,518)	(409,308)
Gross profit	844,899	944,871	939,449	134,943
Operating income (expenses)				
Operating income	5,439	5,027	6,862	986
Sales and marketing expenses	(171,761)	(172,176)	(206,309)	(29,634)
Research and development expenses	(97,597)	(92,109)	(88,792)	(12,754)
General and administrative expenses	(417,154)	(462,637)	(415,277)	(59,651)
(Allowance) reversal for doubtful debt	(6,257)	598	(1,557)	(224)
Impairment of receivables from equity investees	—	—	(52,142)	(7,490)
Changes in the fair value of contingent purchase consideration payables	(937)	13,905	—	—
Operating profit	156,632	237,479	182,234	26,176
Managed network services				
Revenues	417,527	—	—	—
Cost	(504,016)	—	—	—
Gross loss	(86,489)	—	—	—
Operating expenses			—	—
Sales and marketing expenses	(84,921)	—	—	—
Research and development expenses	(51,546)	—	—	—
General and administrative expenses	(102,796)	—	—	—
Allowance for doubtful debt	(31,170)	—	—	—
Impairment of goodwill	(766,440)	—	—	—
Impairment of long-lived assets	(401,808)	—	—	—
Operating loss	(1,525,170)	—	—	—
Group consolidated revenue	3,392,705	3,401,037	3,788,967	544,251
Group consolidated operating (loss) profit	(1,368,538)	237,479	182,234	26,176

25. RESTRICTED NET ASSETS

The Company's ability to pay dividends is primarily dependent on the Company receiving distributions of funds from its subsidiaries. Relevant PRC statutory laws and regulations permit payments of dividends by the Company's PRC subsidiaries only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. The results of operations reflected in the consolidated financial statements prepared in accordance with U.S. GAAP differ from those reflected in the statutory financial statements of the Company's PRC subsidiaries.

In accordance with the PRC Regulations on Enterprises with Foreign Investment and the articles of association of the Company's PRC subsidiaries, a foreign-invested enterprise established in the PRC is required to provide certain statutory reserves, namely general reserve fund, the enterprise expansion fund and staff welfare and bonus fund which are appropriated from net profit as reported in the enterprise's PRC statutory accounts. A foreign-invested enterprise is required to allocate at least 10% of its annual after-tax profit to the general reserve until such reserve has reached 50% of its respective registered capital based on the enterprise's PRC statutory accounts. Appropriations to the enterprise expansion fund and staff welfare and bonus fund are at the discretion of the board of directors for all foreign-invested enterprises. The aforementioned reserves can only be used for specific purposes and are not distributable as cash dividends. 21Vianet China was established as a foreign-invested enterprise and, therefore, is subject to the above mandated restrictions on distributable profits. As of December 31, 2018, and 2019, the Company's PRC subsidiaries had appropriated RMB42,403 and RMB60,469 (US$8,687), respectively, in its statutory reserves.

As a result of these PRC laws and regulations subject to the limit discussed above that require annual appropriations of 10% of after-tax income to be set aside, prior to payment of dividends as general reserve fund, the Company's PRC subsidiaries are restricted in their ability to transfer a portion of their net assets to the Company. Amounts restricted include paid-in capital, additional paid in capital and statutory reserve funds of the Company's PRC subsidiaries and the equity of the Consolidated VIEs, as determined pursuant to PRC generally accepted accounting principles, totaling an aggregate of RMB6,736,125 (US$967,584) as of December 31, 2019.

26. LOSS PER SHARE

Basic and diluted loss per share for each of the years presented were calculated as follows:

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Numerator:				
Net loss	(917,644)	(186,736)	(181,246)	(26,033)
Net loss (profit) attributable to noncontrolling interest and redeemable noncontrolling interest	144,914	(18,329)	(1,046)	(150)
Net loss attributable to ordinary shareholders	(772,730)	(205,065)	(182,292)	(26,183)
Plus increase in accretion of redeemable noncontrolling interests	(141,896)	—	—	—
Adjusted net loss attributable to ordinary shareholders	(914,626)	(205,065)	(182,292)	(26,183)
Denominator:				
Weighted average number of shares outstanding—basic	672,836,226	674,732,130	668,833,756	668,833,756
Weighted average number of shares outstanding—diluted	672,836,226	674,732,130	668,833,756	668,833,756
Loss per share—Basic:				
Net loss	(1.36)	(0.30)	(0.27)	(0.04)
	(1.36)	(0.30)	(0.27)	(0.04)
Loss per share—Diluted:				
Net loss	(1.36)	(0.30)	(0.27)	(0.04)
	(1.36)	(0.30)	(0.27)	(0.04)

In 2017, 2018 and 2019, the Company issued 9,000,000, nil and 6,700,002 ordinary shares to its share depositary bank which will be used to settle stock option awards upon their exercise, respectively. No consideration was received by the Company for this issuance of ordinary shares. These ordinary shares are legally issued and outstanding but are treated as escrowed shares for accounting purposes and therefore, have been excluded from the computation of loss per share. Any ordinary shares not used in the settlement of stock option awards will be returned to the Company.

27. SHARE CAPITAL

Holders of Class A Ordinary Shares, Class B Ordinary Shares and Class C Ordinary Shares are entitled to the same rights except for voting and conversion rights. In respect of matters requiring a shareholder's vote, each Class A Ordinary Share is entitled to one vote right, each Class B Ordinary Share is entitled to ten votes, and each Class C Ordinary Share is entitled to one vote and certain veto rights. Each Class B Ordinary Share and Class C Ordinary Share is convertible into one Class A Ordinary Share at any time by the holder. Class A Ordinary Shares are not convertible into Class B Ordinary Share and Class C Ordinary Shares under any circumstances. Upon any transfer of Class B Ordinary Shares and Class C Ordinary Shares by a holder to any person or entity which is not an affiliate of such holder, such Class B Ordinary Shares and Class C Ordinary Share will be automatically converted into an equal number of Class A Ordinary Shares.

For the years ended December 31, 2017, 2018 and 2019, 3,119,052, 3,070,500 and 304,200 Class A ordinary shares were issued to settle the share options exercised and RSUs vested. In October 2019, the Company issued 60,000 newly created Class C ordinary shares to Personal Group Limited, a British Virgin Islands company wholly owned by Mr. Sheng Chen, the executive chairman of our board of directors, at a price of US$1.35 per share, to execute business strategies over the long term under the leadership of the Company's board and senior management.

28. REDEEMABLE NONCONTROLLING INTERESTS

In May 2014, the Company acquired 50% equity interests plus one share in SC Aipu. The sale and purchase agreement also provided put options that allows the seller of Aipu Group to sell the remaining 50% equity interests in the Aipu Group in three tranches, namely 28% equity interest in 2015, 11% equity interest in 2016 and the remaining equity interests (including those in 2015 and 2016 if these put options are not exercised) in 2017 for a consideration determined using certain financial or operational targets with a floor of RMB700,000 or a ceiling of RMB800,000, in aggregate. A portion of the consideration is to be settled in cash based on certain financial target stipulated in the sale and purchase agreement. The difference will be settled in cash or shares, with the choice to settle in cash or shares residing with the Company for the first tranche and the seller of Aipu Group in the subsequent tranches.

The noncontrolling interests are to be redeemed by the Company at the option of the seller of Aipu Group ("Written Put Option") in return for cash and shares where the maximum number of shares required to be delivered is outside of the control of the Company, and thus are accounted for as redeemable noncontrolling interests. The Company elects to recognize the changes in redemption value immediately as they occur and adjust the carrying amount of the noncontrolling interests to the redemption value at the end of each reporting period as if it was the redemption date in accordance with ASC 480. As of December 31, 2015 and 2016, as the remaining 50% equity interests are held by a few non-controlling shareholders where the underlying shares of the Aipu Group are not publicly traded, the Written Put Option are embedded features in the Aipu Group's shares, which does not qualify for bifurcation accounting. The put options are recognized as part of redeemable non-controlling interests. The redeemable noncontrolling interests were initially recorded at the higher of acquisition date fair value and subsequently adjusted to the balance after attribution of Aipu Group's net income pursuant to ASC 810, Consolidation, and the redemption value pursuant to ASC 480, which is capped within the aforementioned range. Adjustments to the carrying amount of redeemable noncontrolling interests pursuant to ASC 480, if any, are charged to additional paid-in capital.

28. REDEEMABLE NONCONTROLLING INTERESTS (CONTINUED)

Upon the disposal of Aipu Group in September 2017, the redeemable noncontrolling interests recognized was reversed due to the deconsolidation of Aipu Group. However, as the Written Put Option outstanding is legally detachable separately exercisable from the 50% minus one share of equity in Aipu Group held by the Company, the Written Put Option qualifies as a freestanding financial instrument as defined under ASC Topic 480 and the Written Put Option is accounted as derivative liability pursuant to ASC 815. However, in December 2017 as part of the transfer of all the remaining 50% equity interest, the Written Put Option was terminated and the gain was recognized as part of the disposal of subsidiaries for the year ended December 31, 2017.

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Balance as of January 1	700,000	—	—	—
Loss for the year	(141,896)	—	—	—
Increase in accretion of redeemable noncontrolling interests	141,896	—	—	—
Reversal due to extinguishment of put option	(700,000)	—	—	—
Balance as of December 31	—	—	—	—

29. FAIR VALUE MEASUREMENTS

The Company applies ASC 820. ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. ASC 820 requires disclosures to be provided on fair value measurement.

ASC 820 establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 — Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 — Include other inputs that are directly or indirectly observable in the marketplace.

Level 3 — Unobservable inputs which are supported by little or no market activity.

ASC 820 describes three main approaches to measuring the fair value of assets and liabilities: (1) market approach; (2) income approach; and (3) cost approach. The market approach uses prices and other relevant information generated from market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value amount. The measurement is based on the value indicated by current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace an asset.

Cash equivalents, time deposits and bonds payable are classified within Level 1 because they are valued by using quoted market prices.

The contingent considerations for the acquired businesses, liability classified RSU and long-term investments are classified within Level 3. The contingent considerations are based on the achievement of certain financial targets in accordance with the sales and purchase agreements for the various periods, as well as other non-financial measures. The fair value of liability classified RSU was estimated using the share price and exchange rate that the Company estimates to be settled in shares.

The Company measures equity investments elected to use the measurement alternative at fair value on a nonrecurring basis, in the cases of an impairment charge is recognized, fair value of an investment is remeasured in an acquisition/a disposal, and an orderly transaction for identical or similar investments of the same issuer was identified.

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29. FAIR VALUE MEASUREMENTS (CONTINUED)

Assets and liabilities measured at fair value on a recurring basis were summarized below:

	Fair value measurement using:			
	Quoted prices in active markets for identical assets (Level 1) RMB	Significant other observable inputs (Level 2) RMB	Unobservable inputs (Level 3) RMB	Fair value at December 31, 2018 RMB
Cash equivalents:				
- Time deposits	1,194,425	—	—	1,194,425
Short-term investments:				
- Time deposits	245,014	—	—	245,014
Long-term investments				
- Available-for-sale debt securities	—	—	2,537	2,537
Assets	1,439,439	—	2,537	1,441,976
Long-term borrowings:				
- Bonds payable	2,030,361	—	—	2,030,361
Other liabilities:				
- Liability classified RSU	—	—	4,970	4,970
Liabilities	2,030,361	—	4,970	2,035,331

	Fair value measurement using:				
	Quoted prices in active markets for identical assets (Level 1) RMB	Significant other observable inputs (Level 2) RMB	Unobservable inputs (Level 3) RMB	Fair value at December 31, 2019 RMB	US$
Cash equivalents:					
- Time deposits	117,825	—	—	117,825	16,925
Short-term investments:					
- Time deposits	363,856	—	—	363,856	52,265
Long-term investments					
- Available-for-sale debt securities	—	—	1,713	1,713	246
Assets	481,681	—	1,713	483,394	69,436
Short-term borrowings:					
- Current portion of bonds payable	912,416	—	—	912,416	131,060
Long-term borrowings:					
- Bonds payable	2,089,114	—	—	2,089,114	300,082
Other liabilities:					
- Liability classified RSU	—	—	2,109	2,109	303
Liabilities	3,001,530	—	2,109	3,003,639	431,445

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29. FAIR VALUE MEASUREMENTS (CONTINUED)

The following table presented a reconciliation of all liabilities measured at fair value on a recurring basis using significant unobservable inputs (level 3):

	Contingent consideration payable RMB
Fair value at January 1, 2018	36,734
Changes in the fair value	(13,905)
Settlement of contingent consideration payable	(22,829)
Transfers in and/or out of Level 3	—
Fair value at December 31, 2018	—
Transfers in and/or out of Level 3	—
Fair value at December 31, 2019	—
Fair value at December 31, 2019 (US$)	—

	Liability classified RSU RMB
Fair value at January 1, 2018	11,865
Reclassification to equity	(587)
Reversal	(6,308)
Transfers in and/or out of Level 3	—
Fair value at December 31, 2018	4,970
Reclassification to equity	(2,861)
Reversal	—
Transfers in and/or out of Level 3	—
Fair value at December 31, 2019	2,109
Fair value at December 31, 2019 (US$)	303

30. COMMITMENTS AND CONTINGENCIES

Capital commitments

As of December 31, 2019, the Company has the following commitments to purchase certain computer and network equipment and construction-in-progress:

	RMB	US$
2020	225,511	32,393
2021 and thereafter	—	—
	225,511	32,393

Bandwidth and cabinet capacity purchase commitments

As of December 31, 2019, the Company has outstanding purchase commitments in relation to bandwidth and cabinet capacity consisting of the following:

	RMB	US$
2020	600,571	86,267
2021	60,602	8,705
2022	44,968	6,459
2023	206	30
2024 and thereafter	2,068	297
	708,415	101,758

30. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Managed Network Services

As of December 31, 2019, the Company was still in the process of negotiation with the seller of the Managed Network Entities on the quality assessment of the fiber optic network subsequent to the completion of construction. As this is a pending event subsequent to the acquisition which is unrelated to the original acquisition, the Company concluded that the accounting for any settlement should be separated from that of the business combination. Based on the Company's best estimate, the fair value of the related contingent consideration in shares of RMB47,755, as determined based on the remeasured amount of December 31, 2012, is accrued as a contingent payable pursuant to ASC 450, *Contingencies.* The Company is negotiating with the seller of the Managed Network Entities to come to an agreement on the quality assessment of the fiber optic network as of December 31, 2019 and the Company's estimate of the contingent payable remains unchanged.

Income Taxes

As of December 31, 2019, the Company has recognized an accrual of RMB2,443 (US$351) for unrecognized tax benefits and its interest (Note 22). The final outcome of the tax uncertainty is dependent upon various matters including tax examinations, interpretation of tax laws or expiration of statutes of limitation. However, due to the uncertainties associated with the status of examinations, including the protocols of finalizing audits by the relevant tax authorities, there is a high degree of uncertainty regarding the future cash outflows associated with these tax uncertainties.

Securities Litigation

In 2014, the Company and certain of its officers and directors were named as defendants in two putative securities class actions filed in U.S. federal district courts in Texas, the complaints in both actions alleged that certain of the Company's financial statements and other public disclosures contained misstatements or omissions and asset claims under the U.S. securities laws. In 2016, the Company filed a motion to dismiss the complaint and in 2017, the magistrate judge issued a report and recommendation to deny the Company's motion to dismiss.

On April 9, 2018, the lead plaintiff of the putative class action filed an unopposed motion for preliminary approval of class action settlement, requesting that, among others, the Court preliminarily approve a settlement agreement that the parties reached to settle the case for RMB58,808. The unopposed motion for preliminary approval is currently pending before the Court. The Company assessed that the settlement is probable and recorded an estimated loss after deduction of insurance claim of RMB10,007 within accrued expenses and other payables in the consolidated balance sheets as of December 31, 2017. On November 9, 2018, the Court approved the settlement and issued final judgment, ending the case. The Company has paid the settlement amount as of December 31, 2018.

Operating litigation

In March 2019, a third-party supplier filed a lawsuit against the Company, alleging that the Company had not fully fulfilled its obligations under a network infrastructure cooperation agreement entered into in 2013. As this legal proceeding remains in preliminary stage, the Company's management is unable to estimate the likelihood of an unfavorable outcome or the amount or range of any potential loss.

31. SUBSEQUENT EVENTS

In February 2020, the Company has entered into convertible note purchase agreements with several investors to issue convertible notes for a total aggregate principal amount of US$200,000 at a simple interest rate of 2% per annum. The convertible notes will mature in five years from the date of issuance if not converted.

Beginning in January 2020, the emergence and wide spread of the novel Coronavirus ("COVID-19") has resulted in quarantines, travel restrictions, and the temporary closure of stores and facilities in China and elsewhere. Substantially all of the Company's revenue and workforce are concentrated in China. Consequently, the COVID-19 outbreak may adversely affect the Company's business operations, financial condition and operating results for 2020, including but not limited to negative impact to the Company's total revenues, slower collection of accounts receivables and additional allowance for doubtful accounts and downward adjustments or impairment to the Company's long-term investments. Because of the uncertainties surrounding the COVID-19 outbreak, the extent of the business disruption and the related financial impact cannot be reasonably estimated at this time.

32. PARENT COMPANY ONLY CONDENSED FINANCIAL INFORMATION

Condensed balance sheets

	Notes	As of December 31, 2018 RMB	As of December 31, 2019 RMB	As of December 31, 2019 US$
ASSETS				
Current assets				
Cash and cash equivalents		590,470	243,989	35,047
Short-term investments		150,990	138,848	19,944
Prepaid expenses and other current assets		98,337	105,597	15,168
Amounts due from subsidiaries	(b)	5,062,149	6,128,595	880,318
Total current assets		5,901,946	6,617,029	950,477
Non-current assets				
Investments in subsidiaries		1,364,685	1,446,563	207,786
Total non-current assets		1,364,685	1,446,563	207,786
Total assets		7,266,631	8,063,592	1,158,263
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities:				
Accrued expenses and other payables		56,656	57,612	8,275
Account payables		2,725	56	8
Interest payable		53,965	58,525	8,406
Current portion of bonds payable		—	911,147	130,878
Amounts due to subsidiaries	(b)	21,242	22,471	3,228
Total current liabilities		134,588	1,049,811	150,795
Non-current liabilities				
Bonds payable	(c)	2,037,836	2,060,708	296,002
Total non-current liabilities		2,037,836	2,060,708	296,002
Total liabilities		2,172,424	3,110,519	446,797
Shareholders' equity:				
Class A Ordinary shares (par value of US$0.00001 per share; 1,200,000,000 and 1,200,000,000 shares authorized; 499,706,628 and 505,253,850 shares issued and outstanding as of December 31, 2018 and 2019, respectively)		34	34	5
Class B Ordinary shares (par value of US$0.00001 per share; 300,000,000 and 300,000,000 shares authorized; 174,649,638 and 174,649,638 shares issued and outstanding as of December 31, 2018 and 2019, respectively)		12	12	2
Class C Ordinary shares (par value of US$0.00001 per share; nil and 60,000 shares authorized; nil and 60,000 shares issued and outstanding as of December 31, 2018 and 2019, respectively)		—	—	—
Additional paid-in capital		9,141,494	9,202,567	1,321,866
Accumulated other comprehensive income		85,979	77,904	11,190
Accumulated deficit		(3,795,629)	(3,977,921)	(571,391)
Treasury stock		(337,683)	(349,523)	(50,206)
Total shareholders' equity		5,094,207	4,953,073	711,466
Total liabilities and shareholders' equity		7,266,631	8,063,592	1,158,263

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32. PARENT COMPANY ONLY CONDENSED FINANCIAL INFORMATION (CONTINUED)

Condensed statements of operations

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Operating Expenses				
General and administrative expenses	(145,890)	(65,949)	(44,490)	(6,389)
Changes in the fair value of contingent purchase consideration payables	(937)	13,905	—	—
Operating loss	(146,827)	(52,044)	(44,490)	(6,389)
Other loss	(95,210)	(262,186)	(274,572)	(39,440)
Share of (losses) profits from subsidiaries and Consolidated VIEs	(530,693)	109,165	136,770	19,646
Loss before income taxes	(772,730)	(205,065)	(182,292)	(26,183)
Income tax expense	—	—	—	—
Net loss	(772,730)	(205,065)	(182,292)	(26,183)

Condensed statements of comprehensive loss

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Net loss	(772,730)	(205,065)	(182,292)	(26,183)
Other comprehensive (loss) income, net of tax of nil:				
Foreign currency translation adjustments, net of tax of nil	(120,963)	88,652	(8,075)	(1,160)
Other comprehensive (loss) income, net of tax of nil:	(120,963)	88,652	(8,075)	(1,160)
Comprehensive loss	(893,693)	(116,413)	(190,367)	(27,343)
Comprehensive loss attributable to the Company's ordinary shareholders	(893,693)	(116,413)	(190,367)	(27,343)

Condensed statements of cash flows

	For the years ended December 31,			
	2017	2018	2019	
	RMB	RMB	RMB	US$
Net cash used in operating activities	(18,324)	(166,068)	(142,989)	(20,539)
Net cash used in investing activities	(1,291,042)	(203,651)	(1,011,257)	(145,258)
Net cash (used in) generated from financing activities	(130,187)	43,145	807,765	116,028
Net decrease in cash and cash equivalents and restricted cash	(1,439,533)	(326,574)	(346,481)	(49,769)
Cash and cash equivalents and restricted cash at beginning of the year	2,356,597	917,044	590,470	84,816
Cash and cash equivalents and restricted cash at end of the year	917,044	590,470	243,989	35,047

21VIANET GROUP, INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)
(Amounts in thousands of RMB and US$, unless otherwise stated)

32. PARENT COMPANY ONLY CONDENSED FINANCIAL INFORMATION (CONTINUED)

(a) Basis of presentation

In the Company-only financial statements, the Company's investment in subsidiaries is stated at cost plus equity in undistributed earnings of subsidiaries since inception.

The Company records its investment in its subsidiary under the equity method of accounting as prescribed in ASC 323-10, *Investment-Equity Method and Joint Ventures*, and such investment is presented on the balance sheet as "Investments in subsidiaries" and the share of the subsidiaries' profit or loss is presented as "Share of (losses) profits of subsidiaries and Consolidated VIEs" on the statements of operations.

The subsidiaries did not pay any dividends to the Company for the years presented.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted and as such, these Company-only financial statements should be read in conjunction with the Company's consolidated financial statements.

(b) Related party transactions

The Company had the following related party balances as of December 31, 2018 and 2019:

	As of December 31,		
	2018	2019	
	RMB	RMB	US$
Amounts due from subsidiaries			
- 21Vianet HK	4,938,618	5,855,452	841,083
- WiFire Open Network Group Ltd.	4,277	147,326	21,162
- HongKong Fastweb Holdings Co., Ltd.	65,976	67,088	9,637
- 21V Mobile	52,579	58,018	8,334
- WiFire Group Inc.	686	698	100
- Others	13	13	2
	5,062,149	6,128,595	880,318
Amounts due to subsidiaries			
- 21Vianet Beijing	18,351	19,449	2,794
- Others	2,891	3,022	434
	21,242	22,471	3,228

32. PARENT COMPANY ONLY CONDENSED FINANCIAL INFORMATION (CONTINUED)

(c) Bonds payable

On August 17, 2017, the Company issued and sold bonds with an aggregate principle amount of US$200,000 at a coupon rate of 7% per annum or the Original Bonds. On September 29, 2017, the Company issued and sold follow-on bonds with an aggregate principle amount of US$100,000 at a coupon rate of 7% per annum, or the Bonds. The Bonds were priced at a slight premium of 100.04%, with an effective yield of 6.98% (together with the Original Bonds, "2020 Notes"). The 2020 Notes will mature on August 17, 2020. The 2020 Notes were listed and quoted on the Official List of the Singapore Exchange Securities Trading Limited (the "SGX-ST"). Interest on the 2020 Notes is payable semi-annually in arrears on August 17 and February 17 in each year, beginning from February 17, 2018.

Net proceeds from 2020 Notes after deducting issuance costs were RMB1,926,419. The 2020 Notes are unsecured and rank senior in right of payment to any of the Company's indebtedness that is expressly subordinated to the bonds; equal in right of payment to any of the Company's liabilities that are not so subordinated; but rank lower than any secured indebtedness of the Company and all liabilities (including accounts payable) of the Company's subsidiaries and Consolidated VIEs.

On April 15, 2019, the Company issued and sold bonds with an aggregate principle amount of US$300,000 at a coupon rate of 7.875% per annum ("2021 Notes"). The 2021 Notes will mature on October 15, 2021. The 2021 Notes were listed and quoted on the SGX-ST. Interest on the 2021 Notes is payable semi-annually in arrears on April 15 and October 15 in each year, beginning from October 15, 2019.

Net proceeds from 2021 Notes after deducting issuance costs were RMB1,976,474 (US$283,903). The 2021 Notes are unsecured and rank senior in right of payment to any of the Company's indebtedness that is expressly subordinated to the bonds; equal in right of payment to any of the Company's liabilities that are not so subordinated, including the 2020 Notes; effectively junior in the right of payment to any secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including accounts payables) of the Company's subsidiaries and Consolidated VIEs.

On April 16, 2019, the Company repurchased US$150,839 in principal amount of 2020 Notes, representing approximately 50.28% of the US$300,000 total aggregate principal amount of the 2020 Notes outstanding as at such date. On August 12, 2019, the Company repurchased US$18,000 in principal amount of 2020 Notes. The remaining outstanding 2020 Notes with principal amount of US$131,161 continue to be the obligation of the Company. The Company recognized loss on debt extinguishment of RMB18,895 (US$2,714) during the year ended December 31, 2019.

Exhibit 2.5

Description of Rights of Each Class of Securities Registered under Section 12 of the Securities Exchange Act of 1934 (the "Exchange Act")

American Depositary Shares ("ADSs"), each ADSs representing six Class A ordinary shares of 21Vianet Group, Inc. ("21Vianet," "we," "our," "our company," or "us") are listed and traded on the NASDAQ Global Select Market and, in connection therewith, the Class A ordinary shares are registered under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). This exhibit contains a description of the rights of (i) the holders of Class A ordinary shares and (ii) the holders of ADSs. Class A ordinary shares underlying the ADSs are held by Citibank N.A., as depositary, and holders of ADSs will not be treated as holders of Class A ordinary shares.

Description of Class A Ordinary Shares

The following is a summary of material provisions of our currently effective fourth amended and restated memorandum and articles of association (the "Memorandum and Articles of Association"), as well as the Companies Law (as amended) of the Cayman Islands (the "Companies Law") insofar as they relate to the material terms of the Class A ordinary shares. Notwithstanding this, because it is a summary, it may not contain all the information that you may otherwise deem important. For more complete information, you should read the entire Memorandum and Articles of Association, which has been filed with the Securities and Exchange Commission (the "SEC") as an exhibit to our Registration Statement on Form F-1 (File No. 333-173292), as amended, initially filed with the SEC on April 4, 2011.

Type and Class of Securities (Item 9.A.5 of Form 20-F)

Each Class A ordinary share has par value of US$0.00001. The number of Class A ordinary shares that have been issued as of the last day of the fiscal year ended December 31, 2019 is provided on the cover of the annual report on Form 20-F filed on April 2, 2020 (the "2019 Form 20-F"). Our Class A ordinary shares may be held in either certified or uncertified form.

Preemptive Rights (Item 9.A.3 of Form 20-F)

The shareholders of 21Vianet do not have preemptive right.

Limitations or Qualifications (Item 9.A.6 of Form 20-F)

We have a triple-class voting structure such that our ordinary shares consist of Class A ordinary shares, Class B ordinary shares and Class C ordinary shares. In respect of matters requiring the votes of shareholders, holders of Class A ordinary shares are entitled to one vote per share, while (i) holders of Class B ordinary shares are entitled to ten votes per share and (ii) holders of Class C ordinary shares are entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares:

- any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited;

- entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and

- any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares.

Due to the super voting powers attached to the Class B ordinary shares and the Class C ordinary shares, the voting power of holders of the Class A ordinary shares may be materially limited.

Rights of Other Types of Securities (Item 9.A.7 of Form 20-F)

Not applicable.

Rights of Class A Ordinary Shares (Item 10.B.3 of Form 20-F)

General

Our ordinary shares are divided into Class A ordinary shares, Class B ordinary shares and Class C ordinary shares. Holders of Class A ordinary shares, Class B ordinary shares and Class C ordinary shares have the same rights except for voting and conversion rights (as described in more details below). Our ordinary shares are issued in registered form, and are issued when registered in our register of members (shareholders). Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their shares.

Dividends

The holders of our ordinary shares are entitled to such dividends as may be declared by our board of directors, subject to the Companies Law and our articles of association. In addition, our shareholders may by ordinary resolution declare a dividend, but no dividend may exceed the amount recommended by our directors. Under Cayman Islands law, a Cayman Islands company may pay a dividend on its shares out of either profit or share premium account, provided that in no circumstances may a dividend be paid if this would result in the company being unable to pay its debts as they fall due in the ordinary course of business.

Conversion

Each Class B ordinary share or each Class C ordinary share is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares or Class C ordinary shares under any circumstances.

Upon any transfer of Class B ordinary shares or Class C ordinary shares by a holder thereof to any person or entity which is not an affiliate of such holder, such Class B ordinary shares or Class C ordinary shares will be automatically and immediately converted into an equal number of Class A ordinary shares.

Voting Rights

In respect of matters requiring shareholders' votes, each Class A ordinary share is entitled to one vote, each Class B ordinary share is entitled to ten votes, and each Class C ordinary shares is entitled to one vote per share, except that we shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C ordinary shares or with the sanction of a special resolution passed at a separate meeting of the holders of the issued and outstanding Class C ordinary shares: (i) any appointment or removal of directors other than the appointment or removal of directors that is made pursuant to a shareholder's right under the Investor Rights Agreement, dated January 15, 2015, among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein, and the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited; (ii) entry into any agreement by us or our subsidiaries with any shareholder who holds more than 10% of our issued and outstanding share capital or such shareholder's affiliate, other than agreements entered into in our ordinary course of business with a total contract amount below 10% of our consolidated total revenue in the most recent completed fiscal year; and (iii) any proposed amendments to our memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C ordinary shares. Voting at any shareholders' meeting is by show of hands unless a poll is demanded. A poll may be demanded by the chairman or by any three shareholders entitled to vote at the meeting, or one or more shareholders holding at least 10% of the paid-up voting share capital or 10% of the total voting rights entitled to vote at the meeting, present in person or by proxy.

A quorum required for a meeting of shareholders consists of at least one shareholder present in person or by proxy or, if a corporation or other non-natural person, by its duly authorized representative, who holds no less than one-third of the voting power of the shares in issue carrying a right to vote at a meeting of shareholders. Shareholders' meetings may be held annually and may be convened by our board of directors on its own initiative or upon a requisition to the directors made by shareholders holding in aggregate at least one-third of the voting power of the shares in issue carrying a right to vote at a meeting of shareholders. Advance notice of at least 14 days is required for a meeting of shareholders.

An ordinary resolution to be passed by the shareholders requires a simple majority of votes attaching to the ordinary shares cast in a general meeting while a special resolution requires no less than two-thirds of the votes attaching to the ordinary shares cast in a general meeting. Both ordinary resolutions and special resolutions may also be passed by a unanimous written resolution signed by all the shareholders of our company, as permitted by the Companies Law and our memorandum and articles of association. A special resolution is required for matters including, but not limited to, amending the memorandum and articles of association of the company, reducing share capital and winding up. Our shareholders may affect certain changes by ordinary resolution, including increasing the amount of our authorized share capital, consolidating and dividing all or any of our share capital into shares of larger amount than our existing shares, and the cancellation of any authorized but unissued shares.

Transfer of Shares

Subject to the restrictions of our memorandum and articles of association, any of our shareholders may transfer all or any of his or her ordinary shares by an instrument of transfer in any usual or common form or any other form approved by our board of directors.

Our board of directors may, in its sole discretion, decline to register any transfer of any ordinary share which is not fully paid up or on which we have a lien. Our directors may also decline to register any transfer of any share unless (a) the instrument of transfer is lodged with us, accompanied by the certificate for the shares to which it relates and such other evidence as our board of directors may reasonably require to show the right of the transferor to make the transfer; (b) the instrument of transfer is in respect of only one class of shares; (c) the instrument of transfer is properly stamped, if required; (d) in the case of a transfer to joint holders, the number of joint holders to whom the share is to be transferred does not exceed four; I the shares transferred are free of any lien in favor of us; and (f) a nominal processing fee determined to be payable by our directors (not to exceed the maximum sum as Nasdaq may determine to be payable) has been paid to us in respect thereof.

If our directors refuse to register a transfer, they must, within two months after the date on which the instrument of transfer was lodged, send to each of the transferor and the transferee notice of such refusal. The registration of transfers may, on 14 days' notice being given by advertisement in one or more newspapers or by electronic means, be suspended and the register closed at such times and for such periods as our board of directors may from time to time determine; provided, however, that the registration of transfers may not be suspended and the register may not closed for more than 30 days in any year.

Liquidation

On a return of capital on winding up, if the assets available for distribution among our shareholders are more than sufficient to repay the whole of the share capital at the commencement of the winding up, the surplus will be distributed among shareholders in proportion to the par value of the shares held by them at the commencement of the winding up, subject to a deduction from those shares in respect of which there are monies due, of all monies payable to our company for unpaid calls or otherwise. If our assets available for distribution are insufficient to repay the whole of the share capital, the assets will be distributed so that, as nearly as may be, the losses are borne by our shareholders in proportion to the par value of the shares held by them.

Calls on Shares and Forfeiture of Shares

Our board of directors may from time to time make calls upon shareholders for any amounts unpaid on their shares in a notice served to such shareholders at least 14 days prior to the specified time of payment. The shares that have been called upon and remain unpaid on the specified time are subject to forfeiture.

Redemption, Repurchase and Surrender of Shares

We may issue shares on terms that such shares are subject to redemption, at our option or at the option of the holders thereof, on such terms and in such manner as may be determined, before the issue of such shares, by our board of directors or by a special resolution of our shareholders. Our company may also repurchase any of our shares provided that the manner of such purchase has been approved by an ordinary resolution of our shareholders, or the manner of purchase is in accordance with the procedures set out in our memorandum and articles of association. Under the Companies Law, the redemption or repurchase of any share may be paid out of our company's profits or out of the proceeds of a fresh issue of shares made for the purpose of such redemption or repurchase, or out of capital (including share premium account and capital redemption reserve) if our company can, immediately following such payment, pay its debts as they fall due in the ordinary course of business. In addition, under the Companies Law no such share may be redeemed or repurchased (a) unless it is fully paid up, (b) if such redemption or repurchase would result in there being no shares outstanding, or (c) if the company has commenced liquidation. In addition, our company may accept the surrender of any fully paid share for no consideration.

Inspection of Books and Records.

Holders of our ordinary shares will have no right to inspect our corporate records except as conferred by Cayman Islands law or authorized by the board or by ordinary resolution of the shareholders.

Requirements to Change the Rights of Holders of Class A Ordinary Shares (Item 10.B.4 of Form 20-F)

Variations of Rights of Shares

Whenever the capital of our company is divided into different classes, the rights attached to any such class of shares may, subject to any right or restriction attached to any class, be varied either with the written consent of the holders of a majority of the issued shares of that class or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class. The rights conferred upon the holders of the shares of any class will not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking in priority to or pari passu with such previously existing shares.

Limitations on the Rights to Own Class A Ordinary Shares (Item 10.B.6 of Form 20-F)

There are no limitations under the laws of the Cayman Islands or under the Memorandum and Articles of Association that limit the right of shareholders who are non-residents of the Cayman Islands in holding or voting their Class A ordinary shares.

Provisions Affecting Any Change of Control (Item 10.B.7 of Form 20-F)

Anti-Takeover Provisions in the Memorandum and Articles of Association

Some provisions of the Memorandum and Articles of Association may discourage, delay or prevent a change in control of our company or management that shareholders may consider favorable, including provisions that authorize our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders and limit the ability of shareholders to requisition and convene general meetings of shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under the Memorandum and Articles of Association for a proper purpose and for what they believe in good faith to be in the best interests of our company.

Ownership Threshold (Item 10.B.8 of Form 20-F)

There are no provisions under the laws of the Cayman Islands or under the Memorandum and Articles of Association that govern the ownership threshold above which shareholder ownership must be disclosed.

Differences Between the Law of Different Jurisdictions (Item 10.B.9 of Form 20-F)

The Companies Law is modeled after that of the English companies legislation but does not follow recent English law statutory enactments, and accordingly there are significant differences between the Companies Law and the current Companies Act of England. In addition, the Companies Law differs from laws applicable to Delaware corporations and their shareholders. Set forth below is a summary of the significant differences between the provisions of the Companies Law applicable to us and the laws applicable to Delaware corporations and their shareholders.

Mergers and Similar Arrangements

The Companies Law permits mergers and consolidations between Cayman Islands companies and between Cayman Islands companies and non-Cayman Islands companies. For these purposes, (a) "merger" means the merging of two or more constituent companies and the vesting of their undertakings, property and liabilities in one of such companies as the surviving company and (b) a "consolidation" means the combination of two or more constituent companies into a consolidated company and the vesting of the undertakings, property and liabilities of such companies to the consolidated company. In order to effect such a merger or consolidation, the directors of each constituent company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each constituent company, and (b) such other authorization, if any, as may be specified in such constituent company's articles of association. The written plan of merger or consolidation must be filed with the Registrar of Companies in the Cayman Islands together with a declaration as to the solvency of the consolidated or surviving company, a declaration as to the assets and liabilities of each constituent company and an undertaking that a copy of the certificate of merger or consolidation will be given to the members and creditors of each constituent company and that notification of the merger or consolidation will be published in the Cayman Islands Gazette.

A merger between a Cayman parent company and its Cayman subsidiary or subsidiaries does not require authorization by a resolution of shareholders of that Cayman subsidiary if a copy of the plan of merger is given to every member of that Cayman subsidiary to be merged unless that member agrees otherwise. For this purpose a company is a "parent" of a subsidiary if it holds issued shares that together represent at least ninety percent (90%) of the votes at a general meeting of the subsidiary.

The consent of each holder of a fixed or floating security interest over a constituent company is required unless this requirement is waived by a court in the Cayman Islands.

Dissenting shareholders have the right to be paid the fair value of their shares (which, if not agreed between the parties, will be determined by the Cayman Islands court) if they follow the required procedures, subject to certain exceptions. The exercise of dissenter rights will preclude the exercise by the dissenting shareholder of any other rights to which he or she might otherwise be entitled by virtue of holding shares, save for the right to seek relief on the grounds that the merger or consolidation is void or unlawful. Court approval is not required for a merger or consolidation which is effected in compliance with these statutory procedures.

In addition, there are statutory provisions that facilitate the reconstruction and amalgamation of companies by way of schemes of arrangement, provided that the arrangement is approved by a majority in number of each class of shareholders and creditors with whom the arrangement is to be made, and who must in addition represent three-fourths in value of each such class of shareholders or creditors, as the case may be, that are present and voting either in person or by proxy at a meeting, or meetings, convened for that purpose. The convening of the meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder has the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it determines that:

- the statutory provisions as to the due majority vote have been met;
- the shareholders have been fairly represented at the meeting in question and the statutory majority are acting bona fide without coercion of the minority to promote interests adverse to those of the class;
- the arrangement is such that may be reasonably approved by an intelligent and honest man of that class acting in respect of his interest; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Companies Law.

The Companies Law also contains a statutory power of compulsory acquisition which may facilitate the "squeeze out" of dissentient minority shareholder upon a takeover offer. When a takeover offer is made and accepted by holders of 90% of the shares affected (within four months), the offeror may, within a two-month period commencing on the expiration of such four-month period, require the holders of the remaining shares to transfer such shares on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands, but this is unlikely to succeed in the case of an offer which has been so approved unless there is evidence of fraud, bad faith or collusion.

If the arrangement and reconstruction by way of scheme of arrangement is thus approved, or if a takeover offer is made and accepted, in accordance with the foregoing statutory procedures, the dissenting shareholder would have no rights comparable to appraisal rights, save that objectors to a takeover offer may apply to the Grand Court of the Cayman Islands for various orders that the Grand Court of the Cayman Islands has a broad discretion to make, which would otherwise ordinarily be available to dissenting shareholders of United States corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

Shareholders' Suits

In principle, we will normally be the proper plaintiff and as a general rule a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, there are exceptions to the foregoing principle, including when:

- a company acts or proposes to act illegally or ultra vires;
- the act complained of, although not ultra vires, could only be effected duly if authorized by more than a simple majority vote that has not been obtained; and
- those who control the company are perpetrating a "fraud on the minority."

Indemnification of Directors and Executive Officers and Limitation of Liability

The ability of Cayman Islands companies to provide in their articles of association for indemnification of officers and directors is not limited, except that any indemnity would not be effective if it were held by the Cayman Islands courts to be contrary to public policy, which would include any attempt to provide indemnification against civil fraud or the consequences of committing a crime. The Memorandum and Articles of Association provide that our directors and officers shall be indemnified against all actions, proceedings, costs, charges, expenses, losses, damages or liabilities incurred or sustained by such director or officer, other than by reason of such person's own dishonesty, wilful default or fraud, in or about the conduct of our company's business or affairs (including as a result of any mistake of judgment) or in the execution or discharge of his duties, powers, authorities or discretions, including without prejudice to the generality of the foregoing, any costs, expenses, losses or liabilities incurred by such director or officer in defending (whether successfully or otherwise) any civil proceedings concerning our company or its affairs in any court whether in the Cayman Islands or elsewhere. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation. In addition, we have entered into indemnification agreements with each of our directors and executive officers that will provide such persons with additional indemnification beyond that provided in the Memorandum and Articles of Association.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Directors' Fiduciary Duties

Under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components, the duty of care and the duty of loyalty. The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of, and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that a director must act in a manner he or she reasonably believes to be in the best interests of the corporation. A director must not use his or her corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interests of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, the director must prove the procedural fairness of the transaction and that the transaction was of fair value to the corporation.

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company, and therefore it is considered that he or she owes the following duties to the company including a duty to act bona fide in the best interests of the company, a duty not to make a personal profit out of his or her position as director (unless the company permits him or her to do so), a duty not to put himself or herself in a position where the interests of the company conflict with his or her personal interests or his or her duty to a third party and a duty to exercise powers for the purpose for which such powers were intended. A director of a Cayman Islands company owes to the company a duty to act with skill and care. It was previously considered that a director need not exhibit in the performance of his or her duties a greater degree of skill than may reasonably be expected from a person of his or her knowledge and experience. However, there are indications that the English and commonwealth courts are moving towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands.

Under the Memorandum and Articles of Association, directors who are in any way, whether directly or indirectly, interested in a contract or proposed contract with our company must declare the nature of their interest at a meeting of the board of directors. Following such declaration, a director may vote in respect of any contract or proposed contract notwithstanding his interest.

Shareholder Proposals

Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided that it complies with the notice provisions in the governing documents. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Companies Law provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. However, these rights may be provided in a company's articles of association. The Memorandum and Articles of Association allow any one or more of our shareholders who together hold shares which carry in aggregate not less than one-third of the total number of votes attaching to all issued and outstanding shares of our company entitled to vote at general meetings to requisition an extraordinary general meeting of our shareholders, in which case our board of directors is obliged to convene an extraordinary general meeting and to put the proposals so requisitioned to a vote at such meeting. Other than this right to requisition a shareholders' meeting, the Memorandum and Articles of Association do not provide our shareholders with any other right to put proposals before annual general meetings or extraordinary general meetings not called by such shareholders. As an exempted Cayman Islands company, we are not obliged by law to call shareholders' annual general meetings.

Cumulative Voting

Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled for a single director, which increases the shareholder's voting power with respect to electing such director. There are no prohibitions in relation to cumulative voting under the laws of the Cayman Islands but the Memorandum and Articles of Association do not provide for cumulative voting.

Removal of Directors

Under the Delaware General Corporation Law, a director of a corporation may be removed with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under the Memorandum and Articles of Association, directors may be removed with or without cause, by an ordinary resolution of our shareholders. In addition, a director's office shall be vacated if the director (i) becomes bankrupt or makes any arrangement or composition with his creditors; (ii) dies or is found to be or becomes of unsound mind; (iii) resigns his office by notice in writing to the company; (iv) without special leave of absence from our board of directors, is absent from three consecutive meetings of the board and the board resolves that his office be vacated or; (v) is removed from office pursuant to any other provisions of the Memorandum and Articles of Association.

Transactions with Interested Shareholders

The Delaware General Corporation Law contains a business combination statute applicable to Delaware public corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date on which such person becomes an interested shareholder. An interested shareholder generally is one which owns or owned 15% or more of the target's outstanding voting shares within the past three years. This has the effect of limiting the ability of a potential acquiror to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an interested shareholder, the board of directors approves either the business combination or the transaction that resulted in the person becoming an interested shareholder. This encourages any potential acquiror of a Delaware public corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

Cayman Islands law has no comparable statute. As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although Cayman Islands law does not regulate transactions between a company and its significant shareholders, it does provide that such transactions entered into must be bona fide in the best interests of the company, for a proper corporate purpose and not with the effect of perpetrating a fraud on the minority shareholders.

Dissolution; Winding Up

Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. The Delaware General Corporation Law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board of directors. Under the Companies Law, our company may be dissolved, liquidated or wound up by a special resolution, or by an ordinary resolution on the basis that our company is unable to pay its debts as they fall due. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

Variation of Rights of Shares

If at any time, our share capital is divided into different classes of shares, under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under the Memorandum and Articles of Association and as permitted by the Companies Law, if our share capital is divided into more than one class of shares, we may vary the rights attached to any class with the sanction of a special resolution of the holders of the shares of that class.

Amendment of Governing Documents

Under the Delaware General Corporation Law, a corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under the Companies Law, the Memorandum and Articles of Association may only be amended by a special resolution of our shareholders.

Anti-takeover Provisions

Some provisions of the Memorandum and Articles of Association may discourage, delay or prevent a change of control of our company or management that shareholders may consider favorable, including a provision that authorizes our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders and limit the ability of shareholders to requisition and convene general meetings of shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under the Memorandum and Articles of Association for a proper purpose and for what they believe in good faith to be in the best interests of our company.

Rights of Non-Resident or Foreign Shareholders

There are no limitations imposed by foreign law or by the Memorandum and Articles of Association on the rights of non-resident or foreign shareholders to hold or exercise voting rights on our ordinary shares. In addition, there are no provisions in the Memorandum and Articles of Association governing the ownership threshold above which shareholder ownership must be disclosed.

Directors' Power to Issue Shares

Under the Memorandum and Articles of Association, our board of directors is empowered to issue or allot shares or grant options and warrants with or without preferred, deferred, qualified or other special rights or restrictions.

Exempted Company.

The Companies Law in the Cayman Islands distinguishes between ordinary resident companies and exempted companies. Any company that is registered in the Cayman Islands but conducts business mainly outside of the Cayman Islands may apply to be registered as an exempted company. The requirements for an exempted company are essentially the same as for an ordinary company except for the exemptions and privileges listed below:

- an exempted company does not have to file an annual return of its shareholders with the Registrar of Companies;
- an exempted company's register of members is not required to be open to inspection;
- an exempted company does not have to hold an annual general meeting;

- an exempted company may issue no par value shares;
- an exempted company may obtain an undertaking against the imposition of any future taxation (such undertakings are usually given for 30 years in the first instance);
- an exempted company may register by way of continuation in another jurisdiction and be deregistered in the Cayman Islands;
- an exempted company may register as a limited duration company; and
- an exempted company may register as a segregated portfolio company.

"Limited liability" means that the liability of each shareholder is limited to the amount unpaid by the shareholder on that shareholder's shares of the company (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil).

Changes in Capital (Item 10.B.10 of Form 20-F)

Our shareholders may from time to time by ordinary resolutions:

- consolidate and divide all or any of its share capital into shares of a larger amount than its existing shares;
- convert all or any of its paid up shares into stock and reconvert that stock into paid up shares of any denomination;
- subdivide its existing shares, or any of them into shares of a smaller amount provided that in the subdivision the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in case of the share from which the reduced share is derived; and
- cancel any shares that, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled.

Subject to the Companies Law, our shareholders may by special resolution reduce our share capital and any capital redemption reserve in any manner authorized by law.

Debt Securities (Item 12.A of Form 20-F)

Not applicable.

Warrants and Rights (Item 12.B of Form 20-F)

Not applicable.

Other Securities (Item 12.C of Form 20-F)

Not applicable.

American Depositary Shares (Items 12.D.1 and 12.D.2 of Form 20-F)

Citibank, N.A., as depositary, registers and delivers the ADSs. Each ADS represents ownership of six Class A ordinary shares, deposited with Citibank Hong Kong, as custodian for the depositary. Each ADS also represents ownership of any other securities, cash or other property which may be held by the depositary. The office of the custodian is located at 10/F, Harbour Front (II), 22, Tak Fung Street, Hung Hom, Kowloon, Hong Kong. The principal executive office of the depositary is located at 388 Greenwich Street, New York, New York, 10013.

The Direct Registration System, or DRS, is a system administered by The Depository Trust Company, or DTC, pursuant to which the depositary may register the ownership of uncertificated ADSs, which ownership shall be evidenced by periodic statements issued by the depositary to the ADS holders entitled thereto.

We do not treat ADS holders as our shareholders and accordingly, you, as an ADS holder, do not have shareholder rights. Cayman Islands law governs shareholder rights. The depositary is the holder of the Class A ordinary shares underlying your ADSs. As a holder of ADSs, you have ADS holder rights. A deposit agreement among us, the depositary and you, as an ADS holder, and the beneficial owners of ADSs sets out ADS holder rights as well as the rights and obligations of the depositary. The laws of the State of New York govern the deposit agreement and the ADSs.

The following is a summary of the material provisions of the deposit agreement. This summary description assumes you have opted to own the ADSs directly by means of an ADS registered in your name and, as such, we will refer to you as the "holder." When we refer to "you," we assume the reader owns ADSs and will own ADSs at the relevant time. For more complete information, you should read the entire deposit agreement and the form of American Depositary Receipt ("ADR") which contains the terms of your ADSs. The deposit agreement has been filed with the SEC as an exhibit to a Registration Statement on Form S-8 (File No. 333-177273), as amended, for our company on October 13, 2011. The form of ADR is on file with the SEC (as a prospectus) and was filed on April 21, 2011.

Holding the ADSs

As an owner of ADSs, you may hold your ADSs either by means of an ADR registered in your name, through a brokerage or safekeeping account, or through an account established by the depositary bank in your name reflecting the registration of uncertificated ADSs directly on the books of the depositary bank (commonly referred to as the direct registration system, or DRS). The direct registration system reflects the uncertificated, or book-entry, registration of ownership of ADSs by the depositary bank. Under the direct registration system, ownership of ADSs is evidenced by periodic statements issued by the depositary bank to the holders of the ADSs. The direct registration system includes automated transfers between the depositary bank and The Depository Trust Company, or DTC, the central book-entry clearing and settlement system for equity securities in the United States. If you decide to hold your ADSs through your brokerage or safekeeping account, you must rely on the procedures of your broker or bank to assert your rights as an ADS owner. Banks and brokers typically hold securities such as ADSs through clearing and settlement systems such as DTC. The procedures of such clearing and settlement systems may limit your ability to exercise your rights as an owner of ADSs. Please consult with your broker or bank if you have any questions concerning these limitations and procedures. All ADSs held through DTC will be registered in the name of a nominee of DTC.

Dividends and Distributions

As a holder, you generally have the right to receive the distributions we make on the securities deposited with the custodian. Your receipt of these distributions may be limited, however, by practical considerations and legal limitations. Holders will receive such distributions under the terms of the deposit agreement in proportion to the number of ADSs held as of a specified record date.

Distributions of Cash

Whenever we make a cash distribution for the securities on deposit with the custodian, we will deposit the funds with the custodian. Upon receipt of confirmation of the deposit of the requisite funds, the depositary bank will arrange for the funds to be converted into U.S. dollars and for the distribution of U.S. dollars to the holders, subject to the laws and regulations of the Cayman Islands.

The conversion into U.S. dollars will take place only if practicable and if U.S. dollars are transferable to the United States. The amounts distributed to holders will be net of the fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. The depositary bank will apply the same method for distributing the proceeds of the sale of any property (such as undistributed rights) held by the custodian in respect of securities on deposit.

The distribution of cash will be made net of the fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement.

Distributions of Shares

Whenever we make a free distribution of Class A ordinary shares for the securities on deposit with the custodian, we will deposit the applicable number of Class A ordinary shares with the custodian. Upon receipt of confirmation of such deposit, the depositary bank will either distribute to holders new ADSs representing the Class A ordinary shares deposited or modify the ADS-to-Class A ordinary share ratio, in which case each ADS you hold will represent rights and interests in the additional Class A ordinary shares so deposited. Only whole new ADSs will be distributed. Fractional entitlements will be sold and the proceeds of such sale will be distributed as in the case of a cash distribution.

The distribution of new ADSs or the modification of the ADS-to-Class A ordinary share ratio upon a distribution of Class A ordinary shares will be made net of the fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. In order to pay such taxes or governmental charges, the depositary bank may sell all or a portion of the new Class A ordinary shares so distributed.

No such distribution of new ADSs will be made if it would violate a law (i.e., the U.S. securities laws) or if it is not operationally practicable. If the depositary bank does not distribute new ADSs as described above, it may sell the Class A ordinary shares received upon the terms described in the deposit agreement and will distribute the proceeds of the sale as in the case of a distribution of cash.

Distributions of Rights

Whenever we intend to distribute rights to purchase additional Class A ordinary shares, we will give prior notice to the depositary bank and we will assist the depositary bank in determining whether it is lawful and reasonably practicable to distribute rights to purchase additional ADSs to holders.

The depositary bank will establish procedures to distribute rights to purchase additional ADSs to holders and to enable such holders to exercise such rights if it is lawful and reasonably practicable to make the rights available to holders of ADSs, and if we provide all of the documentation contemplated in the deposit agreement (such as opinions to address the lawfulness of the transaction). You may have to pay fees, expenses, taxes and other governmental charges to subscribe for the new ADSs upon the exercise of your rights. The depositary bank is not obligated to establish procedures to facilitate the distribution and exercise by holders of rights to purchase new Class A ordinary shares other than in the form of ADSs.

The depositary bank will not distribute the rights to you if:

- we do not timely request that the rights be distributed to you or we request that the rights not be distributed to you; or
- we fail to deliver satisfactory documents to the depositary bank; or
- it is not reasonably practicable to distribute the rights.

The depositary bank will sell the rights that are not exercised or not distributed if such sale is lawful and reasonably practicable. The proceeds of such sale will be distributed to holders as in the case of a cash distribution. If the depositary bank is unable to sell the rights, it will allow the rights to lapse.

Elective Distributions

Whenever we intend to distribute a dividend payable at the election of shareholders either in cash or in additional shares, we will give prior notice thereof to the depositary bank and will indicate whether we wish the elective distribution to be made available to you. In such case, we will assist the depositary bank in determining whether such distribution is lawful and reasonably practicable.

The depositary bank will make the election available to you only if it is reasonably practicable and if we have provided all of the documentation contemplated in the deposit agreement. In such case, the depositary bank will establish procedures to enable you to elect to receive either cash or additional ADSs, in each case as described in the deposit agreement.

If the election is not made available to you, you will receive either cash or additional ADSs, depending on what a shareholder of Class A ordinary shares in the Cayman Islands would receive upon failing to make an election, as more fully described in the deposit agreement.

Other Distributions

Whenever we intend to distribute property other than cash, Class A ordinary shares or rights to purchase additional Class A ordinary shares, we will notify the depositary bank in advance and will indicate whether we wish such distribution to be made to you. If so, we will assist the depositary bank in determining whether such distribution to holders is lawful and reasonably practicable.

If it is reasonably practicable to distribute such property to you and if we provide all of the documentation contemplated in the deposit agreement, the depositary bank will distribute the property to the holders in a manner it deems practicable.

The distribution will be made net of fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. In order to pay such taxes and governmental charges, the depositary bank may sell all or a portion of the property received.

The depositary bank will not distribute the property to you and will sell the property if:

- we do not request that the property be distributed to you or if we ask that the property not be distributed to you; or
- we do not deliver satisfactory documents to the depositary bank; or
- the depositary bank determines that all or a portion of the distribution to you is not reasonably practicable.

The proceeds of such a sale will be distributed to holders as in the case of a cash distribution.

Redemption

Whenever we decide to redeem any of the securities on deposit with the custodian, we will notify the depositary bank in advance. If it is reasonably practicable and if we provide all of the documentation contemplated in the deposit agreement, the depositary bank will provide notice of the redemption to the holders.

The custodian will be instructed to surrender the shares being redeemed against payment of the applicable redemption price. The depositary bank will convert the redemption funds received into U.S. dollars upon the terms of the deposit agreement and will establish procedures to enable holders to receive the net proceeds from the redemption upon surrender of their ADSs to the depositary bank. You may have to pay fees, expenses, taxes and other governmental charges upon the redemption of your ADSs. If less than all ADSs are being redeemed, the ADSs to be retired will be selected by lot or on a pro rata basis, as the depositary bank may determine.

Changes Affecting Class A Ordinary Shares

The Class A ordinary shares held on deposit for your ADSs may change from time to time. For example, there may be a change in nominal or par value; a split-up, cancellation, consolidation or reclassification of such Class A ordinary shares; or a recapitalization, reorganization, merger, consolidation or sale of assets.

If any such change were to occur, your ADSs would, to the extent permitted by law, represent the right to receive the property received or exchanged in respect of the Class A ordinary shares held on deposit. The depositary bank may in such circumstances deliver new ADSs to you; amend the deposit agreement, the ADRs and the applicable Registration Statement(s) on Form F-6; call for the exchange of your existing ADSs for new ADSs; and take any other actions that are appropriate to reflect as to the ADSs the change affecting the Class A ordinary shares. If the depositary bank may not lawfully distribute such property to you, the depositary bank may sell such property and distribute the net proceeds to you as in the case of a cash distribution.

Issuance of ADSs upon Deposit of Class A Ordinary Shares

The depositary bank may create ADSs on your behalf if you or your broker deposits Class A ordinary shares with the custodian. The depositary bank will deliver these ADSs to the person you indicate only after you pay any applicable issuance fees and any charges and taxes payable for the transfer of the Class A ordinary shares to the custodian. Your ability to deposit Class A ordinary shares and receive ADSs may be limited by U.S. and Cayman Islands legal considerations applicable at the time of deposit.

The issuance of ADSs may be delayed until the depositary bank or the custodian receives confirmation that all required approvals have been given and that the Class A ordinary shares have been duly transferred to the custodian. The depositary bank will only issue ADSs in whole numbers.

When you make a deposit of Class A ordinary shares, you will be responsible for transferring good and valid title to the depositary bank. As such, you will be deemed to represent and warrant that:

- The Class A ordinary shares are duly authorized, validly issued, fully paid, non-assessable and legally obtained.
- All preemptive (and similar) rights, if any, with respect to such Class A ordinary shares have been validly waived or exercised.
- You are duly authorized to deposit the Class A ordinary shares.
- The Class A ordinary shares presented for deposit are free and clear of any lien, encumbrance, security interest, charge, mortgage or adverse claim, and are not, and the ADSs issuable upon such deposit will not be, “restricted securities” (as defined in the deposit agreement).
- The Class A ordinary shares presented for deposit have not been stripped of any rights or entitlements.

If any of the representations or warranties are incorrect in any way, we and the depositary bank may, at your cost and expense, take any and all actions necessary to correct the consequences of the misrepresentations.

Transfer, Combination and Split Up of ADRs

As an ADR holder, you will be entitled to transfer, combine or split up your ADRs and the ADSs evidenced thereby. For transfers of ADRs, you will have to surrender the ADRs to be transferred to the depositary bank and also must:

- ensure that the surrendered ADR certificate is properly endorsed or otherwise in proper form for transfer;

- provide such proof of identity and genuineness of signatures as the depositary bank deems appropriate;

- provide any transfer stamps required by the State of New York or the United States; and

- pay all applicable fees, charges, expenses, taxes and other government charges payable by ADR holders pursuant to the terms of the deposit agreement, upon the transfer of ADRs.

To have your ADRs either combined or split up, you must surrender the ADRs in question to the depositary bank with your request to have them combined or split up, and you must pay all applicable fees, charges and expenses payable by ADR holders, pursuant to the terms of the deposit agreement, upon a combination or split up of ADRs.

Withdrawal of Shares Upon Cancellation of ADSs

As a holder, you will be entitled to present your ADSs to the depositary bank for cancellation and then receive the corresponding number of underlying Class A ordinary shares at the custodian's offices. Your ability to withdraw the Class A ordinary shares may be limited by U.S. and Cayman Islands legal considerations applicable at the time of withdrawal. In order to withdraw the Class A ordinary shares represented by your ADSs, you will be required to pay to the depositary bank the fees for cancellation of ADSs and any charges and taxes payable upon the transfer of the Class A ordinary shares being withdrawn. You assume the risk for delivery of all funds and securities upon withdrawal. Once canceled, the ADSs will not have any rights under the deposit agreement.

If you hold ADSs registered in your name, the depositary bank may ask you to provide proof of identity and genuineness of any signature and such other documents as the depositary bank may deem appropriate before it will cancel your ADSs. The withdrawal of the Class A ordinary shares represented by your ADSs may be delayed until the depositary bank receives satisfactory evidence of compliance with all applicable laws and regulations. Please keep in mind that the depositary bank will only accept ADSs for cancellation that represent a whole number of securities on deposit.

You will have the right to withdraw the Class A ordinary shares represented by your ADSs at any time except for:

- Temporary delays that may arise because (i) the transfer books for the Class A ordinary shares or ADSs are closed, or (ii) Class A ordinary shares are immobilized on account of a shareholders' meeting or a payment of dividends;

- Obligations to pay fees, taxes and similar charges; and

- Restrictions imposed because of laws or regulations applicable to ADSs or the withdrawal of securities on deposit.

The deposit agreement may not be modified to impair your right to withdraw the securities represented by your ADSs except to comply with mandatory provisions of law.

Voting Rights

As a holder, you generally have the right under the deposit agreement to instruct the depositary bank to exercise the voting rights for the Class A ordinary shares represented by your ADSs. The voting rights of holders of ordinary shares are described in "Description of Share Capital."

The depositary bank will distribute to you any notice of shareholders' meeting received from us together with information explaining how to instruct the depositary bank to exercise the voting rights of the securities represented by ADSs.

Voting at our shareholders' meetings is by show of hands unless a poll is demanded. A poll may be demanded by the chairman of such shareholder meeting or any shareholder present in person or by proxy. If the depositary bank timely receives voting instructions from a holder of ADSs, the depositary bank will endeavor to cause the Class A ordinary shares on deposit to be voted as follows: (a) in the event voting takes place at a shareholders' meeting by show of hands, the depositary bank will instruct the custodian to vote all Class A ordinary shares on deposit in accordance with the voting instructions received from a majority of the holders of ADSs who provided voting instructions; or (b) in the event voting takes place at a shareholders' meeting by poll, the depositary bank will instruct the custodian to vote the ordinary shares on deposit in accordance with the voting instructions received from holders of ADSs. In the event of voting by poll, Class A ordinary shares in respect of which no timely voting instructions have been received from ADS holders will not be voted.

In order to give you a reasonable opportunity to instruct the depositary bank as to the exercise of voting rights relating to deposited securities, if we request the depositary bank to act, pursuant to the deposit agreement, we will give the depositary notice of any such meeting and details concerning the matters to be voted upon at least 30 days in advance of the meeting date, although our post-IPO memorandum and articles of association only otherwise require an advance notice of at least 14 days.

Please note that the ability of the depositary bank to carry out voting instructions may be limited by practical and legal limitations and the terms of the securities on deposit. We cannot assure you that you will receive voting materials in time to enable you to return voting instructions to the depositary bank in a timely manner. Securities for which no voting instructions have been received will not be voted.

Fees and Charges

As an ADS holder, you will be required to pay the following service fees to the depositary bank:

Service	Fees
• Issuance of ADSs	Up to U.S. 5¢ per ADS issued
• Cancellation of ADSs	Up to U.S. 5¢ per ADS canceled
• Distribution of cash dividends or other cash distributions	Up to U.S. 5¢ per ADS held
• Distribution of ADSs pursuant to stock dividends, free stock distributions or exercise of rights.	Up to U.S. 5¢ per ADS held
• Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to U.S. 5¢ per ADS held
• Depositary Services	Up to U.S. 5¢ per ADS held on the applicable record date(s) established by the Depositary
• Transfer of ADRs	U.S. $1.50 per certificate presented for transfer

As an ADS holder, you will also be responsible to pay certain fees and expenses incurred by the depositary bank and certain taxes and governmental charges such as:

· fees for the transfer and registration of Class A ordinary shares charged by the registrar and transfer agent for the Class A ordinary shares in the Cayman Islands (i.e., upon deposit and withdrawal of Class A ordinary shares);

· expenses incurred for converting foreign currency into U.S. dollars;

- expenses for cable, telex and fax transmissions and for delivery of securities;

- taxes and duties upon the transfer of securities (i.e., when Class A ordinary shares are deposited or withdrawn from deposit); and

- fees and expenses incurred in connection with the delivery or servicing of Class A ordinary shares on deposit.

Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary bank by the brokers (on behalf of their clients) receiving the newly issued ADSs from the depositary bank and by the brokers (on behalf of their clients) delivering the ADSs to the depositary bank for cancellation. The brokers in turn charge these fees to their clients. Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary bank to the record holders of ADSs as of the applicable ADS record date.

The depositary fees payable for cash distributions are generally deducted from the cash being distributed. In the case of distributions other than cash (i.e., stock dividends, rights), the depositary bank charges the applicable fee to the record date ADS holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or uncertificated in the direct registration system), the depositary bank sends invoices to the applicable record date ADS holders. In the case of ADSs held in brokerage and custodian accounts (via DTC), the depositary bank generally collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients' ADSs in DTC accounts in turn charge their clients' accounts the amount of the fees paid to the depositary banks.

In the event of refusal to pay the depositary fees, the depositary bank may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary fees from any distribution to be made to the ADS holder.

Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary bank. You will receive prior notice of such changes.

The depositary bank may reimburse us for certain expenses incurred by us in respect of the ADR program established pursuant to the deposit agreement, by making available a portion of the depositary fees charged in respect of the ADR program or otherwise, upon such terms and conditions as we and the depositary bank may agree from time to time.

Amendments and Termination

We may agree with the depositary bank to modify the deposit agreement at any time without your consent. We undertake to give holders 30 days prior notice of any modifications that would materially prejudice any of their substantial rights under the deposit agreement. We will not consider to be materially prejudicial to your substantial rights any modifications or supplements that are reasonably necessary for the ADSs to be registered under the Securities Act or to be eligible for book-entry settlement, in each case without imposing or increasing the fees and charges you are required to pay. In addition, we may not be able to provide you with prior notice of any modifications or supplements that are required to accommodate compliance with applicable provisions of law.

You will be bound by the modifications to the deposit agreement if you continue to hold your ADSs after the modifications to the deposit agreement become effective. The deposit agreement cannot be amended to prevent you from withdrawing the Class A ordinary shares represented by your ADSs (except as permitted by law).

We have the right to direct the depositary bank to terminate the deposit agreement. Similarly, the depositary bank may in certain circumstances on its own initiative terminate the deposit agreement. In either case, the depositary bank must give notice to the holders at least 30 days before termination. Until termination, your rights under the deposit agreement will be unaffected.

After termination, the depositary bank will continue to collect distributions received (but will not distribute any such property until you request the cancellation of your ADSs) and may sell the securities held on deposit. After the sale, the depositary bank will hold the proceeds from such sale and any other funds then held for the holders of ADSs in a non-interest bearing account. At that point, the depositary bank will have no further obligations to holders other than to account for the funds then held for the holders of ADSs still outstanding (after deduction of applicable fees, taxes and expenses).

Books of Depositary Bank

The depositary bank will maintain ADS holder records at its depositary office. You may inspect such records at such office during regular business hours but solely for the purpose of communicating with other holders in the interest of business matters relating to the ADSs and the deposit agreement.

The depositary bank will maintain in New York facilities to record and process the issuance, cancellation, combination, split up and transfer of ADSs. These facilities may be closed from time to time, to the extent not prohibited by law.

Limitations on Obligations and Liabilities

The deposit agreement limits our obligations and the depositary bank's obligations to you. Please note the following:

- We and the depositary bank are obligated only to take the actions specifically stated in the deposit agreement without negligence or bad faith.
- The depositary bank disclaims any liability for any failure to carry out voting instructions, for any manner in which a vote is cast or for the effect of any vote, provided it acts in good faith and in accordance with the terms of the deposit agreement.
- The depositary bank disclaims any liability for any failure to determine the lawfulness or practicality of any action, for the content of any document forwarded to you on our behalf or for the accuracy of any translation of such a document, for the investment risks associated with investing in Class A ordinary shares, for the validity or worth of the Class A ordinary shares, for any tax consequences that result from the ownership of ADSs, for the credit-worthiness of any third party, for allowing any rights to lapse under the terms of the deposit agreement, for the timeliness of any of our notices or for failure to give notice.
- We and the depositary bank will not be obligated to perform any act that is inconsistent with the terms of the deposit agreement.
- We and the depositary bank disclaim any liability if we or the depositary bank are prevented or forbidden from or subject to any civil or criminal penalty or restraint on account of, or delayed in, doing or performing any act or thing required by the terms of the deposit agreement, by reason of any provision, present or future of any law or regulation, or by reason of present or future provision of any provision of our articles of association, or any provision of or governing the securities on deposit, or by reason of any act of God or war or other circumstances beyond our control.
- We and the depositary bank disclaim any liability by reason of any exercise of, or failure to exercise, any discretion provided for the deposit agreement or in our articles of association or in any provisions of or governing the securities on deposit.
- We and the depositary bank further disclaim any liability for any action or inaction in reliance on the advice or information received from legal counsel, accountants, any person presenting Class A ordinary shares for deposit, any holder of ADSs or authorized representatives thereof, or any other person believed by either of us in good faith to be competent to give such advice or information.

- We and the depositary bank also disclaim liability for the inability by a holder to benefit from any distribution, offering, right or other benefit that is made available to holders of Class A ordinary shares but is not, under the terms of the deposit agreement, made available to you.

- We and the depositary bank may rely without any liability upon any written notice, request or other document believed to be genuine and to have been signed or presented by the proper parties.

- We and the depositary bank also disclaim liability for any consequential or punitive damages for any breach of the terms of the deposit agreement.

The deposit agreement specifically states that no disclaimer of liability under the Securities Act is intended by any provision of the deposit agreement.

Pre-Release Transactions

Subject to certain terms and conditions, the depositary bank may issue to broker/dealers ADSs before receiving a deposit of Class A ordinary shares. These transactions are commonly referred to as "pre-release transactions" and are entered into between the depositary bank and the applicable broker/dealer. The deposit agreement limits the aggregate size of pre-release transactions (not to exceed 30% of the shares on deposit in the aggregate) and imposes a number of conditions on such transactions (i.e., the need to receive full collateral, the type of collateral required, the representations required from brokers, etc.). The depositary bank may retain the compensation received from the pre-release transactions.

Taxes

You will be responsible for the taxes and other governmental charges payable on the ADSs and the securities represented by the ADSs. We, the depositary bank and the custodian may deduct from any distribution the taxes and governmental charges payable by holders and may sell any or all property on deposit to pay the taxes and governmental charges payable by holders. You will be liable for any deficiency if the sale proceeds do not cover the taxes that are due.

The depositary bank may refuse to issue ADSs, to deliver, transfer, split and combine ADRs, or to release securities on deposit until all taxes and charges are paid by the applicable holder. The depositary bank and the custodian may take reasonable administrative actions to obtain tax refunds and reduced tax withholding for any distributions on your behalf. However, you may be required to provide to the depositary bank and to the custodian proof of taxpayer status and residence and such other information as the depositary bank and the custodian may require to fulfill legal obligations. You are required to indemnify us, the depositary bank and the custodian for any claims with respect to taxes based on any tax benefit obtained for you.

Foreign Currency Conversion

The depositary bank will arrange for the conversion of all foreign currency received into U.S. dollars if such conversion is practical, and it will distribute U.S. dollars in accordance with the terms of the deposit agreement. You may have to pay fees and expenses incurred in converting foreign currency, such as fees and expenses incurred in complying with currency exchange controls and other governmental requirements.

If the conversion of foreign currency is not practical or lawful, or if any required approvals are denied or not obtainable at a reasonable cost or within a reasonable period, the depositary bank may take the following actions in its discretion:

- convert the foreign currency to the extent practical and lawful and distribute U.S. dollars to the holders for whom the conversion and distribution is lawful and practical;
- distribute the foreign currency to holders for whom the distribution is lawful and practical; and
- hold the foreign currency (without liability for interest) for the applicable holders.

Exhibit 2.6

21Vianet Group Inc.

and

Citicorp International Limited
as Trustee

Indenture

April 15, 2019

7.875% Senior Notes due 2021

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INDENTURE, dated as of April 15, 2019, among 21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**"), and Citicorp International Limited (the "**Trustee**").

RECITALS

WHEREAS, the Company has duly authorized the execution and delivery of the Indenture to provide for the issuance of US$300,000,000 aggregate principal amount of the Company's 7.875% Senior Notes Due 2021 and, if and when issued, any Additional Notes as provided herein (the "**Notes**"). All things necessary to make the Indenture a valid agreement of the Company, in accordance with its terms, have been done, and the Company has done all things necessary to make the Notes, when executed by the Company and authenticated and delivered by or on behalf of the Trustee and duly issued by the Company (and, in the case of the Additional Notes, when duly authorized), the valid obligations of the Company as hereinafter provided.

THIS INDENTURE WITNESSETH

For and in consideration of the premises and the purchase of the Notes by the Holders thereof, the parties hereto covenant and agree, for the equal and proportionate benefit of all Holders, as follows:

ARTICLE 1
DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.01. *Definitions.*

"**Additional Amounts**" has the meaning assigned to such term in Section 4.05.

"**Additional Note**" has the meaning assigned to such term in Section 2.08.

"**Adjusted EBITDA**" means, for the purposes of any Relevant Period, the adjusted EBITDA as disclosed in the Company's financial results announcements as published on Form 6-K; provided that in the event Adjusted EBITDA is not disclosed in a Company financial results announcement on Form 6-K for any Relevant Period, "Adjusted EBITDA" means, for such Relevant Period, Consolidated EBITDA excluding share-based compensation expenses and changes in the fair value of contingent purchase consideration payable.

"**Affiliate**" means, with respect to any Person, any other Person directly or indirectly controlling, controlled by, or under direct or indirect common control with, such Person.

"**Agent**" means the Trustee, the Paying and Transfer Agent and the Registrar.

"**Authorization Certificate**" has the meaning assigned to such term in Section 2.02(a).

"**Authorized Officer**" means, with respect to the Company, any one person, officer or director, who, in each case, is authorized to represent the Company.

"**Board of Directors**" means the board of directors elected or appointed by the stockholders of the Company to manage the business of the Company or any committee of such board duly authorized to take the action purported to be taken by such committee.

"**Business Day**" means a day (other than a Saturday, Sunday or public holiday) upon which commercial banks are generally open for business in Hong Kong and London.

"**Capital Stock**" means any and all shares, interests, participations or other equivalents (however designated) of capital stock of a corporation, any and all classes of partnership interests in a partnership, any and all membership interests in a limited liability company, any and all other equivalent ownership interests and any and all warrants, rights or options to purchase any of the foregoing.

"**Cash Dividend**" means (a) any Dividend which is to be paid in cash and (b) any Dividend determined to be a Cash Dividend pursuant to the definition of "Dividend".

"**Certificated Notes**" means the Notes, in certificated, registered form, executed and delivered by the Company and authenticated by or on behalf of the Trustee in exchange for the Global Notes, (a) in the event that the Common Depositary is at any time unwilling or unable to act as common depositary for the Global Notes and a successor common depositary is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such ineligibility, (b) an Event of Default has occurred and is continuing with respect to the Notes and the Company has received a written request from the one or more of the Holders or (c) if Euroclear and Clearstream or any successor clearing system is closed for business for a continuous period of 14 days or announces an intention to permanently cease business operations.

"**Change of Control**" means the occurrence of one or more of the following events:

(1) Any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act) is or becomes the “beneficial owner” (as such term is used in Rule 13d-3 of the Exchange Act), directly or indirectly, of total voting power of the Voting Stock of the Company greater than such total voting power held beneficially by the Permitted Holders;

(2) The merger or consolidation of the Company with or into another Person or the merger of another Person with or into the Company, unless the holders of a majority of the aggregate voting power of the Voting Stock of the Company, immediately prior to such transaction, hold securities of the surviving or transferee Person that represent, immediately after such transaction, at least a majority of the aggregate voting power of the Voting Stock of the surviving or transferee Person;

(3) Individuals who on April 15, 2019 constituted the board of directors, together with any new directors whose election by the board of directors was approved by a vote of at least two-thirds of the directors then still in office who were either directors on April 15, 2019 or whose election was previously so approved, cease of any reason to constitute a majority of the board of directors then in office;

(4) The sale, assignment, conveyance, transfer, lease or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Company and its Subsidiaries (as defined in Condition 4), taken together as a whole, to any “person” (as such term is used in Sections 13(d) and 14(d) of the Exchange Act), other than transactions with one or more Permitted Holders;

(5) The adoption by the shareholders of the Company of a plan or proposal for the liquidation or dissolution of the Company; or

(6) Any change in or amendment to the laws, regulations and rules of the PRC or the interpretation or application thereof (“Change in Law”) that results in (x) the Group (as defined in Condition 4) (as in existence immediately subsequent to such Change in Law), as a whole, being legally prohibited from operating substantially all of the business operations conducted by the Group (as in existence immediately prior to such Change in Law) as of the last date of the period described in the consolidated financial statements of the Company for the most recent fiscal quarter and (y) the Company being unable to continue to derive substantially all of the economic benefits from the business operations conducted by the Group (as in existence immediately prior to such Change in Law) in the same manner as reflected in the consolidated financial statements of the Company for the most recent fiscal quarter.

"**Change of Control Triggering Event**" means the occurrence of both a Change of Control and, provided the Notes are rated by at least one Rating Agency, a Rating Decline.

"**Change of Control Offer**" has the meaning assigned to such term in Section 4.02.

"**Change of Control Payment**" and "**Change of Control Payment Date**" have the meanings assigned to such terms in Section 4.02.

"**Clearstream**" means Clearstream Banking S.A.

"**Common Depositary**" has the meaning assigned to such term in Section 2.04(c).

"**Company**" means the party named as such in the first paragraph of this Indenture or any successor obligor under this Indenture and the Notes pursuant to this Indenture.

"**Consolidated EBIT**" means, for any Relevant Period, the consolidated profits before tax of the Group for that Relevant Period:

(A) adding back interest expense (as reflected in the income statement)

(B) before taking into account any consolidated interest income;

(C) before taking into account any items treated as Exceptional or Extraordinary items; and

(D) before taking into account the profit/loss of any member of the Group which is attributable to minority interest,

in each case, to the extent added, deducted or taken into account, as the case may be, for the purposes of determining the profits of the Group from ordinary activities before taxation.

"**Consolidated EBITDA**" means for any Relevant Period, Consolidated EBIT for that Relevant Period before deducting any amount attributable to amortization of goodwill and other intangible assets or depreciation of tangible assets.

"**Consolidated Interest Expense**" means in respect of any financial year of the Company, interest expense paid net of interest income received as stated in the audited annual and unaudited semi-annual consolidated financial statements of the Company.

"**Corporate Trust Office**" means the office of the Trustee at which the corporate trust business of the Trustee is principally administered, which at the date of this Indenture is located at 39/F, Champion Tower, 3 Garden Road, Central, Hong Kong.

"**Dividend**" means any dividend or distribution of cash or other property or assets or evidences of the Company's indebtedness with respect to the Capital Stock of the Company, whenever paid or made and however described provided that where a Cash Dividend is announced which is to be, or may at the election of a Shareholder or Shareholders be, satisfied by the issue or delivery of Shares or other property or assets, or where a capitalization of profits or reserves is announced which is to be, or may at the election of a Shareholder or Shareholders be, satisfied by the payment of a Dividend, then for the purposes of this definition the Dividend in question shall be treated as a Dividend of (i) such Cash Dividend or (ii) the Fair Market Value (on the date of announcement of such Dividend or date of capitalization (as the case may be) or, if later, the date on which the number of Shares (or amount of property or assets, as the case may be) which may be issued or delivered is determined) of such Shares or other property or assets if such Fair Market Value is greater than the Fair Market Value of such Cash Dividend.

"**Euroclear**" means Euroclear Bank SA/NV.

"**Event of Default**" has the meaning assigned to such term in Section 6.01.

"**Exchange Act**" means the United States Securities Exchange Act of 1934, as amended.

"**Exceptional**" or "**Extraordinary**" means loss or gain on disposal of items of property, plant and equipment, net fair value loss or gain from available for sale investments, loss or gain on disposal of Subsidiaries and disposal of shares or interests of an associate, loss or gain on disposal of a jointly-controlled entity and disposal of prepaid land lease payment, loss or gain resulting from the cumulative effect of a change in accounting principles, translation losses and gains due solely to fluctuations in currency values and related tax effects, non-cash gains or losses attributable to movements in the mark-to-market valuation of any convertible or exchangeable securities and any other loss or gain which is a result of a one-off and non-recurring transaction but does not include revenue or income from concessionaire sales or interest income;

"**Fair Market Value**" means the price that would be paid in an arm's-length transaction between an informed and willing seller under no compulsion to sell and an informed and willing buyer under no compulsion to buy, as determined in good faith by the board of directors of the Company, whose determination shall be conclusive if evidenced by a resolution of such board of directors.

"**Fitch**" means Fitch Inc., a subsidiary of Fimalac, S.A., and its successors.

"**Final Maturity Date**" means October 15, 2021.

"**first currency**" has the meaning assigned to such term in Section 9.03.

"**Group**" means the Company and its Subsidiaries, taken as a whole.

"**Global Notes**" has the meaning assigned to such term in Section 2.04(c).

"**Holder**" means the Person in whose name a Note is registered in the Note register.

"**Indebtedness**" of any Person means, at any date, without duplication, (i) any outstanding indebtedness for or in respect of money borrowed (including bonds, debentures, notes or other similar instruments, whether or not listed) that is evidenced by any agreement or instrument, excluding trade payables, (ii) all noncontingent obligations of such Person to reimburse any bank or other Person in respect of amounts paid under a letter of credit or similar instrument, and (iii) all Indebtedness of others guaranteed by such Person.

"**Investment Grade**" means a rating of "AAA", "AA", "A" or "BBB", as modified by a "+" or "-" indication, or an equivalent rating representing one of the four highest Rating Categories, by S&P or any of its successors or assigns or a rating of "Aaa", or "Aa", "A" or "Baa", as modified by a "1", "2" or "3" indication, or an equivalent rating representing one of the four highest Rating Categories, by Moody's, or any of its successors or assigns, or a rating of "AAA", "AA", "A", "BBB", as modified by a "+" or "-" indication, or an equivalent rating representing one of the four highest Rating Categories, by Fitch or any of its successors or assigns, or the equivalent ratings of any internationally recognized rating agency or agencies, as the case may be, which shall have been designated by the Company as having been substituted for S&P, Moody's or Fitch or two or three of them, as the case may be.

"**Indenture**" means this indenture (including all Exhibits hereto) as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof.

"**Interest Payment Date**" means April 15 and October 15 of each year, commencing October 15, 2019.

"**Interest Record Date**" has the meaning assigned to such term in the Form of Note attached hereto as Exhibit B.

"**Moody's**" means Moody's Investors Service, Inc. and successors.

"**NDRC**" means the National Development and Reform Commission of the PRC.

"**NDRC Registration Business Day**" means a day, other than a Saturday, Sunday or a public holiday, on which the relevant NDRC branch in the PRC is open for business.

"**Net Profit After Tax per Annum**" means the profit of the Group, after deduction of all expenses, finance costs and taxes, but without deduction for share based compensation or changes in the fair value of contingent purchase consideration payable, for the prior 12 month fiscal year.

"**Notes**" has the meaning assigned to such term in the Recitals of this Indenture.

"**Offering Memorandum**" means the final offering memorandum of the Company dated April 9, 2019, as amended or supplemented.

"**Officers' Certificate**" a certificate signed by two executive officers of the Company.

"**Opinion of Counsel**" means a written opinion from legal counsel who is acceptable to the Trustee.

"**Original Issue Date**" means the date on which the Notes are originally issued under this Indenture.

"**outstanding**" when used with respect to the Notes means, as of the date of determination, all Notes theretofore authenticated and delivered under this Indenture, except:

(1) Notes theretofore cancelled by the Paying and Transfer Agent or accepted by the Registrar for cancellation;

(2) Notes for whose payment or redemption money in the necessary amount has been theretofore deposited with any Paying and Transfer Agent for the Holders of such Notes; *provided* that, if such Notes are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee has been made; and

(3) Notes in exchange for or in lieu of which other Notes have been authenticated and delivered pursuant to this Indenture.

A Note does not cease to be outstanding because the Company or any Affiliate of the Company holds the Note; *provided* that in determining whether the Holders of the requisite amount of outstanding Notes have given any request, demand, authorization, direction, notice, consent or waiver under this Indenture, Notes owned by the Company or any Affiliate of the Company or beneficially held for the Company or an Affiliate of the Company shall be disregarded and deemed not to be outstanding, except that, for the purpose of determining whether the Trustee shall be protected in relying on any such request, demand, authorization, direction, notice, consent or waiver, only Notes for which the Trustee has received an Officers' Certificate from the Company or an Affiliate of the Company evidencing such ownership or beneficial holding shall be so disregarded. Notes so owned or beneficially held that have been pledged in good faith may be regarded as outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right to act with respect to such Notes and that the pledgee is not the Company or an Affiliate of the Company.

"**Payment Date**" has the meaning assigned to such term in Section 4.01(a).

"**Permitted Holders**" means any or all of the following:

(1) Tus-Holdings Co., Ltd.;

(2) any Affiliate of Tus-Holdings Co., Ltd.; and

(3) any Person the total voting rights of which (or in the case of a trust, the beneficial interests in which) are owned 80% by Persons specified in clauses (i) and (ii).

"**Person**" means any individual, corporation, firm, limited liability company, partnership, joint venture, undertaking, association, joint stock company, trust, unincorporated organization, trust, state, government or any agency or political subdivision thereof or any other entity (in each case whether or not being a separate legal entity).

"**PRC**" means the People's Republic of China, which, for purposes of this Indenture, excludes Taiwan, the Hong Kong Special Administrative Region of the PRC and the Macau Special Administrative Region of the PRC.

"**Principal Office**" means the office of the Paying and Transfer Agent at which the business of the Paying and Transfer Agent is principally administered, which at the date of this Indenture is located at Citibank, N.A., London Branch, c/o Citibank, N.A., Dublin Brach, One North Wall Quay, Dublin 1, Ireland.

"**Paying and Transfer Agent**" means Citibank, N.A., London Branch, initially or any other paying agent with respect to the Notes appointed pursuant to a Paying and Transfer Agent and Registrar Appointment Letter substantially in the form of Exhibit D.

"**principal**" of any Indebtedness means the principal amount of such Indebtedness (or if such Indebtedness was issued with original issue discount, the face amount of such Indebtedness *less* the remaining unamortized portion of the original issue discount of such Indebtedness), together with, unless the context otherwise indicates, any premium then payable on such Indebtedness.

"**Put Option Date**" has the meaning assigned to such term in Section 3.02.

"**Rating Agencies**" means (1) S&P, (2) Moody's and (3) Fitch; provided that if S&P, Moody's or Fitch, two of the three or all three of them shall not make a rating of the Notes publicly available, one or more nationally recognized securities rating agency or agencies, as the case may be, selected by the Company, which shall be substituted for S&P, Moody's, Fitch, two of the three or all three of them, as the case may be.

"**Rating Category**" means (1) with respect to S&P, any of the following categories: "BB", "B", "CCC", "CC", "C" and "D" (or equivalent successor categories); (2) with respect to Moody's, any of the following categories: "Ba", "B", "Caa", "Ca", "C" and "D" (or equivalent successor categories); (3) with respect to Fitch, any of the following categories: "BB", "B", "CCC", "CC", "C" and "D" (or equivalent successor categories); and (4) the equivalent of any such category of S&P, Moody's or Fitch used by another Rating Agency. In determining whether the rating of the Notes has decreased by one or more gradations, gradations within Rating Categories ("+" and "-" for S&P; "1", "2" and "3" for Moody's and "+" and "-" for Fitch; or the equivalent gradations for another Rating Agency) shall be taken into account (e.g., with respect to S&P, a decline in a rating from "BB+" to "BB", as well as from "BB-" to "B+", will constitute a decrease of one gradation).

"**Rating Date**" means in connection with a Change of Control Triggering Event, that date which is 90 days prior to the earlier of (x) a Change of Control and (y) a public notice of the occurrence of a Change of Control or of the intention by the Company or any other Person or Persons to effect a Change of Control.

"**Rating Decline**" means in connection with a Change of Control Triggering Event, the occurrence on, or within six months after, the date of, or public notice of the occurrence of, a Change of Control or the intention by the Company or any Person or Persons to effect a Change of Control (which period shall be extended so long as the rating of the Notes and/or the Company is under publicly announced consideration for possible downgrade by any of the Rating Agencies) of any of the events listed below:

(A) in the event the Notes are rated by all three of the Rating Agencies on the Rating Date as Investment Grade, the rating of the Notes by any two of the three Rating Agencies shall be below Investment Grade;

(B) in the event the Notes are rated by any two, but not all three, of the three Rating Agencies on the Rating Date as Investment Grade, the rating of the Notes by any of such two Rating Agencies shall be below Investment Grade;

(C) in the event the Notes are rated by one, and only one, of the three Rating Agencies on the Rating Date as Investment Grade, the rating of the Notes by such Rating Agency shall be below Investment Grade; or

(D) in the event the Notes are (i) rated by less than three Rating Agencies or (ii) rated below Investment Grade by all three of the Rating Agencies on the Rating Date, the rating of the Notes by any Rating Agency shall be decreased by one or more gradations (including gradations within Rating Categories as well as between Rating Categories).

"**Register**" has the meaning assigned to such term in Section 2.05(a).

"**Registrar**" means Citibank, N.A., London Branch, initially, or any other registrar with respect to the Notes appointed pursuant to a Paying and Transfer Agent and Registrar Appointment Letter substantially in the form of Exhibit D.

"**Regulation S**" means Regulation S under the Securities Act.

"**Regulation S Certificate**" means a certificate substantially in the form of Exhibit G hereto.

"**Relevant Indebtedness**" means any indebtedness which is in the form of, or represented or evidenced by, bonds, notes, debentures, loan stock or other securities which for the time being are, or are intended to be or capable of being, quoted, listed or dealt in or traded on any stock exchange or over-the-counter or other securities market.

"**Relevant Jurisdiction**" has the meaning assigned to such term in Section 4.05.

"**Relevant Period**" means each period of twelve months ending on the last day of the Company's financial year and each period of six months ending on the last day of the first half of the Company's financial year.

"**Responsible Officer**" when used with respect to the Trustee, means any managing director, vice president, trust associate, relationship manager, transaction manager, client service manager, any trust officer or any other officer located at the corporate trust office who customarily performs functions similar to those performed by any persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such person's knowledge of and familiarity with the particular subject and in each such case, who shall have direct responsibility for the day to day administration of the Indenture.

"**RMB**" means yuan, the lawful currency of the PRC.

"**S&P**" means S&P Global Ratings and its affiliates.

"**second currency**" has the meaning assigned to such term in Section 9.03.

"**Security**" means any mortgage, charge, pledge, lien or other security interest including, without limitation, anything analogous to or which has the same effect as any of the foregoing under the laws of any jurisdiction.

"**Securities Act**" means the United States Securities Act of 1933, as amended.

"**Shareholder**" means a holder of Shares.

"**Shares**" means the equity shares in the Company.

"**Subsidiary**" means any entity whose financial statements at any time are required by US GAAP to be fully consolidated with those of the Company.

"**Trustee**" means the party named as such in the first paragraph of this Indenture or any successor trustee under this Indenture pursuant to Article 7.

"**US GAAP**" means the Generally Accepted Accounting Principles in the United States, as in effect from time to time.

"**U.S. Person**" has the meaning assigned to such term in Regulation S.

"**Voting Stock**" of a Person means all classes of Capital Stock of such Person then outstanding and normally entitled to vote in the election of directors, managers or trustees, as applicable, of such Person.

Section 1.02. *Rules of Construction.* Unless the context otherwise requires or except as otherwise expressly provided,

(a) an accounting term not otherwise defined has the meaning assigned to it in accordance with US GAAP;

(b) "herein," "hereof" and other words of similar import refer to this Indenture as a whole and not to any particular Section, Article or other subdivision;

(c) all references to Sections or Articles or Exhibits refer to Sections or Articles or Exhibits of or to this Indenture unless otherwise indicated; and

(d) references to agreements or instruments, or to statutes or regulations, are to such agreements or instruments, or statutes or regulations, as amended from time to time (or to successor statutes and regulations).

ARTICLE 2
ISSUE, EXECUTION, FORM AND REGISTRATION OF NOTES

Section 2.01. *Authentication and Delivery of Notes.* Upon the execution and delivery of this Indenture, or from time to time thereafter, Notes may be executed and delivered by the Company, initially in an aggregate principal amount outstanding of not more than US$300,000,000 (other than Notes issued pursuant to Section 2.08) to the Trustee for authentication, accompanied by an Officers' Certificate of the Company directing such authentication and specifying the amount of Notes to be authenticated, the applicable rate at which interest will accrue on such Notes, the date on which the original issuance of such Notes is to be authenticated, the date from which interest will begin to accrue, the date or dates on which interest on such Notes will be payable and the date on which the principal of such Notes will be payable and other terms relating to such Notes. The Trustee shall thereupon authenticate and deliver said Notes to or upon the written order of the Company (as set forth in such Officers' Certificate) signed by two Authorized Officers.

The Trustee shall have the right to decline to authenticate and deliver any Notes under this Section if the Trustee determines that such action may not lawfully be taken or if the Trustee determines that such action would expose the Trustee to personal liability, unless indemnity and/or security satisfactory to the Trustee , as applicable, against such liability is provided to the Trustee , as applicable.

Section 2.02. *Execution of Notes.* (a) The Notes shall be executed by or on behalf of the Company by the signature of an Authorized Officer of the Company. Such signatures may be the manual or facsimile signature of the present or any future Authorized Officers. With the delivery of this Indenture, the Company is furnishing, and from time to time thereafter, the Company may furnish to both the Trustee , a certificate substantially in the form of Exhibit C (an "**Authorization Certificate**") identifying and certifying the incumbency and specimen (or facsimile) signatures of the Authorized Officers. Until the Trustee receives a subsequent Authorization Certificate, the Trustee shall be entitled to conclusively rely on the last Authorization Certificate delivered to them for purposes of determining the Authorized Officers. Typographical and other minor errors or defects in any signature shall not affect the validity or enforceability of any Note which has been duly authenticated and delivered by or on behalf of the Trustee.

(b) In case Authorized Officers who shall have signed any of the Notes, shall cease to be such Authorized Officers before the Note shall be authenticated and delivered by or on behalf of the Trustee or disposed of by or on behalf of the Company, such Note nevertheless may be authenticated and delivered or disposed of as though the Persons who signed such Note had not ceased to be such Authorized Officers; and any Note may be signed on behalf of the Company by such Persons as, at the actual date of the execution of such Note, shall be Authorized Officers, although at the date of the execution and delivery of this Indenture any such Persons were not Authorized Officers.

Section 2.03. *Certificate of Authentication.* Only such Notes as shall bear thereon a certification of authentication substantially as set forth in the forms of the Notes in Exhibits A and B hereto, executed by the Trustee by manual signature of one of its authorized signatories, shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. Such certification by the Trustee upon any Note executed by or on behalf of the Company shall be conclusive evidence that the Note so authenticated has been duly authenticated and delivered hereunder and that the Holder is entitled to the benefits of this Indenture.

Section 2.04. *Form, Denomination and Date of Notes; Payments.* (a) The Notes and the certificates of authentication shall be substantially in the form set forth in Exhibits A and B. On the Original Issue Date, the Notes shall be issued in the form provided in Section 2.04(c). The Notes shall be numbered, lettered, or otherwise distinguished in such manner or in accordance with such plans as the Authorized Officers of the Company executing the same may determine with the approval of the Trustee. The Notes may be issued with appropriate insertions, omissions, substitutions and variations, and may have imprinted or otherwise reproduced thereon such legend or legends, not inconsistent with the provisions of this Indenture, as may be required to comply with any law or with any rules or regulations pursuant thereto, with the rules of any securities market in which the Notes are admitted to trading, or to conform to general usage.

(b) Each Note shall be dated the date of its authentication. Each Note shall bear interest from the date of issuance thereof or from the most recent Interest Payment Date to which interest has been paid or duly provided for and shall be payable on the dates specified on the face of the form of Note set forth as Exhibit B hereto. Interest on the Notes shall be calculated on the basis of a 360-day year comprised of twelve 30-day months.

(c) On the Original Issue Date, an appropriate Authorized Officer will execute and deliver to the Trustee one Regulation S global note representing the Notes (together with any other global notes issued after the Original Issue Date, the "**Global Notes**"), in definitive, fully registered form without interest coupons, in a denomination of US$200,000 or any amount in excess thereof which is an integral multiple of US$1,000, substantially in the form of Exhibit B hereto; all such Notes so executed and delivered to the Trustee pursuant to this subsection (c) shall be in an aggregate principal amount that shall equal the aggregate principal amount of the Notes that are to be issued on the Original Issue Date. The aggregate principal amount of the Global Notes may from time to time be increased or decreased by adjustments made on the records of Citibank Europe plc (the "**Common Depositary**") or its nominee.

(d) Each Global Note (i) shall be delivered by or on behalf of the Trustee to, and registered in the name of, the Common Depositary or its nominee for the accounts of Euroclear and Clearstream, and (ii) shall also bear a legend substantially to the following effect:

"THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION. NEITHER THIS NOTE NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS SUCH TRANSACTION IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION.

THE HOLDER OF THIS NOTE, BY ITS ACCEPTANCE HEREOF, AGREES ON ITS OWN BEHALF AND ON BEHALF OF ANY INVESTOR ACCOUNT FOR WHICH IT HAS PURCHASED NOTES, TO OFFER, SELL OR OTHERWISE TRANSFER SUCH NOTE, PRIOR TO THE DATE (THE "**RESALE RESTRICTION TERMINATION DATE**") THAT IS 40 DAYS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS NOTE (OR ANY PREDECESSOR OF SUCH NOTE), ONLY (A) TO THE COMPANY, (B) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES WITHIN THE MEANING OF REGULATION S UNDER THE SECURITIES ACT, OR (D) PURSUANT TO ANOTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, SUBJECT TO THE COMPANY'S AND THE PAYING AND TRANSFER AGENT'S RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (D) TO REQUIRE THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION AND/OR OTHER INFORMATION SATISFACTORY TO EACH OF THEM. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE HOLDER AFTER THE RESALE RESTRICTION TERMINATION DATE. BY ITS ACQUISITION HEREOF, THE HOLDER HEREOF REPRESENTS THAT IT IS NOT A U.S. PERSON NOR IS IT PURCHASING FOR THE ACCOUNT OF A U.S. PERSON AND IS ACQUIRING THIS NOTE IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH REGULATION S UNDER THE SECURITIES ACT.

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF CITIBANK EUROPE PLC, AS COMMON DEPOSITARY ("**COMMON DEPOSITARY**") FOR EUROCLEAR BANK SA/NV ("**EUROCLEAR**") AND CLEARSTREAM BANKING S.A. ("**CLEARSTREAM**") TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF THE NOMINEE OF THE COMMON DEPOSITARY OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE COMMON DEPOSITARY (AND ANY PAYMENT IS MADE TO THE COMMON DEPOSITARY OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE COMMON DEPOSITARY), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, THE COMMON DEPOSITARY, HAS AN INTEREST HEREIN.

THIS NOTE IS A GLOBAL NOTE WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF THE COMMON DEPOSITARY OR A NOMINEE THEREOF. THIS SECURITY MAY NOT BE EXCHANGEABLE IN WHOLE OR IN PART FOR A SECURITY REGISTERED, AND NO TRANSFER OF THIS NOTE IN WHOLE OR IN PART MAY BE REGISTERED, IN THE NAME OF ANY PERSON OTHER THAN SUCH COMMON DEPOSITARY OR A NOMINEE THEREOF, EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE."

Global Notes may be deposited with such other Common Depositary as the Company may from time to time designate in writing to the Trustee, and shall bear such legend as may be appropriate.

(e) If at any time the Common Depositary notifies the Company that it is unwilling or unable to continue as Common Depositary for the Global Notes, the Company shall appoint a successor Common Depositary with respect to such Global Notes. If (1) a successor Common Depositary is not appointed by the Company within 90 days, (2) either Euroclear or Clearstream, or a successor clearing system is closed for business for a continuous period of 14 days (other than by reason of holidays, statutory or otherwise) or announces an intention to permanently cease business or does in fact do so, or (3) any of the Notes has become immediately due and payable as a result of an Event of Default and the Company has received a written request from a Holder, the Company will issue Certificated Notes in registered form in exchange for the Global Note. Upon receipt of such notice from the Common Depositary or the Trustee, as the case may be, the Company will use its best efforts to make arrangements for the exchange of interests in the Global Note for Certificated Notes and cause the requested individual definitive Notes to be executed and delivered to the Registrar in sufficient quantities and authenticated by the Registrar or the Trustee for delivery to Holders. Persons exchanging interests in a Global Note for Certificated Notes will be required to provide the Trustee and the Registrar with written instruction and other information required by the Company and the Trustee and the Registrar to complete, execute and deliver such Certificated Notes. In all cases, Certificated Notes delivered in exchange for any Global Note or beneficial interests therein will be registered in the names, and issued in any approved denominations, requested by the relevant clearing system.

(f) Global Notes shall in all respects be entitled to the same benefits under this Indenture as Certificated Notes authenticated and delivered hereunder.

(g) The Person in whose name any Note is registered at the close of business on any Interest Record Date with respect to any Interest Payment Date shall be entitled to receive the interest, if any, payable on such Interest Payment Date notwithstanding any transfer or exchange of such Note subsequent to the Interest Record Date and prior to such Interest Payment Date.

Section 2.05. *Registration, Transfer and Exchange*. (a) The Notes are issuable only in registered form. The Company will keep at the office or agency to be maintained for the purpose as provided in Section 4.02, a register (the "**Register**") in which, subject to such reasonable regulations as it may prescribe, it will register, and will register the transfer of, Notes as provided in this Article. The name and address of the registered holder of each Note and the amount of each Note will be recorded in the Register. Such Register shall be in written form in the English language or in any other form capable of being converted into such form within a reasonable time. Such Register shall be open for inspection by or on behalf of the Trustee during normal business hours upon prior written request.

(b) Upon due presentation for registration of transfer of any Note, the Company shall execute and the Trustee shall authenticate and deliver in the name of the transferee or transferees a new Note or Notes in authorized denominations for a like aggregate principal amount.

(c) A Holder may register the transfer of a Note only by written application to the Registrar stating the name of the proposed transferee and otherwise complying with the terms of this Indenture. No such registration of transfer shall be effected until, and such transferee shall succeed to the rights of a Holder only upon, final acceptance and registration of the transfer by the Registrar in the Register. Prior to the registration of any transfer by a Holder as provided herein, the Company, the Trustee and any agent of any of them shall treat the Person in whose name the Note is registered as the owner thereof for all purposes whether or not the Note shall be overdue, and neither the Company, the Trustee, nor any such agent shall be affected by notice to the contrary. Furthermore, any Holder of a Global Note shall, by acceptance of such Global Note, agree that transfers of beneficial interests in such Global Note may be effected only through a book-entry system maintained by Euroclear and Clearstream (or their respective agents) and that ownership of a beneficial interest in the Note shall be required to be reflected in a book entry. At the option of the Holder, Notes may be exchanged for other Notes of any authorized denomination and of a like aggregate principal amount, upon surrender of the Notes to be exchanged to the Registrar. When Notes are presented to the Registrar with a request to register the transfer or to exchange them for an equal principal amount of Notes of other authorized denominations, the Registrar shall register the transfer or make the exchange as requested if the requirements for such transactions set forth herein are met. To permit registrations of transfers and exchanges, the Company shall execute and the Trustee shall authenticate Notes.

(d) Every Note presented or surrendered for registration of transfer or for exchange shall (if so required by the Company or the Registrar) be duly endorsed, or be accompanied by a written instrument of transfer duly executed, by the Holder thereof or his attorney duly authorized in writing in a form satisfactory to the Company and the Registrar.

(e) The Company may require payment of a sum sufficient to cover any transfer tax or other similar governmental charge that may be imposed in connection with any exchange or registration of transfer of Notes (other than any such transfer taxes or other similar governmental charge payable upon exchanges). No service charge to any Holder shall be made for any such transaction.

(f) The Company shall not be required to exchange or register a transfer of (1) any Notes for a period of 15 days immediately preceding the first mailing of notice of redemption of Notes to be redeemed or (2) any Notes called or being called for redemption.

(g) So long as the Global Notes remain outstanding and are held by or on behalf of the Common Depositary, transfer of beneficial interests in the Global Notes may be made only in accordance with the rules of Euroclear or Clearstream.

(h) Subject to Section 2.04(e), the Global Notes are not exchangeable for a Certificated Note or Certificated Notes.

(i) Notwithstanding any other provisions hereof, unless and until the Global Notes are exchanged for Certificated Notes, the Global Notes may be transferred, in whole, but not in part, only by the Common Depositary to its nominee or by a nominee of the Common Depositary or another nominee of the Common Depositary or by the Common Depositary or its nominee to a successor Common Depositary or a nominee of any such successor Common Depositary.

(j) Prior to the expiration of the Resale Restriction Termination Date, the transferor of any beneficial interest in the Global Notes will be required to deliver a duly completed Regulation S Certificate to the Trustee prior to such transfer. Upon and after the expiration of the Resale Restriction Termination Date, no such certification will be required with respect to such transfers.

(k) All Notes issued upon any transfer or exchange of Notes shall be valid obligations of the Company, evidencing the same debt and entitled to the same benefits under this Indenture, as the Notes surrendered upon such transfer or exchange.

(l) Claims against the Company for the payment of principal of, premium, if any, or interest on, the Notes will become void unless presentation for payment is made as required in this Indenture within a period of six years.

Section 2.06. *Book-Entry Provisions for Global Notes.* Ownership of beneficial interests in the Global Notes (the "**book-entry interests**") will be limited to persons that have accounts with Euroclear and/or Clearstream or persons that may hold interests through such participants. Book-entry interests will be shown on, and transfers thereof will be effected only through, records maintained in book-entry form by Euroclear and Clearstream and their participants.

Except as provided in Section 2.04(e), the book-entry interests will not be held in definitive form. Instead, Euroclear and/or Clearstream will credit on their respective book-entry registration and transfer systems a participant's account with the interest beneficially owned by such participant. The laws of some jurisdictions may require that certain purchasers of securities take physical delivery of such securities in definitive form. The foregoing limitations may impair the ability to own, transfer or pledge book-entry interests.

So long as the Notes are held in global form, the Common Depositary (or its nominee) will be considered the sole holder of the Global Notes for all purposes under this Indenture and "holders" of book-entry interests will not be considered the owners or "Holders" of Notes for any purpose. As such, participants must rely on the procedures of Euroclear and Clearstream and indirect participants must rely on the procedures of the participants through which they own book-entry interests in order to transfer their interests in the Notes or to exercise any rights of Holders under this Indenture.

None of the Company, the Trustee, the Paying and Transfer Agent, the Registrar or any of their respective agents will have any responsibility or be liable for any aspect of the records relating to the book-entry interests. The Notes are not issuable in bearer form.

Section 2.07. *Mutilated, Defaced, Destroyed, Stolen and Lost Notes*. (a) The Company shall execute and deliver to the Paying and Transfer Agent Certificated Notes in such amounts and at such times as to enable the Paying and Transfer Agent to fulfill its responsibilities under this Indenture and the Notes.

(b) In case any Note shall become mutilated, defaced or be apparently destroyed, lost or stolen, upon the request of the registered holder thereof, the Company in its discretion may execute, and, upon the written request of Authorized Officers of the Company, the Trustee shall authenticate and deliver, a new Note, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated or defaced Note, or in lieu of and substitution for the Note so apparently destroyed, lost or stolen. In every case the applicant for a substitute Note shall furnish to the Company and the Trustee, and any agent of the Company or the Trustee such security or indemnity as may be required by each of them to indemnify and defend and to save each of them harmless and, in every case of destruction, loss or theft, evidence to their satisfaction of the apparent destruction, loss or theft of such Note and of the ownership thereof. Upon the issuance of any substitute Note, such Holder, if so requested by the Company or the Trustee, or any agent thereof, will pay a sum sufficient to cover any stamp duty, tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee or its agent(s)) connected with the preparation and issuance of the substitute Note. The Trustee is hereby authorized, in accordance with and subject to the foregoing conditions in this clause (b), to authenticate and deliver, or cause the authentication and delivery of, from time to time, Notes in exchange for or in lieu of Notes, respectively, which become mutilated, defaced, destroyed, stolen or lost. Each Note delivered in exchange for or in lieu of any Note shall carry all the rights to principal, premium (if any), interest (including rights to accrued and unpaid interest and Additional Amounts) which were carried by such Note.

(c) Mutilated or defaced Certificated Notes must be surrendered before replacements will be issued. In the event any such mutilated, defaced, destroyed, lost or stolen certificate has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new certificate, pay such Notes.

Section 2.08. *Further Issues.* Subject to the covenants described in Article 4, the Company may, from time to time, without notice to or the consent of the Holders, create and issue additional notes (each an "**Additional Note**") having the same terms and conditions as the Notes in all respects (or in all respects except for the first payment of interest on them) (a "**Further Issue**") so that such further issue shall be consolidated and form a single series with the outstanding securities of any series (including the Notes) or upon such terms as the Company may determine at the time of their issue; *provided* that so long as may be required by the applicable provisions of the Securities Act or the procedures of the Common Depositary, Euroclear or Clearstream, such Additional Notes shall be represented by one Global Note in accordance with Section 2.04(c) and subject to applicable transfer or other restrictions. In connection with any such issuance of Additional Notes, the Company shall deliver an Officers' Certificate to the Trustee directing the Trustee to authenticate and deliver Additional Notes in an aggregate principal amount specified therein and the Trustee , in accordance with such Officers' Certificate, shall authenticate and deliver such Additional Notes. The aggregate principal amount of Notes which may be authenticated and delivered under this Indenture is unlimited.

Section 2.09. *Cancellation of Notes; Disposition Thereof.* All Notes surrendered for payment, redemption, registration of transfer or exchange, if surrendered to the Company or any agent of the Company or the Trustee shall be delivered to the Paying and Transfer Agent for cancellation or, if surrendered to the Paying and Transfer Agent shall be canceled by it; and no Notes shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Paying and Transfer Agent shall dispose of canceled Notes held by it in accordance with its customary procedures, and (upon written request by the Company) deliver a certificate of disposition to the Company. All Notes purchased by or on behalf of the Company or its Subsidiaries shall be surrendered for cancellation to the Paying Agent and, upon surrender thereof, all such Notes shall be cancelled forthwith. Any Notes so surrendered for cancellation may not be reissued or resold and the obligations of the Company in respect of any such Notes shall be discharged. If the Company shall acquire any of the Notes, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Notes unless and until the same are delivered to the Paying and Transfer Agent for cancellation.

Section 2.10. *ISIN and Common Code Numbers.* The Company in issuing the Notes may use ISIN and Common Code numbers (if then generally in use), and, if so, the Trustee, the Paying and Transfer Agent and the Registrar shall use for the Notes ISIN and Common Code numbers in notices of redemption as a convenience to Holders; *provided* that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers. The Company will promptly notify the Trustee, the Paying and Transfer Agent and the Registrar of any change in the ISIN and Common Code numbers.

ARTICLE 3
REDEMPTION

Section 3.01. *Redemption for Taxation Reasons.* The Notes may be redeemed at the option of the Company in whole, but not in part, at any time, on giving not less than 30 nor more than 60 days' notice to the Holders (which notice shall be irrevocable), at their principal amount (together with interest accrued to but excluding the date fixed for redemption), if (i) the Company has or will become obliged to pay Additional Amounts as provided or referred to in Section 4.05 as a result of any change in, or amendment to, the laws or regulations of a Relevant Jurisdiction, or any change in the application or official interpretation of such laws or regulations, which change or amendment becomes effective on or after April 9, 2019, and (ii) such obligation cannot be avoided by the Company taking reasonable measures available to it (provided that reincorporation in another jurisdiction shall not be considered a reasonable measure), *provided that* no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Company would be obliged to pay such Additional Amounts were a payment in respect of the Notes then due. Prior to the publication of any notice of redemption pursuant to this Section 3.01, the Company shall deliver to the Trustee a certificate signed by two directors of the Company stating that the Company is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Company so to redeem have occurred, and an opinion of independent legal advisers of recognized standing in the Relevant Jurisdiction to the effect that the Company has or will become obliged to pay such Additional Amounts as a result of such change or amendment.

Section 3.02. *[Reserved]*.

Section 3.03. *Repurchase of Notes upon a Change of Control Triggering Event.* (a) If a Change of Control Triggering Event occurs, unless the Company has exercised its right to redeem the Notes as described in Section 3.01, it will be required to make an offer to repurchase all or, at the holder's option, any part (equal to US$200,000 or multiples of US$1,000 in excess thereof), of each holder's Notes pursuant to the offer described below (the "**Change of Control Offer**"), *provided* that a holder may not exercise its option to require the Company to make an offer to repurchase the Notes in part if it would result in the principal amount of any unpurchased portion of the Notes held by such holder to be less than US$200,000. In the Change of Control Offer, the Company will be required to offer payment in cash equal to 101% of the principal amount of the Notes repurchased plus accrued and unpaid interest, if any, on the Notes repurchased to, but not including, the date of purchase (the "**Change of Control Payment**").

(b) Within 30 days following any Change of Control Triggering Event, the Company will be required to give notice to holders of the Notes, describing the transaction or transactions that constitute the Change of Control Triggering Event and offering to repurchase the Notes on the date specified in the notice, which date will be no earlier than 30 days and no later than 60 days from the date such notice is mailed (the "**Change of Control Payment Date**"), pursuant to the procedures required by the Notes and described in such notice. On the Change of Control Payment Date, the Company will be required, to the extent lawful, to accept for payment all Notes properly tendered pursuant to the Change of Control Offer. One business day prior to the Change of Control Payment Date, the Company shall deposit with a tender agent (the "**Tender Agent**") an amount equal to the Change of Control Payment in respect of all Notes properly tendered;

(c) The Tender Agent will be required to promptly mail, to each holder who properly tendered the Notes, the purchase price for such Notes properly tendered, and the Trustee will be required to promptly authenticate and mail (or cause to be transferred by book-entry) to each such holder a new Note equal in principal amount to any unpurchased portion of the Notes surrendered, if any; provided that each new Note will be in a principal amount of US$200,000 or a multiple of US$1,000 in excess thereof.

(d) The Company will not be required to make a Change of Control Offer upon a Change of Control Triggering Event if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for an offer made by the Company and such third party purchases all Notes properly tendered and not withdrawn under its offer. In the event that such third party terminates or defaults its offer, the Company will be required to make a Change of Control Offer treating the date of such termination or default as though it were the date of the Change of Control Triggering Event.

(e) The Company will comply with the requirements of Rule 14e-1 under the Exchange Act, to the extent applicable, and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the repurchase of the Notes as a result of a Change of Control Triggering Event. To the extent that the provision of any such securities laws or regulations conflicts with the Change of Control Offer provisions of the Notes, the Company will comply with those securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control Offer provisions of the Notes by virtue of any such conflict.

Section 3.04. *Purchase*. (a) The Company and its Subsidiaries may at any time purchase Notes in the open market or otherwise at any price. In determining whether the Holders of the required principal amount of Notes have concurred in any direction, waiver or consent, Notes owned by the Company or any Subsidiary, will be considered as though not outstanding, except that for the purposes of determining whether the Trustee will be protected in relying on any such direction, waiver or consent, only Notes in respect of which the Trustee has received an Officers' Certificate confirming such ownership will be so disregarded.

ARTICLE 4
COVENANTS

Section 4.01. *Payment of Notes.* (a) The Company shall pay the principal of, any premium on (if any) and interest, and Additional Amounts, if any, on the Notes on the dates and in the manner provided in the Notes and this Indenture. Not later than 9:00 a.m. London time one Business Day prior to the Interest Payment Date, the due date of any principal on any Notes or the redemption date pursuant to Section 3.03 (each a "**Payment Date**"), the Company shall pay or cause to be paid to the account of the Paying and Transfer Agent at the Principal Office, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts, in immediately available funds, an amount which shall be sufficient to pay the aggregate amount of interest, principal or premium or all of such amounts, as the case may be, becoming due in respect of the Notes on such Payment Date; *provided* that if the Company or any Affiliate of the Company is acting as the Paying and Transfer Agent or the Registrar, it shall, on or before each due date, segregate and hold in a separate trust fund for the benefit of the Holders a sum of money sufficient to pay such amounts until paid to such Holders or otherwise disposed of as provided in this Indenture. In each case the Company shall promptly notify the Trustee and the Paying and Transfer Agent of its compliance with this Section 4.01(a). The Company shall procure that, before 9:00 a.m. (London time) on the third Business Day before each Payment Date, the bank effecting payment for it confirms by tested telex or authenticated SWIFT message to the Paying and Transfer Agent the payment instructions relating to such payment. The Paying and Transfer Agent shall not be bound to make any payment until it has received the full amount due to be paid to it pursuant to this Section 4.01.

(b) An installment of principal, premium or interest will be considered paid on the date due if the Paying and Transfer Agent, other than the Company or any Affiliate of the Company, holds on that date money designated for and sufficient to pay the installment. If the Company or any Affiliate of the Company acts as Paying and Transfer Agent, an installment of principal or interest will be considered paid on the due date only if paid to the Holders.

(c) The Paying and Transfer Agent, which will include the Company or any Affiliate of the Company if it is acting as Paying and Transfer Agent will make payments in respect of the Notes represented by the Global Notes by wire transfer of immediately available funds to the accounts specified by the Holders of the Global Notes. With respect to Certificated Notes, the Paying and Transfer Agent will make all payments by wire transfer of immediately available funds to the accounts specified by the Holders thereof or, if no such account is specified, by mailing (at the expense of the Company) a check to each Holder's registered address; *provided* that if the Company or any Affiliate of the Company is acting as Paying and Transfer Agent, it shall make such payment to the Holders as specified above.

(d) At least three Business Days prior to the first Payment Date and, if there has been any change with respect to the matters set forth in the below-mentioned certificate, at least three Business Days prior to each Payment Date thereafter, the Company shall furnish the Paying and Transfer Agent with an Officers' Certificate instructing the Paying and Transfer Agent as to any circumstances in which payments of principal of, or interest or premium on, the Notes due on such date shall be subject to deduction or withholding for, or on account of, any Taxes described in Section 4.05 and the rate of any such deduction or withholding. If any such deduction or withholding shall be required and if the Company therefore becomes liable to pay Additional Amounts, if any, pursuant to Section 4.05 then at least three Business Days prior to each Payment Date, the Company shall furnish the Paying and Transfer Agent with a certificate which specifies the amount required to be withheld on such payment to Holders of the Notes, and the Additional Amounts, if any, due to the Holders of the Notes, and at least one Business Day prior to such Payment Date, will pay to the Paying and Transfer Agent such Additional Amounts, if any, as shall be required to be paid to such Holders.

(e) Whenever the Company appoints a Paying and Transfer Agent other than the Trustee for the purpose of paying amounts due in respect of the Notes, it will cause such Paying and Transfer Agent to execute and deliver to the Trustee an instrument substantially in the form of Exhibit D hereof in which such agent shall agree with the Company, among other things, to be bound by and observe the provisions of this Indenture (including the Notes). The Company shall cause each Paying and Transfer Agent other than the Trustee to execute and deliver to the Trustee an instrument in which such Paying and Transfer Agent shall agree with the Trustee,

(i) that it will hold all sums received by it as such Paying and Transfer Agent for the payment of the principal of, or premium or interest on, the Notes (whether such sums have been paid to it by or on behalf of the Company or by any other obligor on the Notes) for the benefit of the Holders or of the Trustee;

(ii) that it will give the Trustee written notice of any failure by the Company (or by any other obligor on the Notes) to make any payment of the principal, or premium or interest on, the Notes and any other payments to be made by or on behalf of the Company under this Indenture, when the same shall be due and payable; and

(iii) that it will pay any such sums so held by it to the Trustee upon the Trustee's written request at any time during the continuance of a failure referred to in clause (ii) above.

Anything in this Section 4.01 to the contrary notwithstanding, the Company may at any time, for the purpose of obtaining a satisfaction and discharge of this Indenture or for any other reason, pay or cause to be paid to the Trustee all sums held by the Company (in trust) or any Paying and Transfer Agent hereunder, as required by this Section 4.01 and such sums shall be held by the Trustee upon the trusts herein contained. If the Paying and Transfer Agent shall pay all sums held to the Trustee as required under this Section 4.01, the Paying and Transfer Agent shall have no further liability for the money so paid over to the Trustee.

Section 4.02. *Maintenance of Office or Agency.* (a) The Company shall maintain an office or agency where Notes may be surrendered for registration of transfer or exchange or for presentation for payment and where notices and demands to or upon the Company in respect of the Notes and this Indenture may be served. The Company hereby initially designates the Principal Office as such office of the Company. The Company shall give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. If at any time the Company fails to maintain any such required office or agency or fails to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served to the Trustee.

(b) The Company may also from time to time designate one or more other offices or agencies where the Notes may be surrendered or presented for any of such purposes and may from time to time rescind such designations; *provided*, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in each place where principal of, and interest or premium on, any Notes are payable. The Company shall give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

(c) The Company has initially appointed the Paying and Transfer Agent and the Registrar listed in Exhibit F.

Section 4.03. *Negative Pledge*. So long as any Note remains outstanding, the Company will not, and will ensure that none of its Subsidiaries will create, or have outstanding, any Security upon the whole or any part of its present or future undertaking, assets or revenues (including any uncalled capital) to secure any Relevant Indebtedness, or any guarantee or indemnity in respect of any Relevant Indebtedness, without at the same time or prior thereto according to the Notes the same security as is created or subsisting to secure any such Relevant Indebtedness, guarantee or indemnity or such other security as shall be approved by a majority in aggregate principal amount of the outstanding Notes.

Section 4.04. *Financial Covenants.* (a) For so long as any Note remains outstanding, the Company shall not directly or indirectly permit:

(i) the Dividend with respect to any fiscal year to be more than 30% of Net Profit After Tax per Annum with respect to the same fiscal year; and

(ii) the ratio of Adjusted EBITDA to Consolidated Interest Expense for any Relevant Period to be less than 2.0:1; provided that if Consolidated Interest Expense for any Relevant Period is equal to or less than zero, the Company shall be deemed to comply with this subclause (ii).

The financial covenants set out in this Section 4.04 shall be calculated in accordance with US GAAP and tested by reference to the audited (or, as the case may be, unaudited) annual consolidated financial statements or interim consolidated financial information of the Company as at the end of each Relevant Period.

(b) So long as any of the Notes remain outstanding, the Company will provide to the Trustee (i) within 120 days after the close of each fiscal year, an Officers' Certificate stating the ratio of Adjusted EBITDA to Consolidated Interest Expense with respect to the two most recent fiscal semi-annual periods and showing in reasonable detail the calculation of the ratio of Adjusted EBITDA to Consolidated Interest Expense, including the arithmetic computations of each component of the ratio of Adjusted EBITDA to Consolidated Interest Expense, which shall include a copy of the Company's financial results announcements as published on Form 6-K for such two fiscal semiannual periods showing the arithmetic computation of Adjusted EBITDA,with a certificate from the Company's external auditors verifying the accuracy and correctness of the calculation and arithmetic computation, *provided* that the Company shall not be required to provide such auditor certification if its external auditors refuse to provide such certification; and (ii) as soon as possible and in any event within 30 days after the Company becomes aware of the occurrence of an Event of Default, an Officers' Certificate setting forth the details of the Event of Default, and the action which the Company proposes to take with respect thereto.

Section 4.05. *Additional Amounts.* All payments of principal, premium and interest by or on behalf of the Company in respect of the Notes shall be made free and clear of, and without withholding or deduction for, any taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or within the United States of America, the Cayman Islands, Hong Kong or the PRC or any authority therein or thereof having power to tax (each a "**Relevant Jurisdiction**"), unless such withholding or deduction is required by law. If the Company is required to make a deduction or withholding in respect of tax of a Relevant Jurisdiction, the Company shall pay such additional amounts ("**Additional Amounts**") as will result in receipt by the Holders of such amounts as would have been received by them had no such withholding or deduction been required, except that no Additional Amounts shall be payable:

(i) for or on account of:

(A) any tax that would not have been imposed but for:

(1) the existence of any present or former connection between the holder or beneficial owner of such Note, as the case may be, and the Relevant Jurisdiction, including without limitation, such holder or beneficial owner being or having been a citizen or resident of the Relevant Jurisdiction, being or having been treated as a resident of the Relevant Jurisdiction, being or having been present or engaged in a trade or business in the Relevant Jurisdiction or having or having had a permanent establishment in the Relevant Jurisdiction, other than merely holding such Note or the receipt of payments or enforcing rights thereunder;

(2) the failure of the holder or beneficial owner of such Note to comply with a timely request of the Company addressed to such holder or beneficial owner to provide information concerning such holder's or beneficial owner's nationality, residence, identity or connection with the Relevant Jurisdiction;

(3) the presentation of such Note (where presentation is required) more than 30 days after the later of the date on which the payment of the principal of, or interest on, such Note, as applicable, became due and payable pursuant to the terms thereof or was made or duly provided for, except to the extent that the holder thereof would have been entitled to such Additional Amounts if it had presented such Note for payment on any date within such 30-day period; or

(4) the presentation of such Note (where presentation is required) for payment in the Relevant Jurisdiction, unless such Note could not have been presented for payment elsewhere;

(B) any estate, inheritance, gift, sale, transfer, exercise, personal property, net income or similar tax;

(C) any taxes that are payable other than by withholding or deduction from payments of principal of, or interest on, the Notes;

(D) any tax, assessment, withholding or deduction required by sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986, as amended ("**FATCA**"), any current or future Treasury Regulations or rulings promulgated thereunder, any intergovernmental agreement between the United States and any other jurisdiction to implement FATCA, any law, regulation or other official guidance enacted in any jurisdiction implementing FATCA or an intergovernmental agreement with respect thereto, or any agreement with the U.S. Internal Revenue Service under FATCA; or

(E) any combination of taxes referred to in the preceding clauses (A), (B), (C) and (D); or

(ii) with respect to any payment of the principal of, or interest on, such Note to or for the account of a fiduciary, partnership or other fiscally transparent entity or any other person (other than the sole beneficial owner of such payment) to the extent that a beneficiary or settlor with respect to that fiduciary, or a partner or member of that partnership or fiscally transparent entity or a beneficial owner with respect to such other person, as the case may be, would not have been entitled to such additional amounts had such beneficiary, settlor, partner, member or beneficial owner held directly the Note with respect to which such payment was made.

Section 4.06. *Undertaking relating to the NDRC*. The Company undertakes to file or cause to be filed with the NDRC, within 10 NDRC Registration Business Days after April 15, 2019, the requisite information and documents in accordance with the Notice on Promoting the Reform of the Filing and Registration System for Issuance of Foreign Debt by Corporates ([illegible][2015] 2044 [illegible]))promulgated by the NDRC on September 14, 2015 which came into effect immediately (the "**NDRC Post-Issuance Filing**"). The Company shall complete the Post-Issuance Filing and comply with all applicable PRC laws and regulations in relation to the issue of the Notes. The Company shall within 15 NDRC Registration Business Days after submission of such NDRC Post-Issuance Filing provide the Trustee with a certificate in English signed by an authorized signatory of the Company confirming the submission of the NDRC Post-Issuance Filing (on which the Trustee may conclusively rely as to such compliance). The Trustee shall have no obligation to monitor or assist with or ensure the completion of the NDRC Post-Issuance Filing on or before the deadline referred to above or to verify the accuracy, validity and/or genuineness of any documents in relation to or in connection with the NDRC Post-Issuance Filing, and shall not be liable to the Holders or any other person for not doing so.

Section 4.07. *No Payments for Consents.* The Company will not, and shall not permit any of its subsidiaries to, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any Holder for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the Indenture or the Notes unless such consideration is offered to be paid or is paid to all Holders that consent, waive or agree to amend such term or provision within the time period set forth in the solicitation documents relating to such consent, waiver or amendment. Notwithstanding the foregoing, in any offer or payment of consideration for, or as an inducement to, any consent, waiver or amendment of any of the terms or provisions of the Indenture or the Notes in connection with an exchange or tender offer, the Company may exclude (i) Holders or beneficial owners of the Notes that are not institutional "accredited investors" as defined in Rule 501 under the Securities Act, and (ii) Holders or beneficial owners of the Notes in any jurisdiction where the inclusion of such Holders or beneficial owners would require the Company to comply with the registration requirements or other similar requirements under any securities laws of such jurisdiction, or the solicitation of such consent, waiver or amendment from, or the granting of such consent or waiver, or the approval of such amendment by, Holders or beneficial owners in such jurisdiction would be unlawful, in each case as determined by the Company in its sole discretion.

ARTICLE 5
CONSOLIDATION, MERGER AND SALE OF ASSETS

Section 5.01. *Consolidation, Merger and Sale of Assets.* The Company shall not consolidate with or merge with or into, or sell, convey, transfer or lease all or substantially all of the properties and assets of the Company and its Subsidiaries taken as a whole on the consolidated basis to another person, unless (i) the resulting, surviving or transferee person (if not the Company) (the "**Surviving Person**") is a corporation organized and existing under the laws of the United States of America, any State thereof, the District of Columbia, the Cayman Islands, the British Virgin Islands, Bermuda or Hong Kong and such corporation (if not the Company) expressly assumes all of Company's obligations under the Notes and the Indenture (including, for the avoidance of doubt, the obligation to pay Additional Amounts as set forth in Section 4.03); and (ii) immediately after giving effect to such transaction, no default or event of default has occurred and is continuing under the Notes. Upon any such consolidation, merger or sale, conveyance, transfer or lease, the resulting, surviving or transferee person (if not the Company) shall succeed to, and may exercise every right and power of, the Company under the Notes and the Indenture, and the Company shall be discharged from its obligations under the Notes and the Indenture except in the case of any such lease.

ARTICLE 6
DEFAULT AND REMEDIES

Section 6.01. *Events of Default.* Each of the following events is an "Event of Default" in this Indenture:

(a) default in any payment of interest or additional amounts, if any, on any of the Notes when due and payable and the default continues for a period of 30 days;

(b) default in the payment of principal of any of the Notes when due and payable at its stated maturity, upon any required repurchase, upon declaration of acceleration or otherwise;

(c) failure to give a change of control notice as described under Section 4.02 when due, and such failure continues for a period of five Business Days;

(d) failure to comply with the Company's obligations under Sections 4.03, 4.04, 4.06 and 5.01, which default is incapable of remedy or is not remedied within 30 days after notice of such default shall have been given to the Company by any Holder;

(e) default by the Company or any of its "significant subsidiaries" as defined in Article 1, Rule 1-02 of Regulation S-X, with respect to any mortgage, agreement or other instrument under which there may be outstanding, or by which there may be secured or evidenced, any Indebtedness in excess of US$15 million (or the foreign currency equivalent thereof) in the aggregate of the Company and/or any such significant subsidiary, whether such Indebtedness now exists or shall hereafter be created (i) resulting in such Indebtedness becoming or being declared due and payable prior to its stated maturity (including, without limitation, a default in the payment of any interest on such Indebtedness resulting in such Indebtedness becoming or being declared due and payable prior to its stated maturity), or (ii) constituting a failure to pay the principal of any such debt when due and payable (after any applicable grace period) at its stated maturity, upon required repurchase, upon declaration of acceleration or otherwise;

(f) an involuntary case or other proceeding is commenced against the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, with respect to it or its debts under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect seeking the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, or all or substantially all of the property and assets of the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, and such involuntary case or other proceeding remains undismissed and unstayed for a period of 60 consecutive days; or an order for relief is entered against the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, under any applicable bankruptcy, insolvency or other similar law as now or hereafter in effect;

(g) the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X (A) commences a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (B) consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, or for all or substantially all of the property and assets of the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X or (iii) effects any general assignment for the benefit of creditors;

(h) a final judgment for the payment of US$15 million (or the foreign currency equivalent thereof) or more (excluding any amounts covered by insurance) rendered against the Company or any of its significant subsidiaries, as defined in Article 1, Rule 1-02 of Regulation S-X, which judgment is not paid, bonded, stayed or otherwise discharged or stayed within 60 days after (i) the date on which the right to appeal thereof has expired if no such appeal has commenced, or (ii) the date on which all rights to appeal have been extinguished.

For the avoidance of doubt, each of our consolidated affiliated entities will be deemed to be a “subsidiary” for purposes of the definition of “significant subsidiary” in Article 1, Rule 1-02 of Regulation S-X.

Section 6.02. *Acceleration.* If an Event of Default (other than an Event of Default specified in clause (f) or (g) of Section 6.01) occurs and is continuing under this Indenture, the Trustee or the Holders of at least 25.0% in aggregate principal amount of the Notes then outstanding, by written notice to the Company (and to the Trustee if such notice is given by the Holders), may, and the Trustee at the written request of such Holders (subject to being indemnified and/or secured to its satisfaction (including by way of pre-funding)) shall, declare the principal of, premium, if any, and accrued and unpaid interest on the Notes to be immediately due and payable. Upon a declaration of acceleration, such principal of, premium, if any, and accrued and unpaid interest shall be immediately due and payable. If an Event of Default specified in clause (f) or (g) of Section 6.01 occurs with respect to the Company or any Significant Subsidiary, the principal of, premium, if any, and accrued and unpaid interest on the Notes then outstanding shall automatically become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

Section 6.03. *Other Remedies*. If an Event of Default occurs and is continuing, the Trustee may pursue, in its own name or as trustee of an express trust (and provided it is indemnified and/or secured (including by way of pre-funding) to its satisfaction), any available remedy by proceeding at law or in equity to collect the payment of principal of and interest on the Notes or to enforce the performance of any provision of the Notes or this Indenture. The Trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding. Subject to the provisions of this Indenture, the Trustee is under no obligation to exercise any of its rights or powers under this Indenture unless indemnity and/or security (including by way of pre-funding) satisfactory to the Trustee against any loss, liability or expense shall have been offered to the Trustee.

Section 6.04. *Waiver of Past Defaults.* The Holders of at least a majority in principal amount of the outstanding Notes by written notice to the Company and to the Trustee may on behalf of the Holders waive all past defaults and rescind and annul a declaration of acceleration and its consequences if: (a) all existing Events of Default, other than the nonpayment of the principal of, premium, if any, and interest on the Notes that have become due solely by such declaration of acceleration, have been cured or waived, and (b) the rescission would not conflict with any judgment or decree of a court of competent jurisdiction. Upon such waiver, the Default will cease to exist, and any Event of Default arising therefrom will be deemed to have been cured, but no such waiver will extend to any subsequent or other Default or impair any right consequent thereon.

Section 6.05. *Control by Majority.* The Holders of at least a majority in aggregate principal amount of the outstanding Notes may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture, that may involve the Trustee in personal liability, or that the Trustee determines may be unduly prejudicial to the rights of Holders not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from Holders. In addition, the Trustee will not be required to expend its own funds in following such direction if it does not believe that reimbursement or satisfactory indemnification and/or security (including by way of pre-funding) is assured to it.

Section 6.06. *Limitation on Suits.* A Holder may not institute any proceeding, judicial or otherwise, with respect to this Indenture or the Notes, or for the appointment of a receiver or trustee, or for any other remedy under this Indenture or the Notes, unless:

(a) the Holder has previously given the Trustee written notice of a continuing Event of Default;

(b) the Holders of at least 25.0% in aggregate principal amount of outstanding Notes make a written request to the Trustee to pursue the remedy;

(c) such Holder or Holders offer the Trustee indemnity and/or security (including by way of pre-funding) satisfactory to the Trustee against any costs, liability or expense to be incurred in compliance with such written request;

(d) the Trustee does not comply with the request within 60 days after receipt of the written request and the offer of indemnity and/or security (including by way of pre-funding); and

(e) during such 60-day period, the Holders of a majority in aggregate principal amount of the outstanding Notes do not give the Trustee a direction that is inconsistent with the written request.

Section 6.07. *Rights of Holders to Receive Payment.* Notwithstanding anything to the contrary, the right of any Holder to receive payment of the principal of, premium, if any, or interest on, such Note, or to bring suit for the enforcement of any such payment, on or after the due date expressed in the Notes, shall not be impaired or affected without the consent of the Holder.

Section 6.08. *Compliance Certificate.* The Company will submit an Officers' Certificate to the Trustee, in substantially the form attached hereto as Exhibit E, on or before a date not more than 120 days after the end of each fiscal year, that a review has been conducted of the activities of the Company and the Company's performance under this Indenture and that the Company has fulfilled all obligations hereunder, or, if there has been a default in the fulfillment of any such obligation, specifying each such default and the nature and status thereof.

Section 6.09. *Collection Suit by Trustee.* If an Event of Default in payment specified in Section 6.01(a) or Section 6.01(b) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust for the whole amount remaining unpaid, together with interest on overdue principal or premium and, to the extent lawful, overdue installments of interest, in each case at the rate specified in the Notes, and such further amount as is sufficient to cover the costs and expenses of collection, including the compensation, expenses, disbursements and advances of the Trustee, its agents and counsel and any other amounts due the Trustee hereunder.

Section 6.10. *Trustee May File Proofs of Claim.* The Trustee may file proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee hereunder) and the Holders allowed in any judicial proceedings relating to the Company or their respective creditors or property, and is entitled and empowered to collect, receive and distribute any money, securities or other property payable or deliverable upon conversion or exchange of the Notes or upon any such claims. Any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, if the Trustee consents to the making of such payments directly to the Holders, to pay to the Trustee any amount due to it for the compensation, expenses, disbursements and advances of the Trustee, its agent and counsel, and any other amounts due the Trustee hereunder. Nothing in this Indenture will be deemed to empower the Trustee to authorize or consent to, or accept or adopt on behalf of any Holder, any plan of reorganization, arrangement, adjustment or composition affecting the Notes or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.11. *Priorities.* If the Trustee collects any money pursuant to this Article, it shall pay out the money in the following order:

First, to the Trustee, Agents and other agent the Trustee may engage to the extent necessary to reimburse them for any expenses incurred in connection with the collection or distribution of such amounts held or realized and fees and expenses incurred in connection with carrying out its functions under this Indenture (including properly incurred legal fees and expenses and indemnity payments);

Second, to the Trustee for the benefit of Holders; and

Third, any surplus remaining after such payments will be paid to the Company or to whomever may be lawfully entitled thereto.

The Trustee, upon written notice to the Company, may fix a record date and payment date for any payment to Holders pursuant to this Section 6.09.

Section 6.12. *Restoration of Rights and Remedies*. If the Trustee or any Holder has instituted a proceeding to enforce any right or remedy under this Indenture and the proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to the Holder, then, subject to any determination in the proceeding, the Company, the Trustee and the Holders will be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Company, the Trustee and the Holders will continue as though no such proceeding had been instituted.

Section 6.13. *Undertaking for Costs.* In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as Trustee, a court may require any party litigant in such suit (other than the Trustee) to file an undertaking to pay the costs of the suit, and the court may assess reasonable costs, including reasonable attorneys' fees, against any party litigant (other than the Trustee) in the suit having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section 6.13 does not apply to a suit by a Holder to enforce payment of principal of or interest on any Note on the respective due dates, or a suit by Holders of more than 10% in principal amount of the outstanding Notes.

Section 6.14. *Rights and Remedies Cumulative.* No right or remedy conferred or reserved to the Trustee or to the Holders under this Indenture is intended to be exclusive of any other right or remedy, and all such rights and remedies are, to the extent permitted by law, cumulative and in addition to every other right and remedy hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or exercise of any right or remedy hereunder, or otherwise, will not prevent the concurrent assertion or exercise of any other right or remedy.

Section 6.15. *Delay or Omission Not Waiver.* No delay or omission of the Trustee or of any Holder to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article 6 or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 6.16. *Waiver of Stay, Extension or Usury Laws.* The Company covenants, to the extent that it may lawfully do so, that it shall not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay or extension law or any usury law or other law that would prohibit or forgive the Company from paying all or any portion of the principal of, or premium or interest on the Notes as contemplated herein, wherever enacted, now or at any time hereafter in force, or that may affect the covenants or the performance of this Indenture. The Company hereby expressly waives, to the extent that it may lawfully do so, all benefit or advantage of any such law and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

ARTICLE 7
THE AGENTS

Section 7.01. *General*. (a) The duties and responsibilities of the Trustee are as set forth herein. Whether or not expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee is subject to this Article and the immunities, rights and protections provided to the Trustee in this Article shall apply to the Agents *mutatis mutandis*.

(b) Except during the continuance of an Event of Default, the Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and no implied covenants or obligations shall be read into this Indenture against the Trustee. In case an Event of Default has occurred and is continuing and the Trustee has received written notice thereof pursuant to Section 7.05, the Trustee shall exercise those rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs. The Trustee shall not be deemed to have knowledge of an Event of Default until one of its Responsible Officers has receipt of written notice thereof. During the continuance of an Event of Default, the Trustee shall act upon the written direction of the Holders of at least 25% of the aggregate principal amount then outstanding, subject to its receiving indemnity and/or security to its satisfaction.

(c) Should the Trustee become a creditor of the Company, rights of the Trustee to obtain payment of claims in certain cases or to realize on certain property received by the Trustee in respect of any such claims as security or otherwise will be limited. The Trustee is permitted to engage in other transactions, including normal banking and trustee relationships, with the Company and its Affiliates and profit therefrom without being obliged to account from profits; *provided*, however that if it acquires any conflict of interest, it must eliminate such conflict or resign.

(d) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own grossly negligent action, its own grossly negligent failure to act or its own willful default, except that the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 6.03 or 6.07.

(e) Unless the Trustee receives prior written notice from the Company, the Trustee shall be entitled to assume, without any further inquiry, that the Company has duly performed all of its obligations in accordance with this Indenture, including each of the exhibits attached hereto.

(f) Notwithstanding anything herein to the contrary, the Trustee shall not be responsible for recitals, statements, warranties or representations of any party contained in this Indenture or any other agreement or other document, entered into in connection herewith or therewith and shall assume the accuracy and correctness thereof and shall not be responsible for the execution, legality, effectiveness, adequacy, genuineness, validity or enforceability or admissibility in evidence of any such agreement or other document or any trust or security thereby constituted or evidenced. Notwithstanding the generality of the foregoing, each Holder shall be solely responsible for making its own independent appraisal of and investigation into the financial condition, creditworthiness, condition, affairs, status and nature of the Company, and the Trustee shall not at any time have any responsibility for the same and each Holder shall not rely on the Trustee in respect thereof.

(g) The Trustee will have no obligation or duty to monitor, determine or inquire as to compliance with any of the provisions in this Indenture or the financial performance of the Company and shall be entitled to assume that the Company is in compliance with all the provisions of this Indenture unless notified to the contrary in writing.

Section 7.02. *Certain Rights of Trustee and Other Agents.* Subject to Section 7.01:

(a) In the absence of fraud, gross negligence or willful default on its part, the Trustee may conclusively rely, and will be protected in acting or refraining from acting, upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document (whether in original or facsimile form) believed by it to be genuine and to have been signed or presented by the proper Person. The Trustee need not investigate any fact or matter stated in the document, but, in the case of any document which is specifically required to be furnished to the Trustee pursuant to any provision hereof, the Trustee shall examine the document to determine whether it conforms to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein). The Trustee, in its sole and absolute discretion, may make further inquiry or investigation into such facts or matters as it sees fit and shall do so if requested in writing to do so by the Holders of at least 25% of the aggregate principal amount of Notes then outstanding; *provided*, however, that if any payment to be made to the Trustee within a reasonable time in respect of any loss, action, proceeding, claim, penalty, damages, costs, expense, disbursement or other liability likely to be suffered or incurred by it in the making of such investigation is, in the opinion of the Trustee, not assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require indemnity and/or security (including by way of pre-funding) satisfactory to the Trustee against such loss, action, proceeding, claim, penalty, damages, cost, expense, disbursement or other liability as a condition to taking any such action.

(b) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate and/or an Opinion of Counsel prepared and delivered at the cost of the Company conforming to Sections 9.03 and 9.04 and the Trustee will not be liable for any action it takes or omits to take in good faith in reliance on such certificate or opinion of counsel.

(c) The Trustee may act through its delegates, attorneys and agents and will not be responsible for supervising any delegate, attorney or agent or for the misconduct or negligence or acts or omissions of any delegate, attorney or agent appointed with due care by it hereunder. Upon an Event of Default, the Trustee shall be entitled to require, by notice in writing, all Agents to act solely in accordance with its directions.

(d) The Trustee will be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the written request or direction of any of the Holders, unless such Holders have offered to the Trustee security and/or indemnity (including by way of pre-funding) satisfactory to it against any loss, action, proceeding, claim, penalty, damages, cost, disbursement, liability or expenses that might be suffered or incurred by it in compliance with such written request or direction.

(e) The Trustee will not be liable for any action it takes or omits to take in good faith that it believes to be authorized or within its rights or powers or for any action it takes or omits to take in accordance with the direction of the Holders in accordance with Section 6.03 or 6.07 relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture, provided, however, that the Trustee's conduct does not constitute willful default or gross negligence.

(f) The Trustee may consult with counsel or other professional advisors of its selection, and the written advice of such counsel or advisors or any Opinion of Counsel will be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(g) No provision of this Indenture will require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of its duties hereunder, or in the exercise of its rights or powers, unless it receives security and/or indemnity (including by way of pre-funding) satisfactory to it against any loss, action, proceeding, claim, penalty, damages, cost, disbursement, liability or expense.

(h) The Trustee may request that the Company deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate.

(i) In connection with the exercise by it of its trusts, powers, authorities or discretions (in including, without limitation, any modification, waiver, authorization or determination), the Trustee shall have regard to the general interests of the Holders as a class but shall not have regard to any interests arising from circumstances particular to individual Holders (whatever their number) and in particular, but without limitation, shall not have regard to the consequences of the exercise of its trusts, powers, authorities or discretions for individual Holders (whatever their number) resulting from their being for any purpose domiciled or resident in, or otherwise connected with, or subject to the jurisdiction of, any country, state or territory and a Holder shall not be entitled to require, nor shall any Holder be entitled to claim, from the Company, the Trustee or any other Person any indemnification or payment in respect of any tax consequence of any such exercise upon individual Holders except to the extent already provided in Section 4.05 and/or any undertaking given in addition to, or in substitution for, Section 4.05 pursuant to this Indenture.

(j) Notwithstanding anything else herein contained, the Trustee may refrain without liability from doing anything that would or might in its opinion be contrary to any law of any state or jurisdiction (including but not limited to Hong Kong, the United States of America or any jurisdiction forming a part of it and England & Wales) or any directive or regulation of any agency of any such state or jurisdiction and may without liability do anything which is, in its opinion, necessary to comply with any such law, directive or regulation.

(k) The Trustee may transfer information to any other Citi Organization (or service provider to a Citi Organization) or to any court, regulator, Authority, auditor or otherwise as required under any Applicable Law, or to persons from whom it receives payments or to whom it makes payments on behalf of the Company and/or Subsidiaries. In each case, the information permitted to be transferred or disclosed or used includes any information regarding third parties provided to the Trustee by the Company and/or Subsidiaries. The Company and/or Subsidiaries is required to provide any necessary information to, and obtain any necessary consents from, such third parties to allow such transfer, disclosure and use. "**Citi Organization**" means Citigroup, Inc., Citibank, N.A., Citibank Europe plc, their branches, subsidiaries and affiliates and anyone who succeeds them or to whom they assign their rights other than Citicorp International Limited.

(l) The Company hereby irrevocably waives, in favour of the Trustee, any conflict of interest which may arise by virtue of the Trustee acting in various capacities under the Indenture or for other customers of the Trustee. The Company acknowledges that the Trustee and its affiliates (together, the "**Trustee Parties**") may have interests in, or may be providing or may in the future provide financial or other services to other parties with interests which the Company may regard as conflicting with its interests and may possess information (whether or not material to the Company) other than as a result of the Trustee acting as Trustee hereunder, that the Agent may not be entitled to share with the Company. The Trustee and the Agents will not disclose confidential information obtained from the Company (without its consent) to any of the Trustee's or the Agents' other customers nor will it use on the Company's behalf any confidential information obtained from any other customer. Without prejudice to the foregoing, the Company agrees that the Trustee Parties may deal (whether for its own or its customers' account) in, or advise on, securities of any party and that such dealing or giving of advice, will not constitute a conflict of interest for the purposes of the Indenture.

(m) The Trustee may refrain from taking any action in any jurisdiction if the taking of such action in that jurisdiction would, in its opinion based upon legal advice in the relevant jurisdiction, be contrary to any law of that jurisdiction. Furthermore, the Trustee may also refrain from taking such action if it would otherwise render it liable to any person in that jurisdiction or if, in its opinion based upon such legal advice, it would not have the power to do the relevant thing in that jurisdiction by virtue of any applicable law in that jurisdiction or if it is determined by any court or other competent authority in that jurisdiction that it does not have such power.

Section 7.03. *Individual Rights of Trustee*. The Trustee, in its individual or any other capacity, may become the owner or pledgee of Notes and may otherwise deal with the Company or its Affiliates with the same rights it would have if it were not the Trustee and nothing herein shall obligate the Trustee to account for any profits earned from any business or transactional relationship. Any Agent may do the same with like rights.

Section 7.04. *Trustee's Disclaimer.* The Trustee makes no representation as to the validity or adequacy of this Indenture or the Notes, (1) is not accountable for the Company's use or application of the proceeds from the Notes, (2) is not responsible for any statement in the Notes other than its certificate of authentication and (3) shall not have any responsibility for the Company's or any Holder's compliance with any state or U.S. federal securities law in connection with the Notes. Under no circumstance will the Trustee or any Agent be liable to any party for any special, indirect, punitive or consequential loss or damage of any kind whatsoever (inter alia, being loss of business, goodwill, opportunity or profit), whether or not foreseeable, even if the Trustee or any Agent, as applicable, has been advised of such loss or damage and regardless of the form of action. This provision shall remain in full force and effect notwithstanding the discharge of the Notes and or the resignation or replacement or removal of the Trustee or Agent.

Section 7.05. *Notice of Default.* If any Default occurs and is continuing and is known to the Trustee, the Trustee will send notice of the Default to each Holder within 90 days after it occurs, or, if later, within 15 days after it is known to the Trustee unless the Default has been cured.

Section 7.06. *Compensation and Indemnity.* (a) The Company agrees to be responsible for and will pay the Trustee compensation as agreed upon in writing for its services. The compensation of the Trustee is not limited by any law on compensation of a trustee of an express trust. The Company will reimburse the Trustee upon request for all out-of-pocket expenses, disbursements and advances (including costs of collection) properly incurred or made by the Trustee, including the compensation, expenses and disbursements of the Trustee's agents and counsel and other Persons not regularly within its employ. If an Event of Default shall have occurred and is continuing or if the Trustee is requested by the Company to undertake duties which are outside the scope of the Trustee's duties under this Indenture, the Company will pay such additional remuneration as the Company and the Trustee may agree.

(b) The Company agrees to indemnify the Trustee or any predecessor Trustee and their agents, employees, officers and directors for, and hold it harmless against, any loss, action, proceeding, claim, penalty, damages, cost, fees, disbursement, liability or expense incurred by it without gross negligence or willful default on its part arising out of or in connection with the acceptance or administration of this Indenture and its duties under this Indenture and the Notes, including the costs and expenses of defending itself against any claim or liability and of complying with any process served upon it or any of its officers in connection with the exercise or performance of any of its powers or duties under this Indenture and the Notes.

(c) To secure the Company's payment obligations in this Section 7.06, the Trustee will have a lien prior to the Notes on all money or property held or collected by the Trustee, in its capacity as Trustee, except money or property held in trust to pay principal of, and interest on particular Notes.

(d) This Section 7.06 shall survive the redemption or maturity of the Notes, the termination of this Indenture, and the resignation or termination of the appointment of the Trustee.

Section 7.07. *Replacement of Trustee.* (a) (i) The Trustee may resign at any time by 30 days prior written notice to the Company.

(ii) The Holders of a majority in principal amount of the outstanding Notes may remove the Trustee by 30 days prior written notice to the Trustee.

(iii) The Company may remove the Trustee if: (1) the Trustee is adjudged a bankrupt or an insolvent; (2) a receiver or other public officer takes charge of the Trustee or its property; or (3) the Trustee becomes incapable of acting.

A resignation or removal of the Trustee and appointment of a successor Trustee will become effective only upon the successor Trustee's acceptance of appointment as provided in this Section 7.07.

(b) If the Trustee has been removed by the Holders, Holders of a majority in principal amount of the Notes may appoint a successor Trustee with the consent of the Company. Otherwise, if the Trustee resigns or is removed, or if a vacancy exists in the office of Trustee for any reason, the Company will promptly appoint a successor Trustee, *provided* that, in the case of a resignation of the Trustee in connection with a bankruptcy of the Company, the Trustee will have the right to appoint a successor Trustee if no successor Trustee is appointed within 10 Business Days of notice of such resignation. If the successor Trustee does not deliver its written acceptance within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee may (at the expense of the Company) appoint its own successor or the retiring Trustee (at the expense of the Company), the Company or the Holders of a majority in principal amount of the outstanding Notes may petition any court of competent jurisdiction for the appointment of a successor Trustee.

(c) Upon delivery by the successor Trustee of a written acceptance of its appointment to the retiring Trustee and to the Company, (i) the retiring Trustee will transfer all money or property held by it as Trustee to the successor Trustee, subject to the lien provided for in Section 7.06(c), (ii) the resignation or removal of the retiring Trustee will become effective, and (iii) the successor Trustee will have all the rights, powers and duties of the Trustee under this Indenture. Upon request of any successor Trustee, the Company will execute any and all instruments for fully vesting in and confirming to the successor Trustee all such rights, powers and trusts. The Company will give notice of any resignation and any removal of the Trustee and each appointment of a successor Trustee to all Holders, and include in the notice the name of the successor Trustee and the address of its Corporate Trust Office.

(d) Notwithstanding replacement of the Trustee pursuant to this Section 7.07, the Company's obligations under Section 7.06 will continue for the benefit of the retiring Trustee.

Section 7.08. *Successor Trustee by Consolidation, Merger, Conversion or Transfer.* If the Trustee consolidates with, merges or converts into, or transfers all or substantially all of its corporate trust business or assets (including the administration of the trust created by this Indenture) to, another corporation or national banking association, the resulting, surviving or transferee corporation or national banking association without any further act will be the successor Trustee with the same effect as if the successor Trustee had been named as the Trustee in this Indenture.

Section 7.09. *Money Held in Trust.* The Trustee will not be liable for interest on any money received by it except as it may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

ARTICLE 8
AMENDMENTS, SUPPLEMENTS AND WAIVERS

Section 8.01. *Amendments without Consent of Holders.* (a) The Indenture may be amended, without the consent of any Holder, to:

(i) cure any ambiguity, defect, omission or inconsistency in this Indenture and the Notes;

(ii) comply with Article 5, including the assumption of obligations required thereby;

(iii) evidence and provide for the acceptance of appointment by a successor Trustee;

(iv) provide for the issuance of Additional Notes in accordance with the limitations set forth in this Indenture;

(v) add collateral to secure the Notes;

(vi) effect any changes to this Indenture in a manner necessary to comply with the procedures of Euroclear or Clearstream;

(vii) make any other change that does not materially and adversely affect the rights of any Holder; or

(viii) conform the text of this Indenture and the Notes to any provision of the "Description of the Notes" in the Offering Memorandum to the extent that such provision in the "Description of the Notes" in the Offering Memorandum was intended to be a verbatim recitation of a provision in this Indenture and the Notes.

Section 8.02. *Amendments with Consent of Holders.* (a) The Indenture may be amended with the consent of the Holders of not less than a majority in aggregate principal amount of the outstanding Notes and the Trustee and other Agents may waive future compliance by the Company with any provision thereof; *provided, however,* that no such modification, amendment or waiver may, without the consent of each Holder affected thereby:

(i) change the stated maturity of the principal of, or any installment of interest on, any Note;

(ii) reduce the principal amount of, or premium, if any, or interest on, any Note;

(iii) change the currency or time of payment of principal of, or premium, if any, or interest on, any Note, *provided* that any amendment to the minimum notice requirement for any redemption of the Notes may be made with the consent of the holders of a majority in aggregate principal amount of the outstanding Notes;

(iv) impair the right to institute suit for the enforcement of any payment on or after the stated maturity (or, in the case of a redemption, on or after the redemption date) of any Note;

(v) reduce the above-stated percentage of outstanding Notes the consent of whose Holders is necessary to modify or amend this Indenture;

(vi) waive a default in the payment of principal of, premium, if any, or interest on the Notes;

(vii) reduce the percentage or aggregate principal amount of outstanding Notes the consent of whose Holders is necessary for waiver of compliance with certain provisions of this Indenture or for waiver of certain defaults;

(viii) reduce the amount payable upon a Change of Control Offer or, change the time or manner by which a Change of Control Offer may be made or by which the Notes must be repurchased pursuant to a Change of Control Offer;

(ix) change the redemption date or the redemption price of the Notes from that stated in Section 3.01 or Section 3.03;

(x) amend, change or modify the obligation of the Company to pay Additional Amounts; or

(xi) amend, change or modify any provision of this Indenture or the related definition affecting the ranking of the Notes in a manner which adversely affects the Holders.

(b) It is not necessary for Holders to approve the particular form of any proposed amendment, supplement or waiver, but is sufficient if their consent approves the substance thereof.

(c) An amendment, supplement or waiver under this Section 8.02 will become effective on receipt by the Trustee of written consents from the Holders of the requisite percentage in principal amount of the outstanding Notes. After an amendment, supplement or waiver under this Section 8.02 becomes effective, the Company will send to the Holders affected thereby a notice briefly describing the amendment, supplement or waiver. The Company will send supplemental indentures to Holders upon request. Any failure of the Company to send such notice, or any defect therein, will not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Section 8.03. *Effect of Consent.* (a) After an amendment, supplement or waiver becomes effective, it will bind every Holder unless it is of the type requiring the consent of each Holder affected. If the amendment, supplement or waiver is of the type requiring the consent of each Holder affected, the amendment, supplement or waiver will bind each Holder that has consented to it and every subsequent Holder that evidences the same debt as the Note of the consenting Holder.

(b) If an amendment, supplement or waiver changes the terms of a Note, the Trustee may require the Holder to deliver it to the Trustee so that the Trustee may place an appropriate notation of the changed terms on the Note and return it to the Holder, or exchange it for a new Note that reflects the changed terms. The Trustee may also place an appropriate notation on any Note thereafter authenticated. However, the effectiveness of the amendment, supplement or waiver is not affected by any failure to annotate or exchange Notes in this fashion.

Section 8.04. *Trustee's and Other Agent's Rights and Obligations.* Each of the Trustee and the other Agents is entitled to receive, and will be fully protected in relying upon, an Opinion of Counsel stating that the execution of any amendment, supplement or waiver authorized pursuant to this Article is authorized or permitted by this Indenture and that such amendment, supplement or waiver constitutes the legal, valid and binding obligations of the party or parties executing such amendment, supplement or waiver, and an Officers' Certificate stating that all conditions precedent have been complied with. If the Trustee or the other Agents, as the case may be, has received such an Opinion of Counsel, it shall sign the amendment, supplement or waiver so long as the same does not adversely affect the rights of the Trustee or the other Agents, as the case may be. Each of the Trustee and the other Agents may, but is not obligated to, execute any amendment, supplement or waiver that affects the Trustee's or the other Agents' own rights, duties or immunities under this Indenture. The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be compensated and indemnified, are extended to, and shall be enforceable by, the Citicorp International Limited in each of its capacities under this Indenture.

Section 8.05. *Appointment of Paying and Transfer Agent and Registrar.* The Company hereby appoints Citibank, N.A., London Branch as the Paying and Transfer Agent and the Registrar with respect to the Notes, and the Paying and Transfer Agent and the Registrar hereby accepts such appointment. By accepting such appointment, the Paying and Transfer Agent and the Registrar agrees to be bound by and to perform the services with respect to itself set forth in the terms and conditions set forth in this Indenture and the Notes.

ARTICLE 9
MISCELLANEOUS

Section 9.01. *Status.* The Notes constitute (subject to Section 4.03) unsecured obligations of the Company and shall at all times rank pari passu and without any preference among themselves. The payment obligations of the Company under the Notes shall, save for such exceptions as may be provided by applicable legislation and subject to Section 4.03, at all times rank at least equally with all its other present and future unsecured and unsubordinated obligations.

Section 9.02. *Notices.* (a) All notices or demands required or permitted by the terms of the Notes or this Indenture are required to be in writing and may be given or served by being sent by prepaid courier or by being deposited, first-class mail as follows:

if intended for the Company, such notices or demands are required to be addressed to the Company at 21Vianet Group, Inc., Guanjie Building Southeast 1st Floor 21Vianet 10# Jiuxianqiao East Road, Chaoyang District, Beijing, 100016, the People's Republic of China, Attention: Chief Financial Officer;

if intended for the Trustee by the Company or any Holder, such notices or demands are required to be addressed to:

Citicorp International Limited
39/F, Champion Tower
3 Garden Road
Central
Hong Kong
Attn: Agency and Trust
Facsimile: +852 2323 0279

If intended for the Paying and Transfer Agent and/or the Registrar by the Company or any Holder, such notices or demands are required to be addressed to:

Citibank, N.A., London Branch
c/o Citibank, N.A., Dublin Branch
One North Wall Quay
Dublin 1
Ireland
Attn: Agency and Trust — PPA Payments
Facsimile: +353 1622 2210

If intended for any Holder by the Company, the Trustee, the Paying and Transfer Agent or the Registrar, such notices or demands are required to be addressed to such Holder at such Holder's last address as it appears in the Register. Copies of any notice or communication to a Holder, if given by the Company, will be mailed to the Trustee at the same time. Defect in mailing a notice or communication to any particular Holder will not affect its sufficiency with respect to other Holders.

(b) Any notice or demand will be deemed to have been sufficiently given or served when so sent or deposited and, if to the Holders, when delivered in accordance with the applicable rules and procedures of Euroclear or Clearstream, as the case may be. Any such notice shall be deemed to have been delivered on the day such notice is delivered to Euroclear or Clearstream, as the case may be, or if by mail, when so sent or deposited. Any notice to the Trustee will be effective only upon receipt.

(c) Where this Indenture provides for notice, the notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and the waiver will be the equivalent of the notice. Waivers of notice by Holders must be filed with the Trustee, but such filing is not a condition precedent to the validity of any action taken in reliance upon such waivers.

Section 9.03. *Currency Indemnity*. (a) U.S. dollar is the sole currency of account and payment for all sums payable by the Company under or in connection with the Notes, including damages. Any amount received or recovered in a currency other than U.S. dollar (whether as a result of, or of the enforcement of, a judgment or order of a court of any jurisdiction, in the insolvency, winding-up or dissolution of the Company or otherwise) by any Holder or the Trustee in respect of any sum expressed to be due to it from the Company shall only constitute a discharge to the Company to the extent of the U.S. dollar amount which the recipient is able to purchase with the amount so received or recovered in that other currency on the date of that receipt or recovery (or, if it is not practicable to make that purchase on that date, on the first date on which it is practicable to do so). If that U.S. dollar amount is less than the U.S. dollar amount expressed to be due to the recipient under any Note, the Company shall indemnify it against any loss sustained by it as a result. In any event, the Company shall indemnify the recipient against the cost of making any such purchase. For the purposes of this Condition, it will be sufficient for the Holder or the Trustee to demonstrate that it would have suffered a loss had an actual purchase been made. These indemnities constitute a separate and independent obligation from the Company's other obligations, shall give rise to a separate and independent cause of action, shall apply irrespective of any indulgence granted by any Holder or the Trustee and shall continue in full force and effect despite any other judgment, order, claim or proof for a liquidated amount in respect of any sum due under any Note or any other judgment or order.

(b) If any sum due from the Company in respect of the Notes or any order or judgment given or made in relation thereto has to be converted from the currency (the "**first currency**") in which the same is payable under these Conditions or such order or judgment into another currency (the "**second currency**") for the purpose of (A) making or filing a claim or proof against the Company, (B) obtaining an order or judgment in any court or other tribunal or (C) enforcing any order or judgment given or made in relation to the Notes, the Company shall indemnify the Trustee and each Holder, on the written demand of the Trustee or such Holder addressed to the Company and delivered to the Company, against any loss suffered as a result of any discrepancy between (i) the rate of exchange used for such purpose to convert the sum in question from the first currency into the second currency and (ii) the rate or rates of exchange at which the Trustee or such Holder may in the ordinary course of business purchase the first currency with the second currency upon receipt of a sum paid to it in satisfaction, in whole or in part, of any such order, judgment, claim or proof.

Section 9.04. *Certificate and Opinion as to Conditions Precedent*.

(a) Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company will furnish to the Trustee at the Trustee's request:

(i) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with;

(ii) an Opinion of Counsel stating that all such conditions precedent have been complied with; and

(iii) an incumbency certificate giving the names and specimen signatures of Authorized Officers for any such Authorized Officers who have not previously provided specimen signatures to the Trustee.

(b) In any case where several matters are required to be certified by, or covered by an Opinion of Counsel of, any specified Person, it is not necessary that all such matters be certified by, or covered by the Opinion of Counsel of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an Opinion of Counsel with respect to some matters and one or more such Persons as to other matters, and any such Person may certify or give an Opinion of Counsel as to such matters in one or several documents.

(c) Any certificate of an Officer of the Company may be based, insofar as it relates to legal matters, upon an Opinion of Counsel, unless such Officer knows, or in the exercise of due care should know, that such Opinion of Counsel with respect to the matters upon which his certificate is based are erroneous. Any Opinion of Counsel may be based, and may state that it is so based, insofar as it relates to factual matters, upon a certificate of, or representations by, an officer or officers of the Company stating that the information with respect to such factual matters is in the possession of the Company, unless such counsel knows, or in the exercise of due care should know, that the certificate or representations with respect to such matters are erroneous.

(d) Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

Section 9.05. *Statements Required in Certificate or Opinion.* Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture must include:

(a) a statement that each person signing the certificate or opinion has read the covenant or condition and the related definitions;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statement or opinion contained in the certificate or opinion is based;

(c) a statement that, in the opinion of each such person, that person has made such examination or investigation as is necessary to enable the person to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(d) a statement as to whether or not, in the opinion of each such person, such condition or covenant has been complied with, *provided* that an Opinion of Counsel may rely on an Officers' Certificate or certificates of public officials with respect to matters of fact.

Section 9.06. *Payment Date Other Than a Business Day.* In any case in which the date of the payment of principal of, premium on or interest on the Notes is not a Business Day in the relevant place of payment or in the place of business of the Trustee, then payment of such principal, premium or interest need not be made on such date but may be made on the next succeeding Business Day. Any payment made on such Business Day shall have the same force and effect as if made on the date on which such payment is due and no interest on the Notes shall accrue for the intervening period.

Section 9.07. *Governing Law, Consent to Jurisdiction; Waiver of Immunities.* (a) Each of the Notes and this Indenture shall be governed by, and construed in accordance with, the laws of the State of New York.

(b) The Company hereby irrevocably and unconditionally submits to the non-exclusive jurisdiction of any New York state or United States federal court located in the Borough of Manhattan, The City of New York (each a "**New York Court**") in connection with any suit, action or proceeding arising out of or relating to this Indenture and any Note or any transaction contemplated hereby or thereby. The Company irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any objection which it may now or hereafter have to the venue of any such suit, action or proceeding brought in any such New York Court and any claim that any such suit, action or proceeding brought in any such New York Court has been brought in an inconvenient forum. To the extent that the Company has or hereafter may acquire any sovereign or other immunity from jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives such immunity in respect of its obligations hereunder or under any Note. The Company agrees that final judgment in any such suit, action or proceeding, brought in such a court shall be conclusive and binding upon the Company and, to the extent permitted by applicable law, may be enforced in any court to the jurisdiction of which the Company, is subject by a suit upon such judgment or in any manner provided by law, *provided* that service of process is effected upon the Company, in the manner specified in the following subsection or as otherwise permitted by applicable law.

(c) As long as any of the Notes remain outstanding, the Company will at all times have an authorized agent in the City of New York, upon whom process may be served in any legal action or proceeding arising out of or relating to this Indenture or any Note. Service of process upon such agent and written notice of such service mailed or delivered to the Company shall to the fullest extent permitted by applicable law be deemed in every respect effective service of process upon the Company in any such legal action or proceeding. The Company hereby appoints Law Debenture Corporate Services Inc. as its agent for such purpose, and covenants and agrees that service of process in any suit, action or proceeding may be made upon it at the office of such agent at 801 2nd Avenue, Suite 403, New York, NY 10017. Notwithstanding the foregoing, the Company may, with prior written notice to the Trustee, terminate the appointment of such agent and appoint another agent for the above purposes so that the Company shall at all times have an agent for the above purposes in the City of New York. The Company hereby agrees to take any and all action as may be necessary to maintain the designation and appointment of an agent in full force and effect until the Final Maturity Date (or earlier, if the Notes are prepaid in full).

(d) The Company hereby irrevocably waives, to the fullest extent permitted by applicable law, any requirement or other provision of law, rule, regulation or practice which requires or otherwise establishes as a condition to the institution, prosecution or completion of any suit, action or proceeding (including appeals) arising out of or relating to this Indenture or any Note, the posting of any bond or the furnishing, directly or indirectly, of any other security.

Section 9.08. *No Adverse Interpretation of Other Agreements.* This Indenture may not be used to interpret another indenture or loan or debt agreement of the Company, and no such indenture or loan or debt agreement may be used to interpret this Indenture. In addition, no other agreement or document may be used to interpret this Indenture with regard to any rights, duties or obligations of the Trustee created hereunder.

Section 9.09. *Successors.*All agreements of the Company in this Indenture and the Notes will bind its successors. All agreements of the Trustee in this Indenture will bind its successor.

Section 9.10. *Duplicate Originals.* The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

Section 9.11. *Separability.* In case any provision in this Indenture or in the Notes is invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions will not in any way be affected or impaired thereby.

Section 9.12. *Table of Contents and Headings.* The Table of Contents and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part of this Indenture and in no way modify or restrict any of the terms and provisions of this Indenture.

Section 9.13. *No Personal Liability of Incorporators, Stockholders, Officers, Directors or Employees.* No recourse for the payment of the principal of, premium, if any, or interest on any of the Notes or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Company in this Indenture, or in any of the Notes, or because of the creation of any Indebtedness represented thereby, shall be had against any incorporator, stockholder, officer, director, employee or controlling person of the Company, or of any successor Person thereof. Each Holder, by accepting the Notes, waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Notes.

Section 9.14. *Force Majeure.* Notwithstanding anything to the contrary in this Indenture or in any other transaction document, neither the Trustee nor any Agent shall be liable for any loss or damage, or any failure or delay in the performance of its obligations hereunder if it is prevented from so performing its obligations by any reason which is beyond the control of the Trustee and/or the Agents, including, but not limited to, any existing or future law or regulation, any existing or future act of governmental authority, "Act of God," flood, war whether declared or undeclared, terrorism, riot, rebellion, civil commotion, strike, lockout, other industrial action, general failure of electricity or other supply, aircraft collision, technical failure, accidental or mechanical or electrical breakdown, computer failure or failure of any money transmission system or any event where performance of any duty or obligation under or pursuant to this Indenture would or may be illegal or would result in the Trustee or any Agent being in breach of any law, rule, regulation, or any decree, order or judgment of any court, or practice, request, direction, notice, announcement or similar action (whether or not having the force of law) of any relevant government, government agency, regulatory authority, stock exchange or self-regulatory organization to which the Trustee or Agent is subject.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the date first written above.

21VIANET GROUP INC.

By: /s/ Xiao Liu
Name: Xiao Liu
Title: Authorised Signatory

CITICORP INTERNATIONAL LIMITED, as Trustee

By: /s/ Ishita Krishna
Name: Ishita Krishna
Title: Vice President

EXHIBIT A

FORM OF CERTIFICATED NOTE

21VIANET GROUP INC.

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION. NEITHER THIS NOTE NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS SUCH TRANSACTION IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION.

THE HOLDER OF THIS NOTE, BY ITS ACCEPTANCE HEREOF, AGREES ON ITS OWN BEHALF AND ON BEHALF OF ANY INVESTOR ACCOUNT FOR WHICH IT HAS PURCHASED NOTES, TO OFFER, SELL OR OTHERWISE TRANSFER SUCH NOTE, PRIOR TO THE DATE (THE "**RESALE RESTRICTION TERMINATION DATE**") THAT IS 40 DAYS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS NOTE (OR ANY PREDECESSOR OF SUCH NOTE), ONLY (A) TO THE COMPANY, (B) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES WITHIN THE MEANING OF REGULATION S UNDER THE SECURITIES ACT, OR (D) PURSUANT TO ANOTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, SUBJECT TO THE COMPANY'S AND THE TRUSTEE'S RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (D) TO REQUIRE THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION AND/OR OTHER INFORMATION SATISFACTORY TO EACH OF THEM. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE HOLDER AFTER THE RESALE RESTRICTION TERMINATION DATE. BY ITS ACQUISITION HEREOF, THE HOLDER HEREOF REPRESENTS THAT IT IS NOT A U.S. PERSON NOR IS IT PURCHASING FOR THE ACCOUNT OF A U.S. PERSON AND IS ACQUIRING THIS NOTE IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH REGULATION S UNDER THE SECURITIES ACT.

No. [•]

21VIANET GROUP INC.

US$300,000,000 7.875% SENIOR NOTES DUE 2021

Certificated Note

21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**"), for value received, hereby promises to pay to [•][1] or registered assigns, upon surrender hereof, the principal sum of up to THREE HUNDRED MILLION UNITED STATES DOLLARS (US$300,000,000) as set forth on the books and records of the Registrar, on April 15, 2019, or on such earlier date as the principal hereof may become due in accordance with the provisions hereof.

Interest Rate: 7.875% *per annum*.

Interest Payment Dates: April 15 and October 15 of each year, commencing October 15, 2019.

Interest Record Dates: March 31 and September 30.

Reference is hereby made to the further provisions set forth on the reverse hereof. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

This Note shall not be valid or obligatory until the certificate of authentication hereon shall have been duly signed by the Trustee acting under the Indenture.

[*Signature pages follow*]

[1] Trustee/counsel to provide.

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed.

Date: , 2019

21VIANET GROUP INC.

By: _____
Name:
Title:

Certificate of Authentication

This is one of the US$300,000,000 7.875% Senior Notes due 2021 described in the Indenture referred to in this Note.

Date: , 2019

CITICORP INTERNATIONAL LIMITED, as Trustee

By: _____
Name:
Title:

21VIANET GROUP INC.
US$300,000,000 7.875% Senior Notes due 2021

1. Principal and Interest.

The Company promises to pay the principal of this Note on October 15, 2021.

The Company promises to pay interest on the principal amount of this Note on each Interest Payment Date, as set forth on the face of this Note, at the rate of 7.875% *per annum*.

Interest will be payable semiannually in arrears (to the Holders of record of the Notes at the close of business on March 31 and September 30 immediately preceding the Interest Payment Date) on each Interest Payment Date, commencing October 15, 2019.

Interest on this Note will accrue from the most recent date to which interest has been paid on this Note (or, if there is no existing default in the payment of interest and if this Note is authenticated between a regular record date and the next interest payment date, from such interest payment date) or, if no interest has been paid, from the Original Issue Date. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

Interest not paid when due and any interest on principal, premium or interest not paid when due will be paid to the Persons that are Holders on a special record date, which will be the 15th day preceding the date fixed by the Company for the payment of such interest, whether or not such day is a Business Day. At least 15 days before a special record date, the Company will send to each Holder and to the Trustee a notice that sets forth the special record date, the payment date and the amount of interest to be paid.

2. Indenture.

This is one of the Notes issued under an Indenture, dated as of April 15, 2019 (as amended from time to time, the "**Indenture**"), among 21Vianet Group Inc., a company incorporated with limited liability under the laws of Cayman Islands (the "**Company**") and Citicorp International Limited, as Trustee. Capitalized terms used herein are used as defined in the Indenture unless otherwise indicated. The terms of the Notes include those stated in the Indenture. The Notes are subject to all such terms, and Holders are referred to the Indenture for a statement of all such terms. To the extent permitted by applicable law, in the event of any inconsistency between the terms of this Note and the terms of the Indenture, the terms of the Indenture will control.

The Notes are general obligations of the Company. The Indenture provides for the issuance from time to time of up to such principal amount or amounts as may from time to time be authorized of the Notes, and the originally issued Notes and any Additional Notes vote together for all purposes as a single class.

The Indenture limits, among other things, the ability of the Company and its Subsidiaries to incur or guarantee additional Indebtedness or effect a consolidation or merger.

3. Registered Form; Denominations; Transfer; Exchange.

The Notes are in registered form without coupons in denominations of US$200,000 and any multiple of US$1,000 in excess thereof. A Holder may register the transfer or exchange of Notes in accordance with the Indenture. The Trustee or the Paying and Transfer Agent may require a Holder to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. Pursuant to the Indenture, there are certain periods during which the Trustee or the Paying and Transfer Agent will not be required to issue, register the transfer of or exchange any Note or certain portions of a Note.

4. Defaults and Remedies.

If an Event of Default, as defined in the Indenture, occurs and is continuing, the Holders of at least 25% in principal amount of the Notes then outstanding, by written notice to the Company (and to the Trustee if such notice is given by the Holders), may, and the Trustee at the written request of such Holders shall (subject to the Trustee being indemnified and/or secured (including by way of pre-funding) to its satisfaction), declare all the Notes to be immediately due and payable. If a bankruptcy or insolvency default with respect to the Company occurs and is continuing, the Notes automatically become immediately due and payable. Holders may not enforce the Indenture or the Notes except as provided in the Indenture. The Trustee may require security and/or indemnity (including in the form of pre-funding) satisfactory to it before it enforces the Indenture or the Notes. Subject to certain limitations, Holders of a majority in principal amount of the Notes then outstanding may direct the Trustee in its exercise of remedies.

5. Amendment and Waiver.

Subject to certain exceptions, the Indenture and the Notes may be amended, or default may be waived, with the consent of the Holders of a majority in aggregate principal amount of the Outstanding Notes. Without notice to or the consent of any Holder, the Company and the Trustee may amend or supplement the Indenture or the Notes to, among other things, cure any ambiguity, defect or inconsistency, or make any other change that does not materially and adversely affect the rights of any Holder.

6. Authentication.

This Note is not valid until the Trustee signs the certificate of authentication on the other side of this Note.

7. Governing Law.

This Note shall be governed by, and construed in accordance with, the laws of the State of New York.

8. Abbreviations.

Customary abbreviations may be used in the name of a Holder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian) and U/G/M/A/ (= Uniform Gifts to Minors Act).

The Company will furnish a copy of the Indenture to any Holder upon written request and without charge.

TRANSFER NOTICE

FOR VALUE RECEIVED the undersigned registered holder hereby sell(s), assign(s) and transfer(s) unto

Insert Taxpayer Identification No.

_____

Please print or typewrite name and address including zip code of assignee

_____

the within Note and all rights thereunder, hereby irrevocably constituting and appointing

_____

attorney to transfer said Note on the books of the Company with full power of substitution in the premises.

Date: _____ _____

NOTICE: The signature to this assignment must correspond with the name as written upon the face of the within-mentioned instrument in every particular, without alteration or any change whatsoever.

OPTION OF HOLDER TO ELECT PURCHASE

If you wish to have all of this Note purchased by the Company pursuant to Section 4.12 or 4.13 of the Indenture, check the box:

If you wish to have a portion of this Note purchased by the Company pursuant to Section 4.12 or 4.13 of the Indenture, state the amount (in original principal amount) below:

US$_____.

Wire transfer instructions for delivery of proceeds from the purchase of the Note are as follows:

[ ]

Date: _____

Your Signature: _____

(Sign exactly as your name appears on the other side of this Note)

TRUSTEE, PAYING AGENT AND REGISTRAR

Trustee

Citicorp International Limited
39/F, Champion Tower
3 Garden Road
Central
Hong Kong

Paying and Transfer Agent and Registrar

Citibank, N.A., London Branch
c/o Citibank, N.A., Dublin Branch
One North Wall Quay
Dublin 1
Ireland

EXHIBIT B

FORM OF GLOBAL NOTE

21VIANET GROUP INC.

US$300,000,000 7.875% SENIOR NOTES DUE 2021

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION. NEITHER THIS NOTE NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS SUCH TRANSACTION IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION.

THE HOLDER OF THIS NOTE, BY ITS ACCEPTANCE HEREOF, AGREES ON ITS OWN BEHALF AND ON BEHALF OF ANY INVESTOR ACCOUNT FOR WHICH IT HAS PURCHASED NOTES, TO OFFER, SELL OR OTHERWISE TRANSFER SUCH NOTE, PRIOR TO THE DATE (THE ''**RESALE RESTRICTION TERMINATION DATE**'') THAT IS 40 DAYS AFTER THE LATER OF THE ORIGINAL ISSUE DATE HEREOF AND THE LAST DATE ON WHICH THE COMPANY OR ANY AFFILIATE OF THE COMPANY WAS THE OWNER OF THIS NOTE (OR ANY PREDECESSOR OF SUCH NOTE), ONLY (A) TO THE COMPANY, (B) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, (C) PURSUANT TO OFFERS AND SALES THAT OCCUR OUTSIDE THE UNITED STATES WITHIN THE MEANING OF REGULATION S UNDER THE SECURITIES ACT, OR (D) PURSUANT TO ANOTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, SUBJECT TO THE COMPANY'S AND THE PAYING AND TRANSFER AGENT'S RIGHT PRIOR TO ANY SUCH OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (D) TO REQUIRE THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION AND/OR OTHER INFORMATION SATISFACTORY TO EACH OF THEM. THIS LEGEND WILL BE REMOVED UPON THE REQUEST OF THE HOLDER AFTER THE RESALE RESTRICTION TERMINATION DATE. BY ITS ACQUISITION HEREOF, THE HOLDER HEREOF REPRESENTS THAT IT IS NOT A U.S. PERSON NOR IS IT PURCHASING FOR THE ACCOUNT OF A U.S. PERSON AND IS ACQUIRING THIS NOTE IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH REGULATION S UNDER THE SECURITIES ACT.

UNLESS THIS NOTE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF CITIBANK EUROPE PLC, AS COMMON DEPOSITARY ("**COMMON DEPOSITARY**") FOR EUROCLEAR BANK SA/NV ("**EUROCLEAR**") AND CLEARSTREAM BANKING S.A. ("**CLEARSTREAM**") TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF THE NOMINEE OF THE COMMON DEPOSITARY OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE COMMON DEPOSITARY (AND ANY PAYMENT IS MADE TO THE COMMON DEPOSITARY OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE COMMON DEPOSITARY), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, THE COMMON DEPOSITARY, HAS AN INTEREST HEREIN.

THIS NOTE IS A GLOBAL NOTE WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF THE COMMON DEPOSITARY OR A NOMINEE THEREOF. THIS SECURITY MAY NOT BE EXCHANGEABLE IN WHOLE OR IN PART FOR A SECURITY REGISTERED, AND NO TRANSFER OF THIS NOTE IN WHOLE OR IN PART MAY BE REGISTERED, IN THE NAME OF ANY PERSON OTHER THAN SUCH COMMON DEPOSITARY OR A NOMINEE THEREOF, EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.

No. S-1 ISIN Number: XS1976766045

Common Code: 197676604

21VIANET GROUP INC.

US$300,000,000 7.875% SENIOR NOTES DUE 2021

Global Note

21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**"), for value received, hereby promises to pay to Citivic Nominees Limited or registered assigns for Euroclear Bank SA/NV and Clearstream Banking S.A., upon surrender hereof the principal sum of up to THREE HUNDRED MILLION UNITED STATES DOLLARS (US$300,000,000) (or such other amount as set forth in the Schedule of Exchanges of Notes attached hereto) on October 15, 2021, or on such earlier date as the principal hereof may become due in accordance with the provisions hereof.

Interest Rate: 7.875% *per annum*.

Interest Payment Dates: April 15 and October 15 of each year, commencing October 15, 2019.

Interest Record Dates: one Clearing System Business Day immediately preceding the Interest Payment Date on each Interest Payment Date, where "Clearing System Business Day" means a weekday (Monday to Friday, inclusive) except December 25 and January 1.

Reference is hereby made to the further provisions set forth on the reverse hereof. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

This Note shall not be valid or obligatory until the certificate of authentication hereon shall have been duly signed by the Trustee acting under the Indenture.

[*Signature pages follow*]

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed.

Date: _____, 2019

21VIANET GROUP INC.

By: _____
Name:
Title:

CERTIFICATE OF AUTHENTICATION

This is one of the US$300,000,000 7.875% Senior Notes due 2021 described in the Indenture referred to in this Note.

Date: _____, 2019

CITICORP INTERNATIONAL LIMITED, as Trustee

By: _____
Name:
Title:

[Global Note - Certificate of Authentication]

FORM OF REVERSE OF GLOBAL NOTE

21VIANET GROUP INC.
US$300,000,000 7.875% Senior Notes due 2021

1. Principal and Interest.

The Company promises to pay the principal of this Note on October 15, 2021.

The Company promises to pay interest on the principal amount of this Note on each Interest Payment Date, as set forth on the face of this Note, at the rate of 7.875% *per annum*.

Interest will be payable semiannually in arrears (to the Holders of record of the Notes at the close of business on one Clearing System Business Day immediately preceding the Interest Payment Date) on each Interest Payment Date, where "**Clearing System Business Day**" means a weekday (Monday to Friday, inclusive) except December 25 and January 1.

Interest on this Note will accrue from the most recent date to which interest has been paid on this Note (or, if there is no existing default in the payment of interest and if this Note is authenticated between a regular record date and the next interest payment date, from such interest payment date) or, if no interest has been paid, from the Original Issue Date. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

Interest not paid when due and any interest on principal, premium or interest not paid when due will be paid to the Persons that are Holders on a special record date, which will be the 15th day preceding the date fixed by the Company for the payment of such interest, whether or not such day is a Business Day. At least 15 days before a special record date, the Company will send to each Holder and to the Trustee a notice that sets forth the special record date, the payment date and the amount of interest to be paid.

2. Indenture.

This is one of the Notes issued under an Indenture, dated as of April 15, 2019 (as amended from time to time, the "**Indenture**"), among 21Vianet Group Inc., a company incorporated with limited liability under the laws of Cayman Islands (the "**Company**") and Citicorp International Limited, as Trustee. Capitalized terms used herein are used as defined in the Indenture unless otherwise indicated. The terms of the Notes include those stated in the Indenture. The Notes are subject to all such terms, and Holders are referred to the Indenture for a statement of all such terms. To the extent permitted by applicable law, in the event of any inconsistency between the terms of this Note and the terms of the Indenture, the terms of the Indenture will control.

The Notes are general obligations of the Company. The Indenture provides for the issuance from time to time of up to such principal amount or amounts as may from time to time be authorized of the Notes, and the originally issued Notes and any Additional Notes vote together for all purposes as a single class.

The Indenture limits, among other things, the ability of the Company and its Subsidiaries to incur or guarantee additional Indebtedness or effect a consolidation or merger.

3. Registered Form; Denominations; Transfer; Exchange.

The Notes are in registered form without coupons in denominations of US$200,000 and any multiple of US$1,000 in excess thereof. A Holder may register the transfer or exchange of Notes in accordance with the Indenture. The Trustee or the Paying and Transfer Agent may require a Holder to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. Pursuant to the Indenture, there are certain periods during which the Trustee or the Paying and Transfer Agent will not be required to issue, register the transfer of or exchange any Note or certain portions of a Note.

4. Defaults and Remedies.

If an Event of Default, as defined in the Indenture, occurs and is continuing, the Holders of at least 25% in principal amount of the Notes then outstanding, by written notice to the Company (and to the Trustee if such notice is given by the Holders), may, and the Trustee at the written request of such Holders shall (subject to the Trustee being indemnified and/or secured (including by way of pre-funding) to its satisfaction), declare all the Notes to be immediately due and payable. If a bankruptcy or insolvency default with respect to the Company occurs and is continuing, the Notes automatically become immediately due and payable. Holders may not enforce the Indenture or the Notes except as provided in the Indenture. The Trustee may require security and/or indemnity (including in the form of pre-funding) satisfactory to it before it enforces the Indenture or the Notes. Subject to certain limitations, Holders of a majority in principal amount of the Notes then outstanding may direct the Trustee in its exercise of remedies.

5. Amendment and Waiver.

Subject to certain exceptions, the Indenture and the Notes may be amended, or default may be waived, with the consent of the Holders of a majority in aggregate principal amount of the Outstanding Notes. Without notice to or the consent of any Holder, the Company and the Trustee may amend or supplement the Indenture or the Notes to, among other things, cure any ambiguity, defect or inconsistency, or make any other change that does not materially and adversely affect the rights of any Holder.

6. Authentication.

This Note is not valid until the Trustee signs the certificate of authentication on the other side of this Note.

7. Governing Law.

This Note shall be governed by, and construed in accordance with, the laws of the State of New York.

8. Abbreviations.

Customary abbreviations may be used in the name of a Holder or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian) and U/G/M/A/ (= Uniform Gifts to Minors Act).

The Company will furnish a copy of the Indenture to any Holder upon written request and without charge.

TRANSFER NOTICE

FOR VALUE RECEIVED the undersigned registered holder hereby sell(s), assign(s) and transfer(s) unto

Insert Taxpayer Identification No.

_____

Please print or typewrite name and address including zip code of assignee

_____

the within Note and all rights thereunder, hereby irrevocably constituting and appointing

_____

attorney to transfer said Note on the books of the Company with full power of substitution in the premises.

Date: _____ _____

NOTICE: The signature to this assignment must correspond with the name as written upon the face of the within-mentioned instrument in every particular, without alteration or any change whatsoever.

OPTION OF HOLDER TO ELECT PURCHASE

If you wish to have all of this Note purchased by the Company pursuant to Section 4.12 or 4.13 of the Indenture, check the box:

If you wish to have a portion of this Note purchased by the Company pursuant to Section 4.12 or 4.13 of the Indenture, state the amount (in original principal amount) below:

US$_____.

Date: _____

Your Signature: _____

(Sign exactly as your name appears on the other side of this Note)

SCHEDULE OF EXCHANGES OF NOTES

The following changes in the aggregate principal amount of Notes represented by this Global Note have been made:

Date of Decrease/Increase	Amount of decrease in aggregate principal amount of Notes	Amount of increase in aggregate principal amount of Notes	Outstanding Balance

TRUSTEE, PAYING AGENT AND REGISTRAR

Trustee

Citicorp International Limited
39/F, Champion Tower
3 Garden Road
Central
Hong Kong

Paying and Transfer Agent and Registrar

Citibank, N.A., London Branch
c/o Citibank, N.A., Dublin Branch
One North Wall Quay
Dublin 1
Ireland

EXHIBIT C

FORM OF COMPANY AUTHORIZATION CERTIFICATE

I, [Xiao Liu], [Chief Financial Officer], acting on behalf of 21Vianet Group Inc., hereby certify that:

(A) the persons listed below are (i) Authorized Officers of the Company for purposes of the Indenture dated as of April 15, 2019 (as amended from time to time, the "**Indenture**") among 21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**") and Citicorp International Limited, as trustee (the "**Trustee**") and (ii) the duly authorized person who executed or will execute the Indenture and the Notes (as defined in the Indenture) by his manual or facsimile signature was at the time of such execution, duly elected or appointed, qualified and acting as the holder of the office set forth opposite his name; and

(B) each signature appearing below is the person's genuine signature.

Authorized Officers:

Name	Title	Signature

IN WITNESS WHEREOF, I have hereunto signed my name.

Date:

21VIANET GROUP INC.

By: _____

Name:
Title:

EXHIBIT D

FORM OF PAYING AND TRANSFER AGENT AND REGISTRAR APPOINTMENT LETTER

April 15, 2019

Citibank, N.A., London Branch
c/o Citibank, N.A., Dublin Branch
One North Wall Quay
Dublin 1
Ireland
Fax: +353 1622 2210
Attention: Agency and Trust — PPA Payments
as Paying and Transfer Agent and Registrar

Re: US$300,000,000 7.875% Senior Notes due 2021 of 21Vianet Group Inc.

Reference is hereby made to the Indenture dated as of April 15, 2019 (as amended from time to time, the "**Indenture**") among 21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**") and Citicorp International Limited (the "**Trustee**"). Terms used herein are used as defined in the Indenture.

The Company hereby appoints Citibank, N.A., London Branch as the paying agent and transfer agent (the "**Paying and Transfer Agent**") and as the registrar (the "**Registrar**," together with the Paying and Transfer Agent, the "**Agents**") with respect to the Notes and the Paying and Transfer Agent and the Registrar hereby accept such respective appointments. By accepting such appointment, each Agent agrees to be bound by and to perform the services with respect to itself set forth in the terms and conditions set forth in the Indenture and the Notes, as well as the following terms and conditions to all of which the Company agrees and to all of which the rights of the holders from time to time of the Notes shall be subject:

(a) Each Agent shall be entitled to the compensation to be agreed upon in writing with the Company, for all services rendered by it under the Indenture, and the Company, agree promptly to pay such compensation and to reimburse each Agent for its out-of-pocket expenses (including fees and expenses of counsel) incurred by it in connection with the services rendered by it under the Indenture, the Notes and this letter. The Company hereby agrees to indemnify each Agent and its officers, directors, agents and employees and any successors thereto for, and to hold each of them harmless against, any loss, liability or expense (including properly incurred fees and expenses of counsel) incurred without gross negligence or willful default on its part arising out of or in connection with its acting as Agent hereunder. Under no circumstances will any Agent be liable to the Company or any other party to this letter or the Indenture for any indirect, consequential, punitive or special loss or damage of any kind whatsoever (inter alia, being loss of business, goodwill, opportunity or profit), whether or not foreseeable, even if any Agent has been advised of such loss or damage and regardless of the form of action. The obligations of the Company under this paragraph (a) shall survive the payment of the Notes, the termination or expiry of the Indenture or this letter and the resignation or removal of the Agents.

(b) In acting under the Indenture and in connection with the Notes, each Agent is acting solely as agent of the Company and does not assume any obligation or fiduciary duty towards or relationship of agency or trust for or with any of the owners or holders of the Notes, except that all funds held by the Agents for the payment of principal interest or other amounts (including Additional Amounts) on, the Notes shall, subject to the provisions of the Indenture, be held by the Agents and applied as set forth in the Indenture and in the Notes, but need not be segregated from other funds held by the Agents, except as required by law.

(c) Any Agent may consult with counsel satisfactory to it and any advice or written opinion of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted to be taken by it under the Indenture in good faith and in accordance with such advice or opinion.

(d) Each Agent shall be fully protected and shall incur no liability for or in respect of any action taken or omitted to be taken or thing suffered by it in reliance upon any Note, notice, direction, consent, certificate, affidavit, statement or other paper or document believed by it to be genuine and to have been presented or signed by the proper party or parties.

(e) Any Agent and any of its Affiliates, in its individual capacity or any other capacity, may become the owner of, or acquire any interest in, any Notes or other obligations of the Company with the same rights that it would have if it were not an Agent, and may engage or be interested in any financial or other transaction with the Company, and may act on, or as common depositary, Trustee or agent for, any committee or body of holders of Notes or other obligations of the Company, as freely as if it were not an Agent.

(f) The Paying and Transfer Agent shall give the Trustee written notice of any failure by the Company (or by any other obligor on the Notes) to make any payment of the principal, or premium or interest on, the Notes and any other payments to be made on behalf of the Company under the Indenture, when the same shall be due and payable and at any time during the continuance of any such failure the Paying and Transfer Agent will pay any such sums so held by it to the Trustee upon the Trustee's written request.

(g) The Paying and Transfer Agent shall not be under any liability for interest on any monies received by it pursuant to any of the provisions of the Indenture or the Notes.

(h) Each Agent shall be obligated to perform such duties and only such duties as are in the Indenture and the Notes specifically set forth, and no implied duties or obligation shall be read into the Indenture or the Notes against any Agent. No Agent shall be under any obligation to take any action under the Indenture which may tend to involve it in any expense or liability, the payment of which within a reasonable time is not, in its reasonable opinion, assured to it. No Agent shall have any obligation to expend its own funds or otherwise incur any financial liability in the performance of its obligations hereunder or under the Indenture.

(i) In acting under the Indenture and in connection with the Notes, the Paying and Transfer Agent shall be entitled to make a deduction or withholding from any payment which it makes under the Indenture for or on account of any present or future taxes, duties or charges if and to the extent so required by applicable law, in which event such Paying and Transfer Agent shall make such payment after such withholding or deduction has been made and shall account to the relevant authorities for the amount so withheld or deducted.

(j) An Agent may at any time resign by giving written notice of its resignation to the Company and the Trustee and specifying the date on which its resignation shall become effective; *provided* that such date shall be at least 30 days after the date on which such notice is given unless the Company agrees to accept shorter notice. Upon receiving such notice of resignation, if required by the Indenture the Company shall promptly appoint a successor paying agent or registrar, as the case may be, by written instrument substantially in the form hereof in triplicate signed on behalf of the Company, one copy of which shall be delivered to the resigning Agent, one copy to the successor paying agent or registrar, as the case may be, and one copy to the Trustee. Upon the effectiveness of the appointment of a successor paying agent or registrar, as the case may be, the Agent shall have no further obligations under this letter or the Indenture. If the successor Agent does not deliver its written acceptance within 60 days after the retiring Agent resigns, the retiring Agent (at the expense of the Company) may appoint a successor Agent, or the retiring Agent (at the expense of the Company) or the Company may petition any court of competent jurisdiction for the appointment of a successor agent.

Such resignation shall become effective upon the earlier of (i) the effective date of such resignation and (ii) the acceptance of appointment by the successor paying agent or registrar, as the case may be, as provided below. The Company may, at any time and for any reason, remove an Agent and appoint a successor paying agent or registrar, as the case may be, by written instrument in triplicate signed on behalf of the Company, one copy of which shall be delivered to the Agent being removed, one copy to the successor paying agent or registrar, as the case may be, and one copy to the Trustee. Any removal of an Agent and any appointment of a successor paying agent or registrar, as the case may be, shall become effective upon acceptance of appointment by the successor paying agent or registrar, as the case may be, as provided below. Upon its resignation or removal, such Agent shall be entitled to the payment by the Company of its compensation for the services rendered hereunder and to the reimbursement of all fees and properly incurred out-of-pocket expenses incurred in connection with the services rendered by it hereunder, and under the Indenture and the Notes.

The Company shall remove an Agent and appoint a successor paying agent or registrar, as the case may be, if such Agent (i) shall become incapable of acting, (ii) shall be adjudged bankrupt or insolvent, (iii) shall commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to it or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, (iv) shall consent to, or shall have had entered against it a court order for, any such relief or to the appointment of or taking possession by any such official in any involuntary case or other proceedings commenced against it, (v) shall make a general assignment for the benefit of creditors or (vi) shall fail generally to pay its debts as they become due.

Any successor paying agent or registrar, as the case may be, appointed as provided herein shall execute and deliver to its predecessor and to the Company and the Trustee an instrument accepting such appointment (which may be in the form of an acceptance signature to the letter of the Company appointing such agent) and thereupon such successor paying agent or registrar, as the case may be, without any further act, deed or conveyance, shall become vested with all the rights, powers, duties and obligations of its predecessor hereunder, with like effect as if originally named as Agent and such predecessor shall pay over to such successor agent all monies or other property at the time held by it hereunder.

(k) Notwithstanding anything contained herein to the contrary, the Company hereby irrevocably agrees that any and all of the rights and obligations of any Agent (except the Trustee) and, to the extent applicable, the obligations of the Company toward any Agent (except the Trustee) set forth in the Indenture shall be deemed to have been included in this letter.

(l) Notwithstanding anything contained herein to the contrary, the obligations of the Agents under this letter are several and not joint and should be independently construed and each Agent shall not be liable for each other's acts or omissions to act.

(m) The Agents may transfer information to any other Citi Organization (or service provider to a Citi Organization) or to any court, regulator, Authority, auditor or otherwise as required under any Applicable Law, or to persons from whom it receives payments or to whom it makes payments on behalf of the Company and/or Subsidiaries. In each case, the information permitted to be transferred or disclosed or used includes any information regarding third parties provided to the Agents by the Company and/or Subsidiaries. The Company and/or Subsidiaries is required to provide any necessary information to, and obtain any necessary consents from, such third parties to allow such transfer, disclosure and use. "**Citi Organization**" means Citigroup, Inc., Citibank, N.A., Citibank Europe plc, their branches, subsidiaries and affiliates and anyone who succeeds them or to whom they assign their rights other than Citicorp International Limited.

(n) Each Agent shall at all times be a responsible financial institution which is authorized by law to exercise its respective powers and duties hereunder and under the Indenture and the Notes.

(o) Any funds held by the Agents are not subject to the relevant United Kingdom Financial Conduct Authority's Client Money Rules.

(p) Each Agent may act through its delegates, attorneys and agents and will not be responsible for supervising any delegate, attorney or agent or for the misconduct or negligence or acts or omissions of any delegate, attorney or agent appointed with due care by it hereunder. Upon an Event of Default, the Trustee shall be entitled to require, by notice in writing, all Agents to act solely in accordance with its directions.

(q) The Agents shall, on demand by the Trustee by notice in writing given to them and the Company at any time after an Event of Default has occurred, until notified by the Trustee to contrary, to the extent permitted by applicable law, deliver all monies, documents and records held by them in respect of the Notes to the Trustee or as the Trustees shall direct in such notice (including to the Collateral Agent to the extent required under the Intercreditor Agreement, if any) or subsequently, *provided* that this paragraph shall not apply to any documents or records which an Agent is obliged not to release by any law or regulation to which it is subject.

(r) The Agents shall, on demand by the Trustee by notice in writing given to them and the Company at any time after the Event of Default or Default has occurred, until notified by the Trustee to the contrary, as far as permitted by applicable law:

(i) act thereafter as agents of the Trustee under the Indenture and the Notes on the terms provided in this letter (save for necessary consequential amendments and the Trustee's liability under any provision hereof for the indemnification, remuneration and all other expenses of the Agents shall be limited to the amounts for the time being held by the Trustee in respect of the Notes on the trusts of the Indenture and after application of such sums in accordance with Section 6.13 of the Indenture in satisfaction of payment of sums, other than referred to in this paragraph (i) and thereafter hold all certificates and moneys, documents and records held by them in respect of the Notes to the order of the Trustee; and/or

(ii) deliver up all certificates and all monies, documents and records held by them in respect of the Notes to the Trustee or as the Trustee shall direct in such notice or subsequently, *provided* that this paragraph (ii) shall not apply to any documents or records which an Agent or the relevant agent is obliged not to release by any law or regulation to which it is subject.

(s) Any notice or communication to an Agent will be deemed given when sent by facsimile transmission, with transmission confirmed. Any notice to an Agent shall be in the English language or shall include a certified English translation and will be effective only upon receipt. The notice or communication should be addressed to the Paying and Transfer Agent and the Registrar at: Citibank, N.A., London Branch, c/o Citibank, N.A., Dublin Branch, One North Wall Quay, Dublin 1, Ireland.

Any notice to the Company or the Trustee shall be given as set forth in the Indenture.

(t) Any corporation into which an Agent may be merged or converted or any corporation with which an Agent may be consolidated or any corporation resulting from any merger, conversion or consolidation to which an Agent shall be a party or any corporation succeeding to the business of any Agent shall be the successor to such Agent hereunder (*provided* that such corporation shall be qualified as aforesaid) without the execution or filing of any document or any further act on the part of any of the parties hereto.

(u) Any amendment, supplement or waiver under Sections 8.01 and 8.02 of the Indenture that adversely affects any Agent shall not affect such Agent's rights, powers, obligations, duties or immunities, unless such Agent has consented thereto.

(v) Notwithstanding anything to the contrary in this letter, no Agent shall be liable for any loss or damage, or any failure or delay in the performance of its obligations hereunder if it is prevented from so performing its obligations by any reason which is beyond the control of such Agent, including, but not limited to, by any existing or future law or regulation, any existing or future act of governmental authority, Act of God, flood, war whether declared or undeclared, terrorism, riot, rebellion, civil commotion, strike, lockout, other industrial action, general failure of electricity or other supply, aircraft collision, technical failure, accidental or mechanical or electrical breakdown, computer failure or failure of any money transmission system or any event where, in the reasonable opinion of such Agent, performance of any duty or obligation under or pursuant to this letter would or may be illegal or would result in such Agent being in breach of any law, rule, regulation, or any decree, order or judgment of any court, or practice, request, direction, notice, announcement or similar action (whether or not having the force of law) of any relevant government, government agency, regulatory authority, stock exchange or self-regulatory organization to which such Agent is subject.

(w) The Company agrees that the provisions of Section 9.07 of the Indenture shall apply hereto, *mutatis mutandis*.

(x) Notwithstanding anything else herein contained, the Agents may refrain without liability from doing anything that would or might in its opinion be contrary to any law of any state or jurisdiction (including but not limited to Hong Kong, the United States of America or any jurisdiction forming a part of it and England & Wales) or any directive or regulation of any agency of any such state or jurisdiction and may without liability do anything which is, in its opinion, necessary to comply with any such law, directive or regulation.

(y) Any payment by the Agent under this agreement will be made without any deduction or withholding for or on account of any Taxes unless such deduction or withholding is required by any Applicable Law. If such a withholding or deduction is so required, the Agent will not pay an additional amount in respect of that withholding or deduction.

(z) **Mutual Undertaking Regarding Information Reporting and Collection Obligations**. Each party shall, within 15 Business Days of a written request by another party, supply to that other party such forms, documentation and other information relating to it, its operations, or the Notes as that other party reasonably requests for the purposes of that other party's compliance with Applicable Law and shall notify the relevant other party reasonably promptly in the event that it becomes aware that any of the forms, documentation or other information provided by such party is (or becomes) inaccurate in any material respect; provided, however, that no party shall be required to provide any forms, documentation or other information pursuant to this paragraph to the extent that: (i) any such form, documentation or other information (or the information required to be provided on such form or documentation) is not reasonably available to such party and cannot be obtained by such party using reasonable efforts; or (ii) doing so would or might in the reasonable opinion of such party constitute a breach of any: (a) Applicable Law; (b) fiduciary duty; or (c) duty of confidentiality.

(aa) **Notice of Possible Withholding Under FATCA**. The Company and the Subsidiaries shall notify the Paying and Transfer Agent in the event that it determines that any payment to be made by the Paying and Transfer Agent under the Notes is a payment which could be subject to FATCA Withholding if such payment were made to a recipient that is generally unable to receive payments free from FATCA Withholding, and the extent to which the relevant payment is so treated, provided, however, that the Company and the Subsidiaries' obligation under this paragraph shall apply only to the extent that such payments are so treated by virtue of characteristics of the Company and/or Subsidiaries and/or the Notes.

(bb) **Paying and Transfer Agent's Right to Withhold**. Notwithstanding any other provision of this Agreement and the Indenture, the Paying and Transfer Agent shall be entitled to make a deduction or withholding from any payment which it makes under the Notes for or on account of any Tax, if and only to the extent so required by Applicable Law, in which event the Paying and Transfer Agent shall make such payment after such deduction or withholding has been made and shall account to the relevant Authority within the time allowed for the amount so deducted or withheld or, at its option, shall reasonably promptly after making such payment return to the Company and/or Subsidiaries (as applicable) the amount so deducted or withheld, in which case, the Company and/or Subsidiaries (as applicable) shall so account to the relevant Authority for such amount.

(cc) **Company's Right to Redirect**. In the event that the Company and the Subsidiaries determine in their sole discretion that withholding for or on account of any Tax will be required by Applicable Law in connection with any payment due to the Paying and Transfer Agent on the Notes, then the Company and the Subsidiaries will be entitled to redirect or reorganize any such payment in any way that it sees fit in order that the payment may be made without such deductions or withholding provided that, any such redirected or reorganized payment is made through a recognized institution of international standing and otherwise made in accordance with this Agreement and the Indenture. The Company and/or the Subsidiaries will promptly notify the Paying and Transfer Agent and the Trustee of any such redirection or reorganization.

(dd) For purposes of this letter, the following terms shall be defined as follows:

"**Applicable Law**" means any law or regulation including, but not limited to: (i) any statute or regulation; (ii) any rule or practice of any Authority by which any party is bound or with which it is accustomed to comply; (iii) any agreement between any Authorities; and (iv) any customary agreement between any Authority and any party.

"**Authority**" means any competent regulatory, prosecuting, Tax or governmental authority in any jurisdiction.

"**Code**" means the U.S. Internal Revenue Code of 1986, as amended.

"**FATCA Withholding**" means any withholding or deduction required pursuant to an agreement described in section 1471(b) of the Code, or otherwise imposed pursuant to sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any law implementing an intergovernmental approach thereto.

"**Tax**" means any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or on behalf of any Authority having power to tax.

(ee) Each Agent shall be entitled to refrain from taking any action if it receives conflicting, unclear or equivocal instructions or in order to comply with any Applicable Law provided, however, that the Agents shall seek clarification within five Business Days following receipt of such conflicting, unclear or equivocal instructions.

(ff) The agreement set forth in this letter and the Indenture contains the whole agreement between the parties relating to the subject matter of this agreement to the inclusion of any terms implied by law which may be excluded by contract and supersedes any previous written or oral agreement between the parties in relation to the matters dealt with in this letter.

[*Signature pages follow*]

The agreement set forth in this letter shall be construed in accordance with and governed by the laws of the State of New York.

21VIANET GROUP INC.

By: _____
Name:
Title:

Agreed and accepted:

Citibank, N.A., London Branch
as Paying and Transfer Agent and Registrar

By: _____
Name:
Title:

Acknowledged:

Citicorp International Limited
as Trustee

By: _____
Name:
Title:

EXHIBIT E

FORM OF COMPLIANCE CERTIFICATE

This Compliance Certificate is delivered pursuant to Section 6.08 of the Indenture, dated as of April 15, 2019, as amended, supplemented or modified from time to time (the "**Indenture**"), among 21Vianet Group Inc., a company incorporated with limited liability under the laws of the Cayman Islands (the "**Company**") and Citicorp International Limited as trustee (the "**Trustee**"). Terms defined in the Indenture are used herein as therein defined.

Each of the undersigned hereby certifies to the Trustee as follows:

1. I am the duly elected, qualified and acting [title] or [title], as the case may be, of the Company.

2. I have reviewed and am familiar with the contents of this Compliance Certificate.

3. I have reviewed the terms of the Indenture.

4. That a review has been conducted of the activities of the Company and the Company's performance under the Indenture, in each case since the Original Issue Date, and that [the Company has been since the Original Issue Date and are in compliance with all obligations under the Indenture]/[if there has been a default in the fulfillment of any obligation under the Indenture, specifying each such default and the nature and status thereof.]

[*Signature page follows*]

IN WITNESS WHEREOF, the undersigned has executed this Compliance Certificate as of the date set forth below.

21Vianet Group Inc.

By: _____
Name:
Title:

By: _____
Name:
Title:

Date: _____, 2019

PAYING AND TRANSFER AGENT AND REGISTRAR

Paying and Transfer Agent and Registrar

Citibank, N.A., London Branch
c/o Citibank, N.A., Dublin Branch
One North Wall Quay
Dublin 1
Ireland

EXHIBIT G

FORM OF REGULATION S CERTIFICATE

April 15, 2019

Citicorp International Limited,
as Trustee

Citibank, N.A., London Branch,
as Paying and Transfer Agent

Citibank, N.A., London Branch,
as Registrar

21Vianet Group, Inc.
as Company

Re: 21Vianet Group, Inc.
US$300,000,000 7.875% Senior Notes due 2021 (the "**Notes**")

Reference is hereby made to the Indenture (the "**Indenture**"), dated as of April 15, 2019 between 21Vianet Group, Inc. (the "**Company**"), a company incorporated with limited liability under the laws of the Cayman Islands and Citicorp International Limited, as Trustee (the "**Trustee**"). Capitalized terms used but not defined herein shall have the meanings given to them in the Indenture. Other terms shall have the meanings given to them in Regulation S under the U.S. Securities Act of 1933, as amended ("**Regulation S**").

This letter relates to US$ THREE HUNDRED MILLION principal amount of Notes [represented by a certificated Note (No.____)][which are held in the form of a beneficial interest in the Global Note with Euroclear or Clearstream] and held with the Depositary in the name of the Transferor specified below. The Transferor has requested a transfer of such [Note] [beneficial interest in the Global Note (ISIN Number: XS1976766045; Common Code: 197676604) to be held with Euroclear or Clearstream] in the name of the Transferee specified below.

In connection with such request and in respect of such Securities, the Transferor does hereby certify that such sale has been effected pursuant to and in accordance with Rule 903 or Rule 904 of Regulation S under the Securities Act, and accordingly the Transferor does hereby further certify that:

(1) the offer of the Notes was not made to a person in the United States;

(2) the Transferee is not a U.S. person;

(3) either (a) at the time the buy order was originated, the Transferee was outside the United States, or the Transferor and any person acting on its behalf reasonably believed that the Transferee was outside the United States or (b) the transaction was executed in, on or through the facilities of a "designated offshore securities market", and neither the Transferor nor any person acting on its behalf knows that the transaction was pre-arranged with a buyer in the United States;

(4) no "directed selling efforts" have been made in contravention of the requirements of Rule 904(a)(2) of Regulation S, as applicable;

(5) in the event the Transferor is an officer or director of the Company, no selling concession, fee or other remuneration was paid in connection with such transfer other than the usual and customary broker's commission that would be received by a person executing such transfer as agent; and

(6) the transaction is not part of a plan or scheme to evade the registration requirements of the Securities Act.

This certificate and the statements contained herein are made for your benefit and the benefit of the Company.

Name of Transferor: _____

Name of Transferee: _____

Signature of Transferor: _____

Name of Signer for Transferor: _____

Title of Signer for Transferor: _____

Date: _____

[Principal amount and other delivery instructions for Global Note in

Euroclear/Clearstream: _____

_____

_____]

Daytime telephone no. of contact person at Transferor: _____

e-mail of contact person at Transferor: _____

Daytime telephone no. of contact person at Transferee: _____

e-mail of contact person at Transferee: _____

Exhibit 4.28

DATE: 24 July 2019

21VIANET GROUP, INC.

21VIANET DRP INVESTMENT HOLDINGS LIMITED

AND

MARBLE STONE HOLDINGS LIMITED

AMENDED AND RESTATED INVESTMENT AGREEMENT

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Schedule B	Annual Business Plan and Budget

THIS AMENDED AND RESTATED INVESTMENT AGREEMENT (this "**Agreement**") is entered into on 24 July 2019,

BY AND AMONG:-

(1) **21VIANET GROUP, INC.**, a NASDAQ listed company duly incorporated and validly existing under the laws of the Cayman Islands with its registered office address at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands ("**VNET**"); and

(2) **21VIANET DRP INVESTMENT HOLDINGS LIMITED**, a limited liability company duly incorporated and validly existing under the laws of Hong Kong with its registered office address at the offices of Flat/Room 716, 7/F., 12W Phase 3 Hong Kong Science Park, Pak Shek Kok, Shatin, New Territories, Hong Kong ("**Vianet**"); and

(3) **MARBLE STONE HOLDINGS LIMITED** (Company Number: 1923409), a business company duly incorporated and validly existing under the laws of the British Virgin Islands with its registered office address at P.O. Box 3340, Road Town, Tortola, British Virgin Islands ("**WP**" or the "**Investor**").

Vianet and WP are hereinafter collectively referred to as the "**Shareholders**", and individually as a "**Shareholder**". VNET, Vianet and WP are hereinafter collectively referred to as the "**Parties**", and individually as a "**Party**".

RECITALS

WHEREAS:-

(A) The Parties hereto have entered into an investment agreement on 5 March 2017 (the "**Original Investment Agreement**"), pursuant to which the Parties formed certain joint venture platforms to engage in wholesale data center business in the PRC.

(B) On or about the even date herewith, the Parties hereto entered into a restructuring agreement (the "**Restructuring Agreement**"), pursuant to which the Parties will restructure the joint venture platforms formed according to the Original Investment Agreement.

(C) The Parties intend to enter into this Agreement to amend and restate the Original Investment Agreement.

NOW, THEREFORE, in consideration of the mutual promises, agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:-

1. INTERPRETATION

1.1 Definitions. Unless otherwise defined in this Agreement, capitalized terms used in this Agreement shall have the meanings set forth in Exhibit 1.1.

1.2 Interpretation. For all purposes of this Agreement, except as otherwise expressly provided, (a) the terms defined herein shall include the plural as well as the singular, (b) all accounting terms not otherwise defined herein have the meanings assigned under US GAAP, (c) all references in this Agreement to designated "Sections" and other subdivisions are to the designated Sections and other subdivisions of the body of this Agreement, (d) pronouns of either gender or neuter shall include, as appropriate, the other pronoun forms, (e) the words "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section or other subdivision, (f) all references in this Agreement to designated exhibits or schedules are to the exhibits or schedules attached to this Agreement unless explicitly stated otherwise, (g) unless the context otherwise requires, "onshore" means in the PRC, and "offshore" means outside the PRC, (h) "include," "including," "are inclusive of" and similar expressions are not expressions of limitation and shall be construed as if followed by the words "without limitation", and (i) if a period of time is specified and dates from a given day or the day of a given act or event, such period shall be calculated exclusive of that day.

1.3 Foreign Exchange Rate. Unless otherwise specified herein, the arithmetic average of the intermediate exchange rates between US Dollars and RMB as promulgated by the People's Bank of China (or its authorized agency) respectively in the ten (10) Business Days immediately prior to the actual payment date of any payment shall apply with respect to any conversion between US Dollars and RMB.

2. INVESTMENT STRUCTURE

2.1 Existing Structure. As at the date of this Agreement, the structure of the Group Companies is as set forth in Schedule 2.1.

2.2 Incorporation of JV Co 1 and Intermediate Companies.

(a) JV Co 1. The Shareholders have jointly incorporated Shihua DC Investment Holdings Limited ("**JV Co 1**") to develop and operate the Existing Projects via PropCo 1 (as defined below). As at the date hereof, (i) the authorized share capital of JV Co 1 shall be US$5,000, divided into 255,000,000 Class A shares of a nominal or par value of US$0.00001 each and 245,000,000 Class B shares of a nominal or par value of US$0.00001 each; (ii) the issued and outstanding shares of JV Co 1 are 51,755,456 Class A shares and 49,725,829 Class B shares; and (iii) Vianet holds 51,755,456 Class A shares representing 100% of the issued and outstanding Class A shares, and the Investor holds 49,725,829 Class B shares representing 100% of the issued and outstanding Class B shares.

(b) Intermediate Companies.

(i) JV Co 1 has incorporated a wholly-owned Subsidiary in the British Virgin Islands named SHIHUA DC INVESTMENT GROUP LIMITED ("**PropCo 1**") to hold, directly or indirectly, any and all Group Companies incorporated for the Existing Projects.

(ii) Subject to consent of the Shareholders or approval by the board of the relevant Group Company, one or more tiers of intermediate companies may be added into the Group Companies.

3. [INTENTIONALLY LEFT BLANK]

4. INVESTMENT COMMITMENT

4.1 Emergency Loans.

(a) Shortfall Event. In the event that,

(i) a funding deficit of a Group Company being identified by the board of JV Co 1 or a Shareholder at any time on the basis of the management accounts of said Group Company and the Annual Business Plan and Budget (a "**Shortfall Event**");

(ii) such Shortfall Event shall impair or is likely to impair the normal operation of said Group Company (for the avoidance of doubt, the funding deficit for seeking a new Project shall not be deemed as a Shortfall Event, unless any Group Company has already entered into any binding commitment to invest in or acquire such new Project); and

(iii) within ten (10) days of the Shortfall Event being identified, the Shareholders are not able to unanimously agree to fulfil such deficit by raising additional funds: (A) pursuant to Section 4.2 (Subsequent Funding to JV Co 1); or (B) from financial institutions or other legitimate sources,

then, an emergency loan may be advanced to JV Co 1 by any of the Shareholders (an "**Emergency Loan**") pursuant to Sections 4.1(b) (Interest of Emergency Loan) to 4.1(e) (Shareholders' Efforts) below; provided, however, that the Shareholder intending to advance the Emergency Loan shall serve a prior ten (10)-day written notice to the other Shareholder so that the other Shareholder may participate in such Emergency Loan in proportion to its Shareholding Percentage in JV Co 1. If the other Shareholder fails to advance the Emergency Loan on a *pro rata* basis within ten (10) days after receipt of the foregoing notice, the Shareholder intending to advance the Emergency Loan may provide the full amount of the Emergency Loan.

(b) Interest of Emergency Loan. Each Emergency Loan shall be structured as a secured debt of JV Co 1 or the relevant Group Company and shall bear interest at 15% per annum, and to the extent the rate of interest is limited by operation of law, the Shareholders shall identify and implement alternative and lawful means to maintain the economic returns of such Emergency Loan at the rate of 15% per annum. To the extent permitted under Applicable Law and subject to other financing documents executed with a third Shareholder, each Emergency Loan shall be senior to all other claims or debts of JV Co 1 or the relevant Group Company.

(c) Repayment of Emergency Loan. If an Emergency Loan is not fully repaid within six (6) months after the initial funding of such Emergency Loan, the Shareholder funding such Emergency Loan shall have the right to convert its outstanding principal and interest of such Emergency Loan into fully-paid shares (Class A shares in the case of Vianet and Class B shares in the case of the Investor) of JV Co 1 at the post-money valuation of JV Co 1 for any investment made immediately prior to such conversion.

(d) Conversion upon Material Breach. Notwithstanding any of the foregoing, all outstanding principal and accrued interest in respect of all Emergency Loans provided by the Investor shall become immediately due and payable or convertible into fully-paid shares (Class A shares in the case of Vianet and Class B shares in the case of the Investor) of JV Co 1 at the time a Material Breach occurs.

(e) Shareholders' Efforts. The Shareholders shall:-

(i) use their commercially reasonable efforts to avoid any Shortfall Event;

(ii) if any Emergency Loan is advanced, use their Best Efforts to procure that the outstanding principal of the Emergency Loan and interest accrued thereon shall be repaid and paid in full within six (6) months after the initial funding of such Emergency Loan; and

(iii) if any amount (whether the principal or interest) fails to be repaid or paid within six (6) months after the initial funding of such Emergency Loan, procure that the Group Companies and the directors of the relevant Group Companies shall take any and all the necessary actions for obtaining any Emergency Loan and the conversion of such loan into equity as provided under this Section 4.1 (Emergency Loans).

4.2 Subsequent Funding to JV Co 1.

(a) JV Co 1's Funding Need. If at any time or from time to time additional funds are required by JV Co 1 and its Subsidiaries, such funding requirements will be addressed in one or more of the following manners:-

(i) The Shareholders may subscribe for additional shares in JV Co 1 at a subscription price and based on terms and subject to the conditions as mutually agreed by the Shareholders in writing in proportion to their respective then-prevailing Shareholding Percentages in JV Co 1; or

(ii) The Shareholders may introduce third party investment in the Group Companies.

5. MASTER SERVICE ARRANGEMENT

5.1 Commitment. Vianet undertakes that it shall (or it shall cause its Affiliates to) lease each of the Existing Projects and receive master services in respect of the same from the Group Companies for a term of at least fifteen (15) years after the Tranche Closing (as defined under the Original Investment Agreement) corresponding to such Existing Project (in three five (5)-year intervals with automatic renewals). The Shareholders undertake that each of the Existing Project Companies shall sub-contract operation and maintenance service in respect of each of the Existing Projects to Vianet (or its Affiliates) for a term of at least fifteen (15) years after the Tranche Closing corresponding to such Existing Project (in three five (5)-year intervals with automatic renewals).

5.2 Form of Master Service Agreement.

(a) Master Service Agreement for Existing Projects. VNET and Vianet shall (or shall cause their Affiliates to) enter into a master service agreement with the relevant Group Company in respect of each of the Existing Projects as soon as practicable after the date of the Original Investment Agreement but in no event later than the correspondent Tranche Closing Date (as defined under the Original Investment Agreement) of such Existing Project in such form and substance as mutually agreed upon by the Shareholders (with possible adjustments to be mutually agreed by the Shareholders), with standards of service fees payable by Vianet or its Affiliates to the relevant Group Companies with respect to each Existing Project as mutually agreed upon by the Shareholders (any amendment thereto or termination thereof without the prior consent of the Investor shall be deemed as a Material Breach by Vianet and VNET). Notwithstanding any other provisions in Section 6.02(a) of the Master Service Agreement for the Existing Projects, the Parties may re-allocate the RMB amount in Section 6.02(a) in the Master Service Agreement among the Existing Projects for a particular year, provided that the total amount for all the Existing Projects remains the same for that year (for the avoidance of doubt, Section 6.02(b) of the Master Service Agreement for the Existing Projects shall not be affected).

(b) Master Service Agreement for Future Projects. For each future Project that Vianet leases and receives master services from the relevant Group Company, Vianet shall (or shall cause its Affiliates to) enter into a master service agreement with such Group Company in such form and substance as mutually agreed upon by the Shareholders with reference to the form mutually agreed upon by the Shareholders for the Existing Projects.

(c) Form of Master Service Agreement. Each such service agreement so executed shall be referred to as a "**Master Service Agreement**".

5.3 Form of Sub-Contracting Agreement. Vianet shall (or shall cause its Affiliates to) enter into a sub-contracting agreement with the relevant Group Company in respect of each of the Existing Projects together with the Master Service Agreement in respect of such Existing Project in such form and substance as mutually agreed upon by the Shareholders for sub-contracting certain services under the Master Services Agreement to Vianet or its Affiliates, with standards of sub-contracting service fees payable by the relevant Group Companies to Vianet or its Affiliates with respect to each Existing Project to be mutually agreed upon by the Shareholders. For each future Project that Vianet leases in the entirety of such Project and receives master services from the relevant Group Company, Vianet shall have a priority right to be sub-contracted with certain services under the Master Services Agreement under equal terms and conditions, and if Vianet (of its Affiliates) is selected as a sub-contractor pursuant to the preceding sentence, Vianet shall (or shall cause its Affiliates to) enter into a sub-contracting agreement with such Group Company in such form and substance as mutually agreed upon by the Shareholders (any amendment thereto or termination thereof without the prior consent of the Investor or its nominated director shall be deemed as a Material Breach by Vianet). Each such service agreement so executed shall be referred to as a "**Sub-Contracting Agreement**".

6. [INTENTIONALLY LEFT BLANK]

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8. REPRESENTATIONS AND WARRANTIES

8.1 Mutual Representations and Warranties. As at the Effectiveness Date, the date of the Original Investment Agreement and each Tranche Closing Date (as defined under the Original Investment Agreement), each Party hereby represents and warrants to the other Parties as follows:-

(a) Incorporation. It is duly incorporated and validly existing under the laws of the place of its incorporation and it has the requisite power and authority to conduct its business in accordance with its business license, certificate of incorporation, memorandum and articles of association, or similar constitutional documents;

(b) Authority. It has all requisite power, authority, approval and third-party consent required to enter into this Agreement and other Transaction Documents and has all requisite power, authority, approval and third-party consent to fully perform each of its obligations hereunder and under other Transaction Documents;

(c) Corporate Actions. It has taken all necessary internal corporate actions to authorize it to enter into this Agreement and other Transaction Documents, and its representative whose signature is affixed hereto is given full authority to sign this Agreement and other Transaction Documents, if applicable; and

(d) No Violation. Neither the execution of this Agreement and other Transaction Documents, if applicable, nor the performance of its obligations hereunder and thereunder, will conflict with, or result in a breach of, any provision of its constitutional documents, or any law, rule, regulation, authorization, or approval of any Government Entity, or of any contract or agreement to which it is a party or is subject.

8.2 Representations and Warranties of VNET and Vianet.

(a) Representations and Warranties of VNET and Vianet. Each of VNET and Vianet hereby represents and warrants, on a joint and several basis, to the Investor that as at the date of the Original Agreement and each Tranche Closing Date (as defined under the Original Investment Agreement):-

(i) Except as fully and fairly disclosed to the Investor in the Disclosure Schedule (as defined below, with sufficient details to identify the nature and scope of the matter disclosed), each of the statements set forth in Exhibit 8.2(a)(i) is and will be true, accurate and complete;

(ii) All information contained in the Disclosure Schedule is and will be true, accurate and complete; and

(iii) All information relating to Vianet and its assets and/or affairs requested by the Investor and its advisors is contained in the due diligence documents provided by Vianet to the Investor and its advisors prior to the date of the Original Investment Agreement, and in the Original Investment Agreement as well as the Disclosure Schedule.

(b) No Violation of Representations and Warranties. Each of VNET and Vianet undertakes that it shall:-

(i) Not knowingly do or omit to do any act or thing, which will result in any Material Breach of the warranties and representations made by VNET and Vianet under this Section 8 (Representations and Warranties) or Exhibit 8.2(a)(i), which could have the effect of making any of the foregoing representations or warranties untrue, inaccurate, incomplete or otherwise breached in any material aspect, and promptly notify the Investor in writing upon becoming aware of the same;

(ii) Rectify or cure any breach of any of the representations and warranties made by VNET and Vianet within thirty (30) days after its occurrence (if such a breach is capable of being rectified or cured) or such other period as mutually agreed upon in writing by the Shareholders; and

(iii) On and from the date of the Original Investment Agreement, provide the Investor, its agents and advisors with reasonable access, during normal business hours, to all information and documentation regarding the business and affairs of Vianet, the Group Companies and/or the Projects as the Investor, its agents or advisors may reasonably require by giving reasonable advance notice, except as reasonably determined by Vianet in good faith (A) a refusal to provide the relevant information is necessary as to ensure compliance with any Applicable Law; or (B) provision of the relevant information is reasonably expected to violate the attorney-client privilege, other legal privilege or contractual confidentiality obligations; provided, however, that none of the Investor, its agents and advisors shall use the foregoing information and documentation for purposes not relating to the transactions contemplated hereby or in a way that would render an adverse impact on Vianet or its Affiliates.

9. ADDITIONAL COVENANTS

9.1 Further Assurances. The Parties shall act in good faith to take any and all actions necessary or advisable to consummate the transactions contemplated hereby, including without limitation, to (a) procure that each of the Group Companies and their respective directors, officers and employees shall fulfill their respective obligations under this Agreement and other Transaction Documents; and (b) provide all reasonably necessary and advisable assistance to the Group Companies and the Investor in obtaining all applicable Government Approvals, and complete the transactions contemplated hereby.

9.2 Disclosure of Related Party Transactions. Without prejudice to Section 10.3 (Reserved Matters), each Shareholder (the "**Conflicted Shareholder**") hereby covenants to the other Shareholder that any and all transactions (each, a "**Related Party Transaction**") between any Group Company, on one hand, and the Conflicted Shareholder or its Affiliates or a Related Party, on the other hand, from and after the date of the Original Investment Agreement will be on an "arms-length" basis, in compliance with Applicable Laws and listing rules and shall be disclosed to the other Shareholder in writing at the end of each calendar quarter. The Shareholders acknowledge and agree that in relation to any dispute arising from and/or in connection with any Related Party Transaction, the Conflicted Shareholder shall, and shall procure its nominee directors at any Group Company to, abstain from voting on any matter relating to such dispute (including in respect of the enforcement by any Group Company of any of its rights, the defense by any Group Company of any claims against it, and the settlement of any rights or claims).

9.3 Confidentiality and Publicity.

(a) Confidentiality. From the date hereof, each Party shall, and shall cause each Person who is Controlled by such Party to, keep confidential the terms, conditions and existence of this Agreement, any related documentation, the identities of any of the Parties and any other information of a non-public nature received from any other Party or prepared by such Party exclusively in connection herewith or therewith (collectively, the "**Confidential Information**") except as the Parties otherwise mutually agree; provided, however, that any Party may disclose the Confidential Information or permit the disclosure of the Confidential Information (i) to the extent required by Applicable Law so long as, where such disclosure is to a Government Entity, such Party shall use all reasonable efforts to obtain confidential treatment of the Confidential Information so disclosed, (ii) to the extent required by the rules of any stock exchange, (iii) to its officers, directors, employees and professional advisors, and in the case of the Investor, its Affiliates, as necessary for the performance of its obligations in connection herewith so long as such Party advises each Person to whom any Confidential Information is so disclosed as to the confidential nature thereof, and (iv) to its investors, prospective investors and any Person otherwise providing substantial debt or equity financing to such Party so long as the Party advises each Person to whom any Confidential Information is so disclosed as to the confidential nature thereof. Each Party shall ensure that any of the foregoing permitted disclosed Persons to which such Party discloses the Confidential Information shall have the same confidentiality obligation and liability as such Party.

Further, the Investor acknowledges that it is aware that VNET is a NASDAQ listed company and is subject to the securities laws and regulations of the Securities and Exchange Commission of the United States of America ("**SEC**"). Therefore, the Investor and/or its Subsidiaries that receive non-public information from VNET about VNET will be subject to inside trading provisions under the rules of SEC.

For the avoidance of doubt, the Confidential Information does not include information that (i) was already in the possession of the receiving Party (the "**Receiving Party**") before such disclosure by the disclosing Party (the "**Disclosing Party**"), (ii) is or becomes available to the public other than as a result of disclosure by the Receiving Party in violation of this Section 9.3 (Confidentiality and Publicity) or (iii) is or becomes available to the Receiving Party from a third party not known by the Receiving Party to be in breach of any legal or contractual obligation not to disclose such information to it; and in each case, if the Receiving Party determines that the foregoing information may have any material adverse effect on the Group Companies, the Receiving Party shall immediately notify the other Parties and take reasonable and necessary measures to avoid further disclosure of the foregoing information.

(b) Publicity. No public announcement or disclosure (including any general announcement to employees, customers or suppliers) will be made by any Party with respect to the subject matter of this Agreement or the transactions contemplated hereby without the prior written consent of the other Parties; provided that the provisions of this Section 9.3(b) (Publicity) shall not prohibit (i) any disclosure required by any Applicable Law (in which case the disclosing Party will provide the other Parties with the opportunity to review and comment in advance of such disclosure if legally permitted and practicable) or (ii) any disclosure made in connection with the enforcement of any right or remedy relating to this Agreement or the transactions contemplated hereby.

Each of the Parties shall not, and shall procure that their respective Affiliates will not, without the prior written consent of the other Parties, (i) use in advertising, publicity, or otherwise the name of the other Parties or their respective Affiliates, nor any trade name, trademark, trade device, service mark, symbol or any abbreviation, contraction or simulation thereof owned by the other Parties or their respective Affiliates, or (ii) represent, directly or indirectly, that any product or any service provided by any Group Company has been approved or endorsed by the other Parties or their respective Affiliates.

9.4 Compliance.

(a) General Compliance. Saving as set out in the Disclosure Schedule, the Shareholders shall ensure that all activities with respect to each Group Company and the Projects shall be conducted in compliance with respective Applicable Law (including without limitation, the Applicable Laws governing acquisition of land use rights, bidding, auction and listing, and anti-corruption and bribery etc.).

(b) FCPA. Without limiting the generality of Section 9.4(a) (General Compliance), Vianet shall ensure that none of Vianet/Vianet's Affiliates (when acting on behalf of the Group Companies), the Investor shall ensure that none of the Investor/the Investor's Affiliates (when acting on behalf of the Group Companies), and the Shareholders shall ensure that none of the Group Companies, the Group Companies' Affiliates and the Group Companies directors, officers, agents, employees, Representatives and any other Person associated with or acting on behalf of any of the foregoing (for the purpose of this Section 9.4 (Compliance), any reference to an Affiliate of the Investor shall not include any Affiliate of the Investor that is an investment portfolio entity invested by the Investor or any of its Affiliates):-

(i) makes, gives, offers, promises, or authorizes any financial or other advantage (including any payment, loan, gift or transfer of anything of value), directly or indirectly, either (A) to or for the use or benefit of any Government Official, political party or official thereof, any candidate for political office or another person at the request or with the assent or acquiescence of any of the foregoing or (B) knowing or being aware of a high probability that all or a portion of such financial or other advantage (including any payment, loan, gift or transfer of anything of value) would be offered, given or promised, directly or indirectly, to or for the use or benefit of any Government Official, political party, official thereof, candidate for political office, or another person at the request or with the assent or acquiescence of any of the foregoing, for the purpose of:-

(A) (x) influencing any act or decision of such Government Official, political party, party official, or candidate in his or its official capacity; (y) inducing such Government Official, political party, party official or candidate to do or omit to do any act in violation of the lawful duty of such Government Official, political party, party official or candidate; or (z) securing any improper advantage; or

(B) inducing such Government Official, political party, party official, or candidate to use his or its influence with any Government Entity to affect or influence any act or decision of such Government Entity

in order to assist any of the Group Companies and the Shareholders in obtaining, retaining or soliciting business; or

(ii) engage in any other conduct which would violate the Anti-Bribery Laws.

(c) Licenses and Permits. Except as disclosed in the Disclosure Schedule and not otherwise provided in this Agreement, Vianet shall be responsible for obtaining all and any applicable license, permit and regulatory approval as required for JV Co 1 and other Group Companies to operate their respective businesses on a standalone basis, including without limitation, serving third party wholesale data center customers. If such license, permit and regulatory approval cannot be obtained for reasons including but not limited to foreign ownership threshold under applicable laws, Vianet shall (and shall cause its Affiliates to) make alternative arrangements satisfactory to the Shareholders to achieve the same commercial outcome. The Investor shall provide commercially reasonable assistance. The Shareholders shall discuss in good faith as to the sharing of any direct cost associated with such alternative arrangements.

(d) Additional Anti-Bribery Covenants. The Shareholders shall procure that each Group Company shall:-

(i) on or before 30 days after the JV Co 2 Closing Date (as defined under the Original Investment Agreement), adopt, maintain, update and enforce adequate policies and procedures designed to achieve compliance with Anti-Bribery Laws by the Group Company and its Representatives, and these policies and procedures shall: (A) fulfil all requirements imposed by the Anti-Bribery Laws and other Applicable Laws; (B) be in line with customary international best practices applicable to a similarly-situated company (taking into account laws and regulations applicable to companies in which the Investor has made an investment of this size and nature); and (C) be substantially similar to the Investor's anti-bribery policies or as otherwise agreed to between the Shareholders;

(ii) adopt such further policies and procedures as shall be reasonably required by the Group Company and its direct or indirect Subsidiaries to fulfil its and their own legal and regulatory compliance obligations;

(iii) maintain books, records and accounts that, in reasonable detail, accurately and fairly reflect all of its transactions and dispositions of its assets, and shall maintain a system of internal accounting controls sufficient to provide reasonable assurances that its transactions are executed, its funds are expended, and access to its assets is permitted, only in accordance with its management's authorization;

(iv) provide anti-bribery trainings at least annually to its directors, officers, agents, employees, Representatives and any other Person associated with or acting on behalf of the Group Companies, including but not limited to those who deal with relationships with government agencies or state-owned enterprises; and

(v) adopt and maintain policies and procedures to ensure the prompt reporting of violations of law or fraud within the Group Company (including by any Representative of the Group Company) and immediately report to the Shareholders such information.

(e) Audit Rights. Without limiting the generality of Section 10.5 (Information and Inspection Rights of Investor) and in case in relation to the matters set out in Section 9.4(a) (General Compliance), Section 9.4(b) (FCPA) and Section 9.4(d) (Additional Anti-Bribery Covenants), the Shareholders shall procure that each Group Company shall immediately answer in reasonable detail any written or oral inquiry by any of the Shareholders (the "**Requesting Shareholder**"), and to facilitate the interview of staff employed by the Group Company at any reasonable time specified by the Requesting Shareholder. The Shareholders shall procure that the Requesting Shareholder, and any independent accountants appointed by any of the Shareholders, shall have the right to review and audit the Group Companies' books, records, accounts and internal accounting controls, and that the Group Companies shall provide to the Requesting Shareholder such analysis and reports with respect thereof as the Requesting Shareholder may direct. The Shareholders shall make all reasonable efforts to cooperate with the Requesting Shareholder's any such review, audit, analysis and report.

9.5 Branding. Subject to applicable laws and listing rules and such terms and conditions as mutually agreed upon by the Parties, VNET and Vianet will allow, and cause their respective Affiliates to allow, the Group Companies to use the intellectual property right (including without limitation, any brands, business names, logos, trademarks and copyrights) of VNET, Vianet and their respective Affiliates. Notwithstanding the foregoing, the Shareholders hereby agree and acknowledge that the Group Companies shall develop and build their own intellectual property rights (including without limitation, any brands, business names, logos, trademarks and copyrights) which are distinct from those of VNET, Vianet and their respective Affiliates.

9.6 Covenants. Vianet undertakes that Vianet shall, and shall cause its Affiliates to, at the cost of the applicable Group Companies, complete all the matters, actions and transactions provided in Exhibit 9.6 within the applicable time limits respectively set forth therein or such other time as agreed upon by the Shareholders. The Investor shall provide commercially reasonable assistance as requested by Vianet.

9.7 Financing. The Shareholders shall use commercially reasonable efforts to use leverage on JV Co 1 and its Subsidiaries in order to maximize the economic returns of the Shareholders.

9.8 U.S. Tax Matters. The Parties shall procure that JV Co 1, PropCo 1, together with any other Group Companies shall use commercially reasonable Best Efforts to assist WP in (1) determining annually whether any of the Group Companies is a passive foreign investment company ("**PFIC**") within the meaning of IRC Section 1297 and the Treasury Regulations promulgated thereunder, (2) providing WP with any information necessary for WP to comply with annual reporting requirements in respect of such PFIC, (3) obtaining (i) PFIC Annual Information Statements as described in Treasury Regulation Section 1.1295-1(g)(1) so as to permit WP (or its direct or indirect investors) to timely make and maintain at all times a qualified electing fund election in accordance with IRC Section 1295 or (ii) information necessary to make a mark-to-market election on the PFIC in accordance with IRC Section 1296. The aforesaid assistance is limited to providing necessary information or documents to WP for it to comply with obligations in respect of PFIC, and shall under no circumstances be taken as agreement to submit or file any documents to any U. S. government authorities on behalf of WP.

10. CORPORATE GOVERNANCE

10.1 Board and Officers. The Shareholders hereby agree that:-

(a) Directors and Supervisors.

(i) The board of each of JV Co 1 and its Subsidiaries shall consist of five (5) directors, three (3) of which shall be appointed, removed or replaced (with or without cause) by Vianet and the other two (2) of which shall be appointed, removed or replaced (with or without cause) by the Investor. A director appointed by Vianet shall be appointed as the Chairman of the board of each of JV Co 1 and its Subsidiaries, who shall not have any casting vote. The Investor shall be entitled to appoint a person to be an observer with rights to attend and participate and speak (but not vote) in all meetings of the board of each of JV Co 1 and its Subsidiaries, and rights to receive all notices, agenda, papers and other documents and information as if such person were a director of each of JV Co 1 and its Subsidiaries.

(ii) Notwithstanding the foregoing, if any Shareholder's Shareholding Percentage in JV Co 1 is diluted pursuant to the provisions of this Agreement or other Transaction Documents, such Shareholder's corporate governance rights with respect to JV Co 1 and its Subsidiaries shall be adjusted according to the resultant dilution such that the number of directors that it can appoint to the board of JV Co 1 and its Subsidiaries will remain directly proportional to its Shareholding Percentage in JV Co 1. For the avoidance of doubt, if either Shareholder holds more than 60% of the then issued and outstanding shares in JV Co 1, the board of JV Co 1 shall be enlarged to consist of six (6) directors, four (4) of which shall be appointed, removed or replaced by such Shareholder and the other two (2) of which shall be appointed, removed or replaced by the other Shareholder.

(iii) Each onshore Group Company shall have two (2) supervisors, one (1) of which shall be appointed, removed or replaced (with or without cause) by Vianet; and the other one (1) of which shall be appointed, removed or replaced (with or without cause) by the Investor. To the extent permitted by Applicable Law, the general manager of an onshore Group Company shall act as the legal representative of such onshore Group Company.

(b) Senior Executives. Either Shareholder may recommend suitable candidate for appointment as any of the senior executives of each Group Company (including without limitation the roles of chief executive officer and chief financial officer of JV Co 1 and general manager of each Group Company), subject to the approval of the board of directors of JV Co 1. Notwithstanding the foregoing, (i) Vianet shall be entitled to nominate the general manager of each Group Company, who shall be subject to the approval of the board of directors of JV Co 1; and (ii) the Investor shall be entitled to nominate the chief financial officer of each Group Company, who shall be subject to the approval of the board of directors of JV Co 1 and shall (A) have authority over any and all bank accounts of the Group Companies, (B) have any other rights to ensure that the Investor or the Investor Directors may exercise their respective rights in respect of the Reserved Matters, and (C) have responsibility for compliance, including but not limited to anti-corruption compliance, and authority to report directly to the board, including but not limited to making reports on anti-corruption compliance to the board on at least an annual basis; and (iii) each Shareholder may request to dismiss the legal representative or other Key Management of any Group Company if such legal representative or Key Management commits any Misconduct Event and the Shareholders shall take any and all actions to effectuate any dismissal requested by the requesting Shareholder. The replacement for the dismissed legal representative or other Key Management of the applicable Group Company shall be nominated and approved following the normal procedures for the nomination and approval of such position as provided in this Section 10.1(b) (Senior Executives).

(c) Investor Director. Immediately prior to an IPO or REIT, the Shareholders shall act in good faith with relevant advisors and regulatory authorities to replace the corporate governance procedures described in this Section 10 (Corporate Governance) with such procedures and practices that are consistent with the regulatory and listing requirements of the stock exchange on which JV Co 1 will be listed. Subject to the relevant rules and regulations, in the event any or all of the Investor's rights set forth herein are terminated, the Shareholders acknowledge that the Investor (or its permitted assignee or successor) shall continue, to the extent permissible under Applicable Law and applicable listing rules, to be entitled to appoint at least one (1) member to the board of JV Co 1 after an IPO or REIT.

(d) Appointment. The Shareholders shall, and shall procure each Group Company to, take any and all necessary actions to duly appoint the director(s) respectively selected by the Shareholders to the board of the relevant Group Company pursuant to this Section 10 (Corporate Governance), including adoption of the relevant shareholder or board resolutions and obtaining all necessary Governmental Approvals.

10.2 Board Meetings and Rights of Shareholders.

(a) Board Meetings. A board meeting of each Group Company may be called by the Chairman of the board of the applicable Group Company or any of the Investor Directors with a prior written notice to all the other directors of the applicable Group Company specifying the date, time, venue and agenda for such board meeting. Such notice must be sent at least seven (7) days prior to the proposed board meeting or such shorter notice period as mutually agreed upon by all directors of JV Co 1. Except otherwise provided herein and subject to Section 10.3 (Reserved Matters), resolutions of the board of each Group Company shall be passed by a simple majority at a duly convened meeting.

(b) Quorum. The quorum of a board meeting of each Group Company shall be four (4) directors present in person or by proxy.

The Shareholders shall use their respective commercially reasonable efforts to ensure that the director(s) respectively appointed by them attend the board meetings. If a quorum is not present within an hour from the time specified for a board meeting, such board meeting shall be re-scheduled and a notice specifying the date, time and venue of a re-scheduled board meeting (the "**First Re-scheduled Meeting**") must be sent to all the directors of the applicable Group Company at least seven (7) days prior to the proposed First Re-scheduled Meeting or such shorter notice period as mutually agreed upon by all of the directors.

If at the First Re-scheduled Meeting after all the meeting notices have been duly served, a quorum is still not present within an hour from the specified time of the First Re-scheduled Meeting, the First Re-scheduled Meeting shall be further re-scheduled and another notice specifying the date, time and venue of a further re-scheduled board meeting (the "**Second Re-scheduled Meeting**") must be sent to all the directors of the applicable Group Company at least seven (7) days prior to the proposed Second Re-scheduled Meeting or such shorter notice period as mutually agreed upon by all of the directors.

If at the Second Re-scheduled Meeting after all the meeting notices have been duly served, a quorum is still not present within an hour from the specified time of the Second Re-scheduled Meeting, those directors present shall be deemed a quorum and may transact the business for which the original board meeting was originally convened.

For the avoidance of doubt, the foregoing board meeting, the First Re-scheduled Meeting and the Second Re-scheduled Meeting shall be the same board meeting with the same meeting topics and agenda. A board meeting with a different topic or agenda shall be deemed as a separate board meeting and the foregoing provisions shall apply separately.

(c) Frequency. Subject to Section 10.2(a) (Board Meetings), the board of each Group Company shall meet not less than quarterly.

(d) Written Resolutions. Subject to Applicable Laws, anything which may be done by resolution of the directors of any Group Company may, without a meeting and without any previous notice being required, be done by resolution in writing signed by (and thereby signifying their approval thereof) all such directors of the relevant Group Company whose affirmative vote is necessary for passing a resolution at a duly convened meeting (counting all directors of the relevant Group Company as present).

(e) Chairman. The Chairman shall act as the chairman at all meetings of the board of the applicable Group Company at which the Chairman is present. In the absence of the Chairman, any other director designated by the Chairman shall be entitled to act as the chairman in his place at the meeting. If the Chairman fails to make such designation, a chairman shall be appointed or elected by a simple majority of the directors of the applicable Group Company present at the meeting.

(f) Participation. The directors of each Group Company may participate in any meeting of the board of the applicable Group Company by means of such telephone, electronic or other communication facilities as permit all persons participating in the meeting to communicate with each other simultaneously and instantaneously, and participation in such a meeting shall constitute presence in person at such meeting. Any Investor Director may require an interpreter to be present at a board meeting at the cost of the relevant Group Company.

(g) Annual Business Plan and Budgets. On or before 15 November of a given year, the board of the JV Co 1 shall prepare an annual business plan and budget for JV Co 1 and its Subsidiaries for the succeeding year on the basis of the principles set out in Schedule B (each an "**Annual Business Plan and Budget**"), which shall include without limitation, the consolidated operating budget, budget of capital expenditures, and strategic plan for the Group Companies for the succeeding fiscal year. The Annual Business Plan and Budget shall be drafted and discussed by all members of the board of JV Co 1, and all comments from all such members shall be reflected therein. The Annual Business Plan and Budget drafted by the board shall be subject to review and approval by the shareholders meeting of JV Co 1, which approval shall be granted on or before 15 December of that given year when the applicable Annual Business Plan and Budget is presented to the shareholders meeting of JV Co 1 for review and approval. The foregoing arrangements with respect to the Annual Business Plan and Budget shall remain in place notwithstanding any subsequent investment in JV Co 1 after the JV Co 2 Closing, unless otherwise mutually agreed upon by the Shareholders. The first Annual Business Plan and Budget shall be submitted to and approved by the shareholders meeting of JV Co 1 as soon as practical prior to the last Tranche Closing Date (as defined under the Original Investment Agreement).

(h) Rights of Shareholders. The shareholders of each Group Company shall have the right to receive notice of, attend, speak and vote at any meeting of the shareholders of the applicable Group Company. The shareholders of the applicable Group Company shall be able to vote according to their then ownership interests in the applicable Group Company, with its voting percentage equal to their then shareholding percentage (on a fully diluted basis) in the applicable Group Company. Except otherwise provided herein and subject to Section 10.3 (Reserved Matters) and Applicable Laws, resolutions of the shareholders meeting of JV Co 1 shall be passed by a simple majority at a duly convened shareholders meeting.

10.3 Reserved Matters. Without any prejudice to the Investor's rights and interests hereunder, the Shareholders shall procure that no Group Company shall, without the prior written consent of both the Shareholders (or if permitted under Applicable Laws, the unanimous approval of all directors of the board of a Group Company expressly in respect of a specific Reserved Matter), take any of the actions set forth in Exhibit 10.3 (the "**Reserved Matters**"), provided that, where the approval of one of the Shareholders has not been obtained, then at a meeting at which such matter is considered, such Shareholder shall, in such vote, have such number of votes as equal to the Shareholder who voted in favor of the resolution plus one (as applicable).

10.4 Key Management. The Shareholders shall: (i) procure that the chief executive officer (or general manager, as applicable) and the chief financial officer of each Group Company (except Josh Chen) enter into employment contracts with the applicable Group Company in form and substance as unanimously approved by the board of JV Co1 (each an "**Employment Contract**"); and (y) procure the department heads of each Group Company (if any) enter into employment contracts with the applicable Group Company, which employment contracts may vary, in form and substance, from the Employment Contract (including without limitation, in terms of non-solicitation and non-competition clauses); provided, however, that such variation shall be subject to unanimous approval by the board of JV Co 1. The Shareholders shall cause each member of Key Management shall:-

(a) be an employee of a Group Company (except Josh Chen);

(b) not work, whether formally or informally, for any other Person that is not a Group Company; and

(c) comply with the terms of his or her Employment Contract with the applicable Group Company and the Applicable Laws.

10.5 Information and Inspection Rights of Investor. Subject to compliance with Applicable Laws and listing rules, the Investor shall be entitled to the information and inspection rights set forth in Exhibit 10.5.

11. TRANSFER RESTRICTIONS

11.1 Restrictions on Transfer. Unless otherwise provided under this Agreement or other Transaction Documents, none of the Shareholders may Transfer its shares in JV Co 1 without the prior written consent of the other Shareholder until the earlier of (a) the expiration of five (5) years following the first Tranche Closing Date (as defined under the Original Investment Agreement), or (b) the occurrence of an IPO or REIT.

11.2 Permitted Transfers. The restrictions on Transfer set forth in this Section 11 (Transfer Restrictions) shall not apply to the following Transfers (each such Transfer, a "**Permitted Transfer**"):-

(a) Any Transfers by any Shareholder to one or more of its Affiliates; provided that (i) the Transfer otherwise complies with Section 11.7 (Deed of Adherence) where applicable; (ii) in the event such transferee would no longer qualify as an Affiliate of such Shareholder, such transferee shall immediately Transfer the shares in JV Co 1 to such Shareholder or to an Affiliate of such Shareholder; and (iii) in the event of any such Transfer in accordance with this Section 11.2 (Permitted Transfer), such Shareholder shall provide prompt notice of such Transfer to the other Shareholders and JV Co 1;

(b) Any Transfer of any share, equity or other interest in any direct or indirect shareholder or investor of WP; or

(c) Any Transfers by the Investor pursuant to Section 13 (Exit).

11.3 Right of First Offer. Subject to Section 11.1 (Restrictions on Transfer), Section 11.2 (Permitted Transfers) and Section 13 (Exit):-

(a) Sale Notice. If a Shareholder (the "**Transferring Shareholder**") intends to Transfer all or any portion of the shares owned by such Transferring Shareholder (such Shares to be Transferred, the "**Subject Shares**") in JV Co 1, the Transferring Shareholder shall give a written notice (the "**Sale Notice**") to the other Shareholder (the "**Non-Transferring Shareholder**") offering to sell all (but not less than all) of the Subject Shares to the Non-Transferring Shareholder, which notice shall set forth the price on which the Transferring Shareholder is willing to sell the Subject Shares (and, if the Transferring Shareholder has received any proposal from a potential transferee for the Transfer of the Subject Shares, the terms and conditions of such proposal and the identity of such potential transferee). For a period of forty-five (45) days following the Non-Transferring Shareholder's receipt of such notice (the "**ROFO Negotiation Period**"), the Transferring Shareholder and the Non-Transferring Shareholder shall negotiate in good faith with each other the terms and conditions upon which such Non-Transferring Shareholder may acquire all (but not less than all) of the Subject Shares from the Transferring Shareholder. During the ROFO Negotiation Period, the Transferring Shareholder may not engage in any negotiation or discussion with any potential transferee with respect to the Subject Shares other than the Non-Transferring Shareholder.

(b) Completion Period. In the event the Transferring Shareholder and the Non-Transferring Shareholder reach an agreement with respect to all of the Subject Shares within the ROFO Negotiation Period, (i) within twenty-one (21) days after the date of the foregoing agreement, the foregoing Non-Transferring Shareholder shall pay to the Transferring Shareholder a non-refundable deposit in an amount of 10% of the transfer price set forth in the Sale Notice; and (ii) the relevant Shareholders shall enter into a share transfer agreement and an instrument of transfer and complete the Transfer of all of the Subject Shares within Forty-five (45) days of entry into such agreement (subject to extensions of up to 120 days as required to obtain requisite regulatory approvals) (the "**ROFO Completion Period**").

(c) Sale at Liberty. In the event (i) no agreement in writing with respect to all of the Subject Shares is reached between the Transferring Shareholder and the Non-Transferring Shareholder within the ROFO Negotiation Period, or (ii) such an agreement is reached but the Transfer contemplated thereunder fails to be completed within the ROFO Completion Period, then the Transferring Shareholder (unless the Transferring Shareholder causes the Transfer in this Section 11.3(c)(ii) to fail to be completed) shall be entitled to engage in negotiations and discussions with any potential third party transferee, and to sell all (but not less than all) of the Subject Shares at a price not less than the price set forth in the Sale Notice within a period of 120 days (subject to extensions of up to 120 days as required to obtain requisite regulatory approvals) following the end of the ROFO Negotiation Period or the ROFO Completion Period, as applicable.

(d) Vianet's Designation. In the case of the Investor being the Transferring Shareholder, Vianet may designate Josh Chen, Tus-Holdings Co., Ltd. (□□□□□□□□□□) or any other party to exercise the right of first offer provided under this Section 11.3 (Right of First Offer)

11.4 Tag-along Right. Without any prejudice to Section 11.1 (Restrictions on Transfer) through 11.3 (Right of First Offer), if Vianet proposes to Transfer its shares in JV Co 1, in whole or in part, the Investor shall have the tag-along right pursuant to the following:-

(a) Tag-Along. The Investor shall have the right to participate in the proposed Transfer by Vianet to sell all or part of its shares in JV Co 1, on the same terms and subject to the same conditions as specified in the Sale Notice issued by Vianet pursuant to Section 11.3 (Right of First Offer), by issuing to Vianet a written notice (the "**Tag-Along Notice**") within one (1) month after Investor's receipt of the Sale Notice. The Tag-Along Notice shall specify the series and number of shares of JV Co 1 which the Investor elects to sell. Unless the third party buyer of the shares to be Transferred by Vianet agrees to purchase more shares held by the Investor, the number of shares in JV Co 1 that can be sold by the Investor shall not exceed the total number of shares to be Transferred to such third party buyer multiplied by the Shareholding Percentage of the Investor in JV Co 1.

(b) Procurement. Vianet shall procure that:-

(i) All of the relevant parties to the Transfer shall execute such additional documents as may be necessary or appropriate to effectuate such Transfer;

(ii) Vianet shall not Transfer any share in JV Co 1 to the foregoing proposed transferee unless and until the proposed transferee has purchased all of the shares set forth in the Tag-Along Notice from the Investor and the corresponding share purchase price has been paid to the Investor in full; and

(iii) The closing of the Transfer of shares held by the Investor in JV Co 1 shall occur prior to or simultaneously with the closing of the Transfer of shares held by Vianet.

11.5 No Indirect Transfer. The Parties agree that the Transfer restrictions in this Section 11 (Transfer Restrictions) may not be avoided by and shall be applied to any Transfer of the shares (or other equity interests) in any direct or indirect shareholder of JV Co 1. Any Transfer of any shares (or other equity interests) in a direct or indirect shareholder of JV Co 1 in violation of this Section 11 (Transfer Restrictions) shall be null and void and shall be deemed to be a breach of this Section 11 (Transfer Restrictions) by the relevant direct shareholder of JV Co 1.

11.6 Ceasing to Apply. For the avoidance of doubt, any and all restrictions in respect of Transfer by the Investor under this Section 11 (Transfer Restrictions) shall cease to apply with immediate effect upon the earlier of (a) an IPO or REIT; or (b) the occurrence of any of the exit events set forth in Section 13 (Exit).

11.7 Deed of Adherence. No direct Transfer of any share in JV Co 1 shall be made, unless the Person to whom any such share is directly Transferred or issued shall first have executed and delivered a Deed of Adherence in the form set out in Exhibit 11.7. The Shareholders agree to extend the benefit of this Agreement to any Person who acquires shares in JV Co 1 in accordance with this Agreement and enters into a Deed of Adherence in the form set out in Exhibit 11.7, but without prejudice to the continuation inter se of the rights and obligations of the original Shareholders to this Agreement and all other Persons who have entered into such a Deed of Adherence.

11.8 Compliance of Restrictions. The Parties shall, and shall procure their respective Affiliates and the relevant directors thereof to fully comply with the restriction provided in this Section 11 (Transfer Restrictions).

12. IPO OR REIT

12.1 IPO or REIT. The Parties shall use their commercially reasonable efforts to procure that JV Co 1 achieve (a) an initial public offering ("**IPO**"); or (b) listing of JV Co 1 and/or its assets as a real estate investment trust ("**REIT**") with location and other terms and conditions to be mutually agreed upon by the Shareholders in writing, in each case by the end of five (5) years (or any other time period mutually agreed to by the Shareholders in writing) following the first Tranche Closing Date (as defined under the Original Investment Agreement).

12.2 Alternative. Subject to Applicable Laws, the Shareholders shall use good faith and their respective Best Efforts to entitle the Investor to the corresponding economic rights and benefits as well as contractual protections that are commensurate with those available to the Investor hereunder to the fullest extent permitted by law should any of such the rights, benefits or protections of the Investor as contemplated by this Agreement and other Transaction Documents are found to be unacceptable by the relevant stock exchange or other relevant Government Entities or institutions.

13. EXIT

If: (a) neither an IPO nor a REIT of JV Co 1 and/or its assets occurs by the end of four (4) years (or any other time period mutually agreed to by the Shareholders in writing) after the execution date of the Restructuring Agreement, then, at any time after expiry of the foregoing four (4) years (or any other time period mutually agreed to by the Shareholders in writing); (b) any Material Breach under this Agreement or other Transaction Documents or any RA Material Breach occurs; or (c) JV Co 4 fails to undertake any new Project for a period of any consecutive twenty-four (24) months following the JV Co 4 Establishment Date (as defined under the Restructuring Agreement), then the Investor shall be entitled to, in its sole discretion, exit from its investments in the Group Companies via one or more of the following exit mechanisms:-

13.1 Investor's Marketing Right.

(a) Investor's Sale Notice. The Investor shall be entitled to give a Sale Notice to Vianet pursuant to Section 11.3(a) (Sale Notice) and Vianet shall be entitled to the right of first offer pursuant to the provisions of Section 11.3 (Right of First Offer).

(b) Negative Decision Notice. If (i) Vianet elects not to exercise its right of first offer pursuant to Section 11.3 (Right of First Offer); or (ii) Vianet fails to pay the non-refundable deposit pursuant to the provisions of Section 11.3(b) (Completion Period), then, the Investor is at liberty to Transfer the Investor's Subject Shares to any third party, at a price no less than the price set forth in the Investor's Sale Notice.

13.2 Share Swap with Vianet ListCo.

(a) Share Swap Right. If Vianet or any of its Affiliates including VNET ("**Vianet ListCo**") remains a listed company or achieves another initial public offering, the Investor shall have an option (the "**Share Swap Right**"), by serving a written notice (the "**Share Swap Notice**") to Vianet, to compel an injection of all or part of the shares held by the Investor in JV Co 1 (the "**Swap Shares**") into Vianet ListCo through a share swap (the "**Share Swap**") pursuant to the provisions of Section 13.2(b) (Share Swap), subject to regulatory approval and approval by the shareholders (and/or board, as may be required by Applicable Laws) meeting of Vianet ListCo.

(b) Share Swap. Upon receipt of the Share Swap Notice, Vianet shall cause Vianet ListCo to purchase any and all of the Swap Shares in consideration of new shares to be issued by Vianet ListCo to the Investor, the number of which shall be calculated based on the respective fair market value of JV Co 1 determined pursuant to the provisions of Section 13.4(b) (Dissolution Exit) and the then actual publicly traded share price of Vianet ListCo.

13.3 Trade Sale. Upon the consent of the Shareholders, the Shareholders shall appoint an investment bank of international repute to procure a sale by JV Co 1 of all or substantially all of its assets and undertakings (whether by way of a share sale, an asset sale or a combination of both) at a valuation acceptable to the Shareholders, and the Shareholders shall extend all necessary cooperation and assistance to facilitate the sale (including providing assistance to the potential purchasers and their advisers in the conduct of any due diligence investigation in respect of the JV Co 1 Group Companies). Upon completion of the trade sale, the Shareholders shall take the necessary steps to distribute the sale proceeds from the sale of JV Co 1 to the Shareholders on a *pro rata* basis pursuant to their respective then-current Shareholding Percentages in JV Co 1.

13.4 Dissolution Exit.

(a) Dissolution Notice. The Investor may (but is not obligated to), in its sole discretion, elect to exit (the "**Dissolution Exit Option**") from its investment in JV Co 1 pursuant to Section 13.4(b) (Dissolution Exit) by serving a written notice to Vianet (the "**Dissolution Notice**"). For the avoidance of doubt, any sale or transfer in connection with the exercise of the Dissolution Exit Option shall not be subject to the Transfer restrictions set forth in Section 11 (Transfer Restrictions).

(b) Dissolution Exit. After serving the Dissolution Notice, the Investor may arrange for the fair market value of JV Co 1 to be determined as follows:-

(i) Each of the Shareholders shall appoint an Appraiser within five (5) days after the date of service of the Dissolution Notice to each determine the fair market value of JV Co 1, based on the principles set forth in Exhibit 12.3(b) (assuming the principal of the entrustment loans extended to the Shareholders pursuant to the Restructuring Agreement and the interest accrued thereon have been repaid in full);

(ii) The Appraisers shall submit a valuation report setting out the fair market value within one (1) month of their respective appointment; and

(iii) The fair market value of JV Co 1 shall be the arithmetic average of the fair market values submitted by the two (2) Appraisers.

The Shareholders shall (and shall cause the JV Co 1 Group Companies to) provide the Appraisers with all information reasonably required for the purposes of determining the fair market value of JV Co 1. The cost of such appraisal shall be paid and borne by JV Co 1.

(c) Within thirty (30) Business Days after the fair market value of JV Co 1 is determined pursuant to the provisions of Section 13.4(b) (the "**Exit Put/Call Exercise Period**"),

(i) WP is entitled to, by serving a written notice to Vianet (the "**WP Put Notice**"), require Vianet to purchase all (but not less than all) the shares then held by WP in JV Co 1 (the "**WP Put Shares**") at a price equal to the product of such fair market value multiplied by WP's then Shareholding Percentage in JV Co 1 (the "**WP Put Price**"), and Vianet shall be obligated to purchase all the WP Put Shares at the WP Put Price, which WP Put Price shall be paid by Vianet to an account designated by WP no later than twenty (20) Business Days after delivery of the WP Put Notice; and

(ii) Vianet is entitled to, by serving a written notice to Vianet (the "**Vianet Call Notice**"), require WP to sell all (but not less than all) the shares then held by WP in JV Co 1 (the "**Vianet Call Shares**") at a price equal to the product of such fair market value multiplied by WP's then Shareholding Percentage in JV Co 1 (the "**Vianet Call Price**"), and WP shall be obligated to sell all the Vianet Call Shares at the Vianet Call Price, which Vianet Call Price shall be paid by Vianet to an account designated by WP no later than twenty (20) Business Days after delivery of the Vianet Call Notice.

If (x) neither WP exercises the foregoing WP Put Option nor Vianet exercises the foregoing Vianet Call Option within the Exit Put/Call Exercise Period or (y) each Shareholder indicates in writing that it will not exercise the WP Put Option or the Vianet Call Option, as applicable (and if the circumstances described in this item (y) occurs, the Exit Put/Call Exercise Period shall be deemed as early terminated upon such occurrence), WP shall be entitled to trigger the asset distribution pursuant to Section 13.4(d) (Asset Distribution) immediately upon the expiry or early termination (whichever is earlier) of the Exit Put/Call Exercise Period. For the avoidance of doubt, WP shall not be allowed to trigger the asset distribution under Section 13.4(d) (Asset Distribution) during the Exit Put/Call Exercise Period (or the early terminated Exit Put/Call Exercise Period, as applicable).

(d) Asset Distribution. The Shareholders may initiate the break-up of JV Co 1 (the "**Dissolution Exit**") and shall take turns to select Project Companies to be transferred to itself or its Affiliates until each of the Shareholders (or their respective Affiliates, as applicable) receives its share in the fair market value of JV Co 1 (assuming the principal of the entrustment loans extended to the Shareholders pursuant to the Restructuring Agreement and the interest accrued thereon have been repaid in full) based on its Shareholding Percentage in JV Co 1; provided, however, that (i) the Investor shall have the right to the first selection, and Vianet shall have the right to the second selection; and (ii) the Investor shall be entitled to a priority to be distributed all available cash of JV Co 1. If, after completion of the foregoing selection, there is any shortfall between the fair market value of the Project Companies selected by any Shareholder and the amount that should be distributed to such Shareholder pursuant to this Section 13.4(d) (Asset Distribution), such shortfall shall be made up for in cash by the other Shareholder that receives any excess distribution. The Shareholders shall use their respective Best Efforts to cause the transfer or disposal of each Project Company to be completed within 180 days after the date of service of the Dissolution Notice.

13.5 Amendment to MSA upon WP's Exit. The Parties acknowledge and agree that upon WP's exercise of its exit rights with respect to its investment in JV Co 1 pursuant to this Section 13 (Exit), WP shall use commercially reasonable efforts to procure the Master Service Agreement between the relevant Project Company and Vianet's relevant Affiliate be amended to allow such Project to satisfy the requirements of VNET's finance lease accounting treatment, provided that the amendments will not impose any negative economic impact on the relevant Project Company (including any additional Tax burden), nor impair the marketability or value of the Projects upon WP's (or its Affiliates') direct or indirect sale thereof via sale of shares, asset sale or a combination of both (comparing to the situation where there is no amendment to satisfy the finance lease treatment).

13.6 Actions to Effectuate Investor's Exit. Vianet shall, and shall cause its Affiliates, appointed directors, permitted successors, transferees or assignees to, procure the Group Companies take any and all necessary actions to effectuate the Investor's exit pursuant to the provisions hereof.

13.7 Late Payment Fee. If either Shareholder fails to pay to the other Shareholder any due and payable amount in a timely manner under this Section 13 (Exit), such default Shareholder shall pay to the other Shareholder a late payment fee at a daily interest rate of 0.05%.

13.8 Taxes. Without prejudicing the rights and interests of the Investor under this Section 13 (Exit), each Shareholder shall pay and bear the Taxes arising from or in connection with the exit mechanism set forth in this Section 13 (Exit) payable by said Shareholder pursuant to the Applicable Law; provided, however, that the Shareholders shall use their respective Best Efforts to ensure that the exit mechanism set forth in this Section 13 (Exit) be implemented in a most tax-efficient way.

14. INDEMNITY

14.1 Survival of Representations and Warranties. The representations and warranties of the Parties in this Agreement and any certificate delivered pursuant hereto shall survive the JV Co 2 Closing (as defined under the Original Investment Agreement) and the completion of the transactions contemplated hereby.

14.2 General. If there occurs any misrepresentation, breach of warranty, breach of covenant, or other violation by any Party under this Agreement or any other Transaction Documents, such Party shall indemnify and hold harmless other Parties, their respective Affiliates, together with the senior management, directors, employees thereof, from and against any and all Indemnifiable Losses suffered by such other Parties, such Affiliates, such senior management, directors or employees, directly or indirectly, in relation to the foregoing.

14.3 Indemnity by Vianet. Without prejudice to the generality of Section 14.2 (General), Vianet shall indemnify the Investor and its Affiliates against any and all Indemnifiable Losses suffered by the Investor and its Affiliate arising out of or in connection with the matters set forth in Exhibit 14.3 due to Vianet's fault as soon as commercially reasonable (but in no event later than forty-five (45) days) after the occurrence of the foregoing Indemnifiable Losses. For the avoidance of doubt, each of the following shall be deemed as "due to Vianet's fault": (a) there is any violation of Applicable Laws by Vianet, the Group Companies or their respective Affiliates; and (b) there is any breach of any binding contract, agreement or other document in connection with the matters set forth in Exhibit 14.3 by Vianet, the Group Companies or their respective Affiliates.

In the event any Group Company suffers any Indemnifiable Loss that gives rise to or otherwise entitles the Investor and/or its Affiliates to any indemnification by Vianet hereunder, Vianet shall have the right to either (i) indemnify such Group Company for the entire amount of the Indemnifiable Loss suffered by such Group Company or (ii) indemnify the Investor (or, at the Investor's sole and absolute discretion, an Investor's designee) for the proportion of the Indemnifiable Loss that is proportionate to the Investor's direct or indirect shareholding percentage in such Group Company.

14.4 Non-Exclusive. The foregoing indemnity provisions are not in derogation of other contractual and statutory remedies and rights any Party may have under this Agreement, other Transaction Documents and Applicable Law. For the avoidance of doubt, no Party is entitled to any repetitive payment and indemnity arising from or in relation to the same breach or default by any other Party.

15. TERMINATION

15.1 Termination of Agreement. This Agreement may be terminated:-

(a) by all the Parties upon their unanimous written consent;

(b) by the Investor if the Investor elects to exercise the Dissolution Exit Option pursuant to Section 13.4 (Dissolution Exit);

(c) by the Investor if there is a Material Breach;

(d) by Vianet if there is an Investor Material Breach;

(e) by any Shareholder upon the winding up of JV Co 1 and completion of the distribution of proceeds, if any, from such winding up;

(f) with respect to a Shareholder, upon the date on which such Shareholder ceases to hold any shares in JV Co 1; provided, however, that such Shareholder's cessation to hold any shares shall not be a breach of this Agreement;

(g) by any Shareholder upon the successful completion of an IPO or REIT of JV Co 1 or any of its Subsidiaries; or

(h) by either Shareholder if any Government Entity having relevant jurisdiction or power mandatorily requires that the transactions contemplated hereby be terminated and the Shareholders fail to resolve such requirement by such Government Entity after using Best Efforts within 180 days after the date of such requirement by such Government Entity.

15.2 Effects of Termination. If this Agreement is terminated pursuant to the provisions of Section 15.1 (Termination of Agreement):-

(a) No Further Effect. This Agreement shall become invalid and have no further effect; provided, however, that termination of this Agreement (howsoever occasioned) shall not affect any accrued rights or liabilities to any Shareholder, nor shall it affect the effect of any provision hereof which is expressly or by implication intended to come into or continue in force on or after such termination, including those sections set out in Section 15.3 below;

(b) Termination of Ancillary Agreements. The Parties hereby agree that they shall take any and all necessary actions to terminate any ancillary agreements entered into in connection with this Agreement; and

15.3 Survival. Notwithstanding any other provisions, the provisions of Section 9.3 (Confidentiality and Publicity), Section 13 (Exit), Section 14 (Indemnity), this Section 15 (Termination) and Section 16 (Miscellaneous) shall survive any expiration or termination of this Agreement.

16. MISCELLANEOUS

16.1 Taxes and Expenses.

(a) Taxes. Each of the Parties shall bear all Taxes arising from the transactions contemplated hereby pursuant to the requirements of Applicable Laws.

(b) Expenses. In the event that the transactions contemplated hereby are not consummated, each of the Parties shall bear its own due diligence costs, advisory fees and costs and expenses incurred in connection with their respective negotiation and preparation of this Agreement and any other related agreements.

(c) Reimbursement. In the event that the transactions contemplated hereby are consummated, the Group Companies shall pay to each of the Shareholders their respective reasonable due diligence costs, advisory fees and costs and expenses incurred in connection with their respective negotiation and preparation of this Agreement and any other related agreements, which are subject to a cap of US$500,000 for each of the Shareholders. The Shareholders shall provide the Group Companies with valid invoices to support the foregoing reimbursements.

16.2 Binding Effect; Assignment. This Agreement shall be binding upon and shall be enforceable by each Party, its successors and permitted assigns. Subject to Section 11.2 (Permitted Transfers), no Party may assign any of its rights or obligations hereunder without the prior written approval of the other Parties.

16.3 Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of Hong Kong without regard to conflict of laws principles thereunder.

16.4 Dispute Resolution.

(a) Dispute. Any dispute, controversy or claim (each, a "**Dispute**") arising out of or relating to this Agreement, or the interpretation, breach, termination or validity hereof, shall be referred to and finally resolved by arbitration administered by the Hong Kong International Arbitration Center ("**HKIAC**") in accordance with the HKIAC Administrated Arbitration Rules (the "**Rules**") in effect when the Notice of Arbitration is submitted, which Rules are deemed to be incorporated by reference into this Section 16.4 (Dispute Resolution). The seat of arbitration shall be Hong Kong. Before resolving the Dispute by way of arbitration as provided in this Section 16.4 (Dispute Resolution), the Dispute shall be resolved at the first instance through consultation between the Parties to such Dispute. Such consultation shall begin immediately after any Party has delivered written notice to any other Party to the Dispute requesting such consultation (the "**Notice of Escalation of Dispute**"). If the Dispute is not resolved within thirty (30) days following receipt of the Notice of Escalation of Dispute in accordance with Section 16.8 (Notices), the Dispute shall be submitted to arbitration by any of the Parties in accordance with this Section 16.4 (Dispute Resolution). The thirty (30)-day consultation period set out in this Section 16.4(a) (Dispute) shall not apply to applications seeking conservatory or interim relief.

(b) Arbitration Tribunal. The arbitral tribunal shall be composed of three (3) arbitrators. The arbitration proceedings shall be conducted in English. If the Rules are in conflict with the provisions of this Section 16.4 (Dispute Resolution), including but not limited to the provisions concerning the appointment of arbitrators, the provisions of this Section 16.4 (Dispute Resolution) shall prevail. The arbitrators shall decide any Dispute submitted by the Parties strictly in accordance with the substantive law of Hong Kong.

(c) Matters Not in Dispute. When any Dispute occurs and when any Dispute is under arbitration, except for the matters in dispute, the Parties shall continue to fulfill their respective obligations and shall be entitled to exercise their rights under this Agreement. The award of the arbitral tribunal shall be final and binding upon the Parties and shall be enforceable in any court of competent jurisdiction. The costs of arbitration shall be borne by the losing Party on full indemnity basis, unless otherwise determined by the arbitral tribunal.

(d) Exclusive Remedy. The Dispute resolution provisions of this Section 16.4 (Dispute Resolution) shall be the sole and exclusive remedy and process to resolve any Disputes under or pursuant to this Agreement. Nothing in this Section 16.4 (Dispute Resolution) shall be construed as preventing any Party from seeking conservatory or interim relief (including injunction, specific performance or other similar or comparable forms of equitable relief) from any court of competent jurisdiction. For the avoidance of doubt, the thirty (30)-day consultation period set out in Section 16.4(a) (Dispute) shall not apply to applications seeking conservatory or interim relief.

16.5 Specific Performance. The Parties hereto acknowledge and agree that irreparable harm may occur for which money damages would not be an adequate remedy in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the Parties shall be entitled to injunctive relief to address breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement.

16.6 Language. This Agreement shall be executed in English.

16.7 Effectiveness and Amendments. Except as otherwise permitted herein, this Agreement and its provisions may be amended, changed, waived or terminated only by a writing signed by each of the Parties. This Agreement shall enter into effect from the later of (such later date, the "**Effectiveness Date**") (i) the Major Projects Closing Date (as defined under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) to the Restructuring Agreement), and (ii) the date when this Agreement is executed by all of the Parties or their respective duly authorized representatives.

16.8 Notices. All notices, claims, requests, demands and other communications under this Agreement shall be made in writing and shall be delivered to any Party hereto by hand or sent by facsimile, or sent, postage prepaid, by reputable overnight courier services at the address given for such Party on Exhibit 16.8 (or at such other address for such Party as shall be specified by like notice), and shall be deemed given when so delivered by hand, or if sent by facsimile, upon receipt of a confirmed transmission receipt, or if sent by overnight courier, seven (7) days after delivery to or pickup by the overnight courier service. Any of the foregoing notices and other communications may be accompanied with (but not replaced by) email to the email address given for a Party on Exhibit 16.8 (or at such other email address for such Party as shall be specified by like notice). Each Party shall promptly (and in any event within fourteen (14) days of the event taking place) notify the other Parties shall there be a change in the address of service.

16.9 Entire Agreement. This Agreement and all other Transaction Documents (together with documents mentioned herein and therein) constitute the entire agreement among the Parties with respect to the subject matter hereof and supersedes all prior written or oral understandings or agreements. Without prejudice to the foregoing, the Parties hereby acknowledge and agree that this Agreement replaces in its entirety the Original Investment Agreement from the Effectiveness Date, and the Original Investment Agreement has been terminated by the Parties with effect from the Effectiveness Date; provided that such termination of the Original Investment Agreement shall not affect any accrued rights or liabilities to any Shareholder.

16.10 Severability. If any provision of this Agreement shall be held invalid or unenforceable to any extent, the remainder of this Agreement shall not be affected thereby and shall be enforced to the greatest extent permitted by Applicable Law.

16.11 Counterpart Execution. This Agreement shall be executed in three (3) counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Each Party shall hold one (1) counterpart.

16.12 Drafting Presumption. This Agreement shall be construed fairly as to each Party regardless of which Party drafted it. Each Party acknowledges and agrees that each of them played a significant and essential role in the preparation, drafting and review of this Agreement.

16.13 Conflicts among Transaction Documents. In the case of any conflict between this Agreement and other Transaction Documents, this Agreement shall prevail as among the Parties only, and the Parties shall procure that the constitutional documents of the relevant Group Companies are promptly amended, to the extent permitted by Applicable Laws, in order to remove such conflict.

16.14 Limitation on Benefits of this Agreement. A person who is not a party (or the successor or assignee, immediate or otherwise, of a party, or the person becoming a party by novation) to this Agreement shall not have any rights under the Contracts (Rights of Third Parties) Ordinance (Cap. 623) to enforce any term of this Agreement.

[Remainder of this page intentionally left blank; signature pages to follow.]

IN WITNESS WHEREOF, each of the Parties hereto has caused this Agreement to be executed by their duly authorized signatories on the date first set forth above.

21VIANET GROUP, INC.

By:	/s/ Sheng Chen		By:	
	Name:	Sheng Chen	Name:	
	Title:	Director	Title:	Director

21VIANET DRP INVESTMENT HOLDINGS LIMITED

By:	/s/ Shiqi WANG		By:	/s/ Xiao LIU
	Name:	Shiqi WANG	Name:	Xiao LIU
	Title:	Director	Title:	Director

IN WITNESS WHEREOF, each of the Parties hereto has caused this Agreement to be executed by their duly authorized signatories on the date first set forth above.

MARBLE STONE HOLDINGS LIMITED

By: /s/ Ellen Hoi Ying Ng

Name: Ellen Hoi Ying Ng

Title: Director

Exhibit 1.1

Definitions

1. The following terms shall have the following meanings:-

"**21Vianet HK**" means 21 ViaNet Group Limited (□□□□□□□□□□), a limited liability company incorporated under the laws of Hong Kong.

"**21Vianet VNB**" means Beijing 21Vianet Broad Band Data Center Co., Ltd. (□□□□□□□□□□□□□□□□□), a limited liability company incorporated under the laws of the PRC.

"**Action**" means any claim, action, suit, arbitration, inquiry, proceeding or investigation by or before any Government Entity.

"**Affiliate**" with respect to a specified Person means (a) in the case of an individual, such Person's siblings, spouse and lineal descendants or antecedent (whether natural or adopted) and any trust formed and maintained solely for the benefit of such Person, such Person's siblings, spouse and/or such lineal descendants or antecedent, and (b) in the case of any Person, a Person that directly, or indirectly through one or more intermediaries, Controls or is Controlled by, or is under common Control with, the Person specified, and with respect to the Investor, excludes JV Co 1, JV Co 4 and any of their respective Subsidiaries or other Affiliates. In the case of any of the Parties being an investment fund (or a Subsidiary of an investment fund), the term "Affiliate" shall include, without limitation, any other investment fund (or a Subsidiary of any such investment fund) managed by the same manager of such investment fund (or, if such Party is a Subsidiary of an investment fund, the same manager of the investment fund of which such Party is a Subsidiary).

"**AIC**" means the State Administration for Industry and Commerce and/or its local branches, as applicable.

"**Anti-Bribery Laws**" means (a) the US Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations issued thereunder, (b) the PRC Criminal Law, the PRC Anti-Unfair Competition Law, the Interim Rules of the State Administration for Industry and Commerce on Prohibition of Commercial Bribery, and any other PRC law, rule, regulation, judicial interpretation, or other legally binding measure that contains anti-bribery or corruption provisions or that otherwise relates to bribery or corruption, and (c) any other law, rule, regulation, or other legally binding measure of any jurisdiction that relates to bribery or corruption.

"**Applicable Law**" or "**Applicable Laws**" means, with respect to any activities or matters conducted by or happen to any Person, any and all provisions of any law, regulation, code, rule, judgment, rule of common law, order, decree, award, injunction, governmental approval, license, directive, or other governmental restriction or any similar form of decision of, or determination by, or any interpretation or administration of any of the foregoing by, any Government Entity, applicable to such Person or any of its assets or undertakings at the time when such activities are conducted or when such matters happen (as applicable).

"**Appraiser**" means any of Jones Lang LaSalle, CB Richard Ellis, Savills Property Services, DTZ Debenham Tie Leung or Colliers International, or such other internationally reputable appraiser agreed by the Shareholders in writing.

"**Best Efforts**" means, in relation to a Person, taking all steps that a prudent Person desirous of achieving a result would take in similar circumstances to achieve that result as expeditiously as possible.

"**Big Four Accounting Firm**" means any of (i) Ernst & Young, (ii) PricewaterhouseCoopers, (iii) Deloitte & Touche Tohmatsu and (iv) KPMG.

"**Business Day**" means a day (other than a Saturday or Sunday) when banks in China, Hong Kong, the Cayman Islands, the British Virgin Islands, Singapore and New York are open for business.

"**Cash**" shall mean in respect of a Group Company, all cash held by such Group Company, for the avoidance of doubt excluding outstanding checks and wire transfers of such Company as at the relevant time.

"**Chairman**" means the chairman of the board of JV Co 1 (or the relevant Group Company, as applicable) from time to time.

"**Control**" (including the correlative meanings of the terms "**Controlling**", "**Controlled by**" and "**under common Control with**") means, with respect to any Person, direct or indirect possession of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of securities or title to properties, by contract or otherwise.

"**Disclosure Schedule**" means the disclosure schedule delivered by VNET and Vianet to the Investor on or prior to the date of the Original Investment Agreement.

"**EBITDA**" means, with respect to any Group Company, the earnings before interest, income taxes, depreciation and amortization. If the subject Group Company is in operation for less than a full fiscal year, such EBITDA shall be annualized as if that Group Company has been in operation for a full fiscal year. For the avoidance of doubt, business taxes and value added taxes (if applicable) shall be deducted for the calculation of the EBITDA and any extraordinary, non-cash or non-recurring revenues shall be explicitly excluded from the EBITDA. EBITDA shall be assumed to be zero if the calculated amount is less than zero.

"**Encumbrance**" means and includes, without limitation, any interest or equity of any person (including, without limitation to any right to acquire, option or right of pre-emption) or any mortgage, pledge, lien, option, charge, assignment, hypothecation, contractor's lien, or other agreement or arrangement which has the same or a similar effect to the granting of security or a security interest over or in the relevant property.

"**Existing Projects**" means the projects as set forth in Schedule A, and "**Existing Project**" means any one of them.

"**Existing Project Companies**" means the project companies as set forth in Schedule A, and "**Existing Project Company**" means any one of them.

"**Foshan Offshore SPV**" means Asia Quality Limited (□□□□□□), a limited liability company incorporated under the laws of Hong Kong.

"**Government Approval**" means any consent, approval, authorization, waiver, permit, grant, franchise, concession, license, ruling, judgment, decree, exemption or order of, registration, certificate, declaration, filing, report, notice, right or privilege by, to, or with any Government Entity.

"**Government Entity**" means

(a) the government of any jurisdiction (or any political or administrative subdivision thereof), whether provincial, state or local, and any department, ministry, agency, instrumentality, court, central bank or other authority thereof, including without limitation any entity directly or indirectly owned or controlled thereby;

(b) any public international organization or supranational body (including without limitation the European Union) and its institutions, departments, agencies and instrumentalities; and

(c) any quasi-governmental or private body or agency lawfully exercising, or entitled to exercise, any administrative, executive, judicial, legislative, regulatory, licensing, competition, tax or other governmental or quasi-governmental authority.

"**Government Official**" means any officer, employee or representative of a Government Entity (including without limitation, for purposes of this definition, any entity or enterprise owned or Controlled by a government), any Person acting in an official capacity for or on behalf of any such Government Entity, or any candidate for political office or an person acting on his or her behalf.

"**Group Companies**" means, collectively, JV Co 1 and its direct or indirect Subsidiaries and "**Group Company**" means any one of them.

"**Hong Kong**" means the Hong Kong Special Administrative Region of the People's Republic of China.

"**Indebtedness**" means any indebtedness for or in respect of:

(a) moneys borrowed;

(b) any amount raised by acceptance under any acceptance credit facility;

(c) any amount raised pursuant to any note purchase facility or the issue of bonds, notes, debentures, loan stock or any similar instrument;

(d) the amount of any liability in respect of any lease or hire purchase contract which would be treated as a finance or capital lease;

(e) receivables sold or discounted (other than any receivables to the extent they are sold on a non-recourse basis);

(f) any amount raised under any other transaction (including any forward sale or purchase agreement) having the commercial effect of a borrowing;

(g) any derivative transaction entered into in connection with protection against or benefit from fluctuation in any rate or price (and, when calculating the value of any derivative transaction, only the marked to market value shall be taken into account);

(h) any counter-indemnity obligation in respect of a guarantee, indemnity, bond, standby or documentary letter of credit or any other instrument, in each case, issued by a bank or financial institution; and

(i) the amount of any liability in respect of any guarantee or indemnity for any of the items referred to in paragraphs (a) to (h) above.

"**Indemnifiable Loss(es)**" means, with respect to any Person, any action, cost, damage, disbursement, expense, Liability, loss, deficiency, diminution in value, obligation, penalty or settlement of any kind or nature as recognized by the Parties or HKIAC. Notwithstanding anything to the contrary provided in the preceding sentence, "**Indemnifiable Loss(es)**" shall include, but shall not be limited to, (i) interest or other costs, penalties, legal, accounting and other professional fees and expenses reasonably incurred in the investigation, collection, prosecution or defense of claims and amounts paid in settlement, that have been imposed on or otherwise incurred or suffered by such Person; and (ii) any Taxes that have been payable by such Person by reason of the indemnification of any Indemnifiable Loss hereunder, other than Taxes that would have been payable notwithstanding the event giving rise to indemnification.

"**Investor Director**" means any director of JV Co 1 (or the relevant Group Company, as applicable) appointed/nominated by the Investor, and "**Investor Directors**" means all of them.

"**Investor Material Breach**" means the occurrence of any of the following at any time:-

(a) a breach of any provision of Section 8 (Representations and Warranties) by the Investor that is:-

(i) not capable of remedy; or

(ii) a second breach within eighteen (18) months of a previous breach (that is capable of remedy); or

(iii) capable of remedy but not remedied within the cure period (if any) as expressly provided under the relevant Transaction Document,

in the case of items (i) and (ii) above, such breach has a negative monetary impact of at least RMB5,000,000 on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the Group Companies taken as a whole; or

(b) a default under Section 4 (Investment Commitment), Section 10.3 (Reserved Matters) or Section 11 (Transfer Restrictions) by the Investor, subject to the relevant cure period provided herein.

"**IRC**" means U.S. Internal Revenue Code of 1986 (as amended from time to time).

"**Josh Chen**" means Mr. Chen Sheng (□□), an individual with the last four (4) numbers of his PRC identification card number being 1450.

"**JV Co 1 Articles**" means the memorandum and articles of association of JV Co 1, as amended from time to time.

"**JV Co 2**" means Shihua DC Investment Holdings 2 Limited.

"**JV Co 2 Closing**" shall have the meaning as defined under the Original Investment Agreement.

"**JV Co 2 Closing Date**" shall have the meaning as defined under the Original Investment Agreement.

"**JV Co 4**" shall have the meaning as defined under the Restructuring Agreement.

"**JV Co 4 Establishment Date**" shall have the meaning as defined under the Restructuring Agreement.

"**Key Management**" means the chief executive officer, the chief financial officer, the chief operation officer, the general manager and the head of each department of JV Co 1 and other Group Companies.

"**Liability**" or "**Liabilities**" means, with respect to any Person, liabilities owed by such Person of any nature, whether accrued, absolute, contingent, fixed or otherwise, direct or indirect, actual or consequential, or whether known or unknown, and whether due or to become due or otherwise.

"**Material Breach**" means the occurrence of any of the following at any time:-

(a) A breach of any provision of Section 8 (Representations and Warranties) and Exhibit 8.2(a)(i) by VNET and/or Vianet (as applicable), Section 9.4(a) (General Compliance), Section 9.4(d) (Additional Anti-Bribery Covenants) by Vianet that is:-

(i) not capable of remedy; or

(ii) a second breach within eighteen (18) months of a previous breach (that is capable of remedy); or

(iii) capable of remedy but not remedied within the cure period (if any) as expressly provided under the relevant Transaction Document,

in the case of items (i) and (ii) above, such breach has a negative monetary impact of at least RMB5,000,000 on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the Group Companies taken as a whole; or

(b) a default under Section 2 (Investment Structure), Section 4 (Investment Commitment), Section 9.4(b) (FCPA), Section 9.4(e) (Audit Rights), Section 10.3 (Reserved Matters), Section 10.5 (Information and Inspection Rights of Investor), Section 11 (Transfer Restrictions) or Section 13 (Exit) by VNET or Vianet (as applicable), subject to the relevant cure period provided herein; or

(c) a Misconduct Event.

"**Misconduct Event**" means the occurrence of any of the following at any time:-

(a) any of Vianet, the Group Companies, their Affiliates, or any of their employees, directors or agents (excluding (x) the Investor Directors, and (y) any agent engaged by the Investor):-

(i) having committed fraud, wilful misconduct or negligence; or

(ii) having committed misappropriation, theft or conversion of, or with respect to, any funds, revenues, assets, proceeds or payments,

under any of the Transaction Documents, or otherwise in relation to any Group Company, provided that, an event in respect of an employee, director or agent (for the avoidance of doubt, excluding the Investor Directors and any agent engaged by the Investor):-

(iii) under paragraph (a)(i) above, the event or a series of related or similar events has a negative monetary impact of at least RMB1,000,000 (RMB5,000,000 for negligence) on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the Group Companies taken as a whole; or

(iv) under paragraph (a)(ii) above, the event has occurred twice where the first event has a negative monetary impact of at least RMB400,000 and the second event (whether or not it relates to the same employee, director or agent) has a monetary impact of RMB40,000, or where two events have occurred with an aggregate negative monetary impact of RMB440,000 or more on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the Group Companies taken as a whole; or

(b) Vianet has committed a crime, or is subject to any criminal detention for a period longer than forty (40) days or administrative detention for a period longer than thirty (30) days, and which detention causes loss or damage (including any loss of reputation) to any of the Group Companies.

"**MOFCOM**" means the Ministry of Commerce of the PRC and/or its local branches, as applicable.

"**NDRC**" means the National Development and Reform Commission of the PRC and/or its local branches, as applicable.

"**Order**" means any writ, judgment, decree, injunction, award or similar order of any Government Entity (in each case whether preliminary or final).

"**Ordinary Course of Business**" shall mean, when used with reference to the Group Companies, the ordinary course of the business of the Group Companies consistent with past practices and in conducting materially the same business (including but not limited to execution and performance of contracts).

"**Person**" means any natural person, limited liability company, joint stock company, joint venture, partnership, enterprise, trust, unincorporated organization or any other entity or organization.

"**PRC**" or "**China**" means the People's Republic of China, solely for purposes of this Agreement, excluding Hong Kong, the Macau Special Administrative Region and Taiwan.

"**Project**" means any project invested, acquired and developed by JV Co 1 or any other Group Companies or JV Co 4 or any Subsidiary of JV Co 4, including without limitation any of the Existing Projects, and "**Projects**" means all of them.

"**Project Company**" any project company incorporated for the purpose of any Project, including without limitation any Existing Project Company and any project company incorporated for the purpose of any subsequent Project and "**Project Companies**" means all of them.

"**RA Material Breach**" shall have the meaning ascribed to the term "Material Breach" under the Restructuring Agreement.

"**Related Party**" means with respect to any specified Person, any Person (a) that is a "connected person" of such Person as defined in the U.S Securities Act of 1933 and the U.S. Securities Exchange Act of 1934, or (b) whose assets, or a portion thereof, are consolidated with its net earnings, or (c) over which it or any of the Persons described in (a) and (b) above exercises Control or significant influence through voting, position, ownership, contract or otherwise.

"**Representatives**" means, with respect to a Person, that Person's senior managers, directors, accountants, counsel, investment bankers, financial advisors, agents and other representatives.

"**Restructuring and Transaction Plan**" has the meaning as defined under the Original Investment Agreement.

"**RMB**" means Renminbi, the lawful currency of the PRC.

"**Securities**" means, with respect to any Person, such Person's capital stock, membership interests, partnership interests, registered capital, joint venture or other ownership interests or any options, warrants or other Securities that are directly or indirectly convertible into, or exercisable or exchangeable for, such capital stock, membership interests; partnership interests, registered capital, joint venture or other ownership interests (whether or not such derivative Securities are issued by such Person).

"**Shareholding Percentage**" means, with respect to JV Co 1, the ratio of the number of the issued and outstanding shares held by a Shareholder in JV Co 1 as at a certain date to the total number of the issued and outstanding shares of JV Co 1 as at the same date.

"**Subsidiary**" means, with respect to any given Person, any other Person that is not a natural person and that is directly or indirectly Controlled by such given Person.

"**Tax**" or "**Taxes**" means any national, provincial or local tax, assessment or duty on or in relation to any income, sales and use, excise, franchise, real and personal property, gross receipt, capital stock, production, business and employment, payroll, severance or withholding tax or any other type of tax, assessment or custom duty imposed by any Government Entity, any interest, tax penalties and other penalties (civil or criminal) related thereto or to the nonpayment thereof, and any loss or Tax Liability incurred in connection with the determination, settlement or litigation of any Liability arising therefrom.

"**Tax Return**" means all Tax returns, statements, reports, declarations and other forms and documents (including without limitation estimated Tax returns and reports and material information returns and reports).

"**Tranche Closing**" shall have the meaning as defined under the Original Investment Agreement.

"**Tranche Closing Date**" shall have the meaning as defined under the Original Investment Agreement.

"**Transaction Documents**" means this Agreement, the Restructuring Agreement, the JV Co 1 Articles, constitutional documents of other Group Companies, the Master Service Agreements and any material agreement, contract, deed or other documents in connection with this Agreement or the transactions contemplated hereby.

"**Transfer**" means any direct or indirect transfer (including but not limited to transfer of holding companies), sale, assignment, pledge, hypothecation, encumbrance, gift or other disposition, whether voluntary or by operation of law, of all or any share or other securities of a company or entity.

"**Treasury Regulations**" means the U.S. federal income tax laws and regulations issued pursuant to IRC.

"**US GAAP**" means the generally accepted accounting principles in the United States of America from time to time.

"**US$**" and "**US Dollars**" means the lawful currency of the United States of America.

"**Vianet's Tranche Subscription Price**" shall have the meaning as defined under the Original Investment Agreement.

"**Xi'an Offshore SPV**" means 21 Vianet @Xian Holding Limited, a business company with limited liability incorporated under the laws of the British Virgin Islands.

2. The following terms are defined in the following sections of this Agreement:-

Term	Section
"**Agreement**"	Preamble
"**Annual Business Plan and Budget**"	Section 10.2(g)
"**Confidential Information**"	Section 9.3(a)
"**Conflicted Shareholder**"	Section 9.2
"**Daxing Project**"	Schedule A
"**Daxing Project Company**"	Schedule A
"**Disclosing Party**"	Section 9.3(a)
"**Dispute**"	Section 16.4(a)
"**Dissolution Exit**"	Section 13.4(d)
"**Dissolution Exit Option**"	Section 13.4(a)
"**Dissolution Notice**"	Section 13.4(a)
"**Effectiveness Date**"	Section 16.7
"**Emergency Loan**"	Section 4.1(a)
"**Employment Contract**"	Section 10.4
"**Environmental Licenses**"	Exhibit 8.2(a)(i)
"**Exit Put/Call Exercise Period**"	Section 13.4(c)
"**Financial Statements**"	Exhibit 8.2(a)(i)
"**First Re-scheduled Meeting**"	Section 10.2(b)
"**Foshan Project**"	Schedule A
"**Foshan Project Company**"	Schedule A
"**Foshan Telecom Owned Assets**"	Exhibit 8.2(a)(i)
"**HKIAC**"	Section 16.4(a)
"**Investor**"	Preamble
"**IPO**"	Section 12.1
"**JV Co 1**"	Section 2.2(a)
"**Licenses**"	Exhibit 8.2(a)(i)
"**Master Service Agreement**"	Section 5.2(c)
"**Material Contracts**"	Exhibit 8.2(a)(i)
"**Non-Transferring Shareholder**"	Section 11.3(a)
"**Notice of Escalation of Dispute**"	Section 16.4(a)
"**Original Investment Agreement**"	Recitals
"**Party**" or "**Parties**"	Preamble
"**Permitted Transfer**"	Section 11.2
"**PFIC**"	Section 9.8
"**PropCo 1**"	Section 2.2(b)(i)
"**Properties**"	Exhibit 8.2(a)(i)
"**Receiving Party**"	Section 9.3(a)
"**REIT**"	Section 12.1

Term	Section
"**Related Party Transaction**"	Section 9.2
"**Requesting Shareholder**"	Section 9.4(e)
"**Reserved Matters**"	Section 10.3
"**Restructuring Agreement**"	Recitals
"**ROFO Completion Period**"	Section 11.3(b)
"**ROFO Negotiation Period**"	Section 11.3(a)
"**Rules**"	Section 16.4(a)
"**Sale Notice**"	Section 11.3(a)
"**SEC**"	Section 9.3(a)
"**Second Re-scheduled Meeting**"	Section 10.2(b)
"**Shareholder**" or "**Shareholders**"	Preamble
"**Share Swap**"	Section 13.2(a)
"**Share Swap Notice**"	Section 13.2(a)
"**Share Swap Right**"	Section 13.2(a)
"**Shortfall Event**"	Section 4.1(a)(i)
"**Sub-Contracting Agreement**"	Section 5.3
"**Subject Shares**"	Section 11.3(a)
"**Swap Shares**"	Section 13.2(a)
"**Tag-Along Notice**"	Section 11.4(a)
"**Transferring Shareholder**"	Section 11.3(a)
"**Vianet**"	Preamble
"**Vianet Call Notice**"	Section 13.4(c)(ii)
"**Vianet Call Price**"	Section 13.4(c)(ii)
"**Vianet Call Shares**"	Section 13.4(c)(ii)
"**Vianet ListCo**"	Section 13.2(a)
"**VNET**"	Preamble
"**WP**"	Preamble
"**WP Put Notice**"	Section 13.4(c)(i)
"**WP Put Price**"	Section 13.4(c)(i)
"**WP Put Shares**"	Section 13.4(c)(i)
"**Xi'an Project**"	Schedule A
"**Xi'an Project Company**"	Schedule A
"**Xi'an Telecom Owned Assets**"	Exhibit 8.2(a)(i)

Exhibit 8.2(a)(i)

Representations and Warranties of VNET and Vianet

Capitalized terms used in this Exhibit 8.2(a)(i) shall have the meaning as defined under the Original Investment Agreement.

1. GENERAL

1.1 Exceptions

Matters set out in the Disclosure Schedule are exceptions for any and all representations and warranties of VNET and Vianet contained in this Agreement, including those set forth in this Exhibit 8.2(a)(i).

1.2 Group Companies

1. Schedule A sets forth a true and complete list of all Group Companies (including any company that would become a Group Company upon completion of the Restructuring), each of which is or will become upon completion of the Restructuring a wholly-owned Subsidiary of the JV Cos (as defined under the Original Investment Agreement). There are no Group Companies other than the foregoing listed companies.

2. Other than the Group Companies, there are no other corporations, partnerships, joint ventures, associations or other entities in which any JV Co or any Group Company owns or will own upon completion of the Restructuring, of record or beneficially, any direct or indirect equity or other interest or any right (contingent or otherwise) to acquire the same.

3. Each Group Company (i) is (or will be upon completion of the Restructuring) duly incorporated, validly existing and in good standing under the laws of its jurisdiction of incorporation, (ii) has (or will have upon completion of the Restructuring) all necessary power and authority to own, operate or lease the properties and assets owned, operated or leased by such Group Company and to carry on its business as has been and is currently conducted by such Group Company and (iii) is duly licensed and/or qualified to do business and is in good standing in each jurisdiction in which the properties owned or leased by it or the operation of its business makes such licensing and/or qualification necessary.

4. There is no (nor will there be upon completion of the Restructuring) Encumbrance on any of shares of or equity interests in the Group Companies nor is there any agreement or commitment to create any such Encumbrance and no person has claimed to be entitled to do so.

5. Except as set out in the Disclosure Schedule, the registered capital of each of the onshore Group Companies has been (or will be upon completion of the Restructuring) fully contributed according to the statutory contribution schedule under the Applicable Law and verified by an accountant registered in the relevant jurisdiction. There have been no feigned contribution of registered capital (□□□□) or illegal withdrawal of the registered capital (□□□□) with respect to any of the onshore Group Companies.

6. Except as set out in the Disclosure Schedule, the offshore Group Companies are special purpose vehicles and have not engaged in any substantive business or entered into any contract with third parties except as expressly permitted under this Agreement.

7. Each of the Group Companies has provided to the Investor with a copy of its minutes books prior to the date of the Original Investment Agreement. Such copy is true, correct and complete in all material aspects and contains all material minutes of meetings and actions taken by the applicable Group Company's shareholders and directors since 2014 through the date of the Original Investment Agreement, and reflects all transactions referred to in such minutes accurately in all material respects.

1.3 Restructuring

Each and every steps provided in the Restructuring and Transaction Plan are in compliance with Applicable Laws and any contract to which any Group Company is a party in all material aspects. To the best knowledge of Vianet, none of the Restructuring steps set forth in the Restructuring Plan will impose any obstacles that may restrict or prevent an initial public offering or REIT of any of JV Cos (as defined under the Original Investment Agreement) or their respective substitute listing or REIT entity, except for those imposed by any change of Applicable Laws after the date of the Original Investment Agreement.

1.4 Ownership of Assets

Each of the Group Companies has good and marketable title to, or the valid right to use, all of their respective properties, intellectual property rights and assets (including, without limitation, the Existing Projects), free and clear of Encumbrance adversely affecting title (unless agreed to by the Investor in writing). The development, current use and operation of the afore-mentioned properties, intellectual property rights and assets (including, without limitation, the Existing Projects) by the relevant Group Companies comply with all Applicable Laws in all material aspects, and none of Vianet and the Group Companies has received any notice of penalty from any Government Entity with respect to any violation thereof.

1.5 Litigation

There is no judgement, order, claim action, proceeding, or investigation by or against any of the Group Companies or with respect to the Existing Projects, pending or to the knowledge of Vianet or any Group Company, threatened.

1.6 Insolvency

Each of Vianet and the Group Companies (i) is and has at all times been solvent, and (ii) is free from pending or threatened bankruptcy, corporate reorganization proceedings, liquidation, or any other insolvency or bankruptcy action or event.

1.7 Changes and Material Facts

There has not occurred any change, development or condition (financial or otherwise) that has had, or would reasonably be expected to have, individually or in aggregate, a Material Adverse Effect (as defined under the Original Investment Agreement).

1.8 Full Disclosure

Vianet has made available to the Investor, all information, including without limitation the financial, marketing, sales and operational information on a historical basis relating to the Group Companies and the Projects, which would be material to an investor in the Group Companies, as requested by the Investor and its advisors. To the best knowledge of Vianet and the Group Companies, all such information which has been provided to the Investor is true, correct and complete in all material aspects and no material fact or facts have been omitted from that information which would make such information untrue, inaccurate or unreasonably incomplete.

1.9 Condemnation

There is no condemnation or other government action pending or threatened to seize any portion of the assets or properties (including without limitation, the Existing Projects) of any Group Company.

2. COMPLIANCE WITH LAW

2.1 General

1. Each of the Group Companies is in compliance in all material aspects with governmental laws, rules, regulations and orders applicable to it and/or its assets (including, the Applicable Laws governing foreign investment, labour and employment, contracts, lease, construction, acquisition of land use rights, bidding, auction and listing, anti-corruption and bribery, environmental protection, trademarks, property management, etc.) to the extent as required for the Ordinary Course of Business of the Group Companies without any Material Adverse Effect (as defined under the Original Investment Agreement).

2. The operations of each of Vianet and the Group Companies are, and have been, conducted at all times in compliance with, in all material aspects, applicable financial record keeping and reporting requirements and anti-money laundering statutes in each of the jurisdictions in which it is incorporated and of all jurisdictions in which they conduct business.

3. Without limiting the generality of above paragraph, none of Vianet and the Group Companies, their Affiliates and their respective directors, officers, agents, employees, Representatives and any other Person acting on behalf of any of the foregoing has:-

   (a) made, offered, given, promised, or authorized any financial or other advantage (including any payment, loan, gift or transfer of anything of value), directly or indirectly, either (A) to or for the use or benefit of any Government Official, political party or official thereof, any candidate for political office, or another person at the request or with the assent or acquiescence of any of the foregoing or (B) knowing or being aware of a high probability that all or a portion of such financial or other advantage (including any payment, loan, gift or transfer of anything of value) would be offered, given or promised, directly or indirectly, to or for the use or benefit of any Government Official, political party, official thereof, any candidate for political office, or another person at the request or with the assent or acquiescence of any of the foregoing, for the purpose of:-

(1) (x) influencing any act or decision of such Government Official, political party, party official, or candidate in his or its official capacity; (y) inducing such Government Official, political party, party official or candidate to do or omit to do any act in violation of the lawful duty of such Government Official, political party, party official or candidate; or (z) securing any improper advantage; or

(2) inducing such Government Official, political party, party official, or candidate to use his or its influence with any Government Entity to affect or influence any act or decision of such Government Entity

in order to assist any of the Group Companies and the Shareholders in obtaining, retaining or soliciting business.

(b) engaged in any other conduct which would violate the Anti-Bribery Laws.

2.2 Governmental Consent and Approval

Except as set forth in this Agreement or other Transaction Documents or as otherwise recognized by the Parties in writing, the execution, delivery and performance of this Agreement and the other Transaction Documents by Vianet and any Group Company do not and will not require any consent, approval, authorization or other order of, action by, filing with or notification to, any Government Entity.

2.3 Licenses and Consents

(a) Save as disclosed in this Agreement and/or the Disclosure Schedule, each Group Company has obtained and will maintain all necessary licenses, approvals, permits, registrations, filings and other authorisations (collectively, the "**Licenses**"), including without limitation the licenses required by law for the relevant Group Company to own, occupy, use and develop the Existing Projects and other assets and to conduct its business.

(b) To the best knowledge of Vianet and the Group Companies, the Group Companies have complied with the terms of the Licenses to the extent as required to maintain such Licenses under Applicable Laws and no circumstance exists which may result in the termination, revocation or suspension of any of the Licenses or that may prejudice the renewal of any of them, which will individually, or in the aggregate, have an adverse effect on the operation of the Group Companies.

(c) All consents, waivers and notification required for the transactions contemplated hereby have been or will be obtained prior to the closing of the relevant transactions contemplated hereby.

2.4 Environmental Matters

(a) Each Group Company has obtained all necessary permits, licenses or other approval required by or in relation to any applicable environmental laws and energy saving laws of the PRC (collectively, "**Environmental Licenses**") and the Group Company has complied with the terms of the Environmental Licenses in all material respects. All of the Environmental Licenses are in full force and effect. No circumstance exists which may result in any Environmental License not being renewed or, where necessary, transferred. There are no circumstances which are likely to give rise to any such violation, termination, suspension or revocation of Environmental Licenses and no notices or other communications have been issued by any government authority in this regard.

(b) No Group Company has used, disposed of, generated, stored, processed, transported, dumped, released, deposited, buried or emitted any dangerous substance at, on, from, to or under any of its assets or at, on, from, to or under any other property which is in breach of any applicable environmental laws of the PRC in any material respect.

(c) No notice, notification, demand, request for information, citation, summons, order or complaint has been received from any third party (including any employee of the Project Companies or governmental, regulatory, supervisory or administrative body), no penalty has been assessed and no action, suit or proceeding is pending, or to the knowledge of Vianet, threatened (nor to the knowledge of Vianet is there any investigation or review pending) by any Government Entity or other person with respect to any matters relating to the Project Companies arising out of any applicable environmental law.

(d) No property or other asset now or previously owned, leased or operated by the Project Companies is listed or, to the knowledge of Vianet, proposed for listing, on the list of sites requiring investigation or clean-up. There has been no environmental investigation, study, audit, test, review or other analysis conducted of which Vianet is aware in relation to the current or prior business of the Project Companies or any property or facility now or previously owned, leased or operated by the Project Companies which has not been made available to the Investor at least ten (10) Business Days prior to the date of the Original Investment Agreement.

(e) There are no liabilities of or relating to the business of the Project Companies of any kind whatsoever, whether accrued, contingent, absolute, determined, determinable or otherwise, arising under or relating to any applicable environmental law (including any liability to make good, repair, re-instate or clean up land or another asset owned, occupied, possessed or used by the Project Companies on or before the date of the Original Investment Agreement) and there are no facts, conditions, situations or set of circumstances which could reasonably be expected to result in or be the basis for any such liability.

2.5 Convictions

Each of the onshore Group Companies, the Xi'an Offshore SPV, Dynamic Ruby Limited and the Foshan Offshore SPV has not been convicted of any offence. No officer, employee, agent or former officer, agent or employee of any Group Company has been convicted of any offences in relation to any Group Company, and no employee has, to the best of the knowledge, information and belief of Vianet, been convicted of any offence (save for any traffic offence) which reflects upon his suitability to hold his position or upon the reputation of any Group Company.

3. ACCOUNTS AND FINANCIAL MATTERS

3.1 Books and Records

All accounts, books, ledgers and other financial records of each Group Company have been properly maintained and contain up to date and accurate records of all matters required to be entered into them by Applicable Laws, and give a true and fair view of the matters which ought to appear in them.

Section 3.1 of the Disclosure Schedule sets forth true and complete copies of the unaudited consolidated balance sheet of the Group Companies as of 30 September 2016 (the "**Financial Statements**").

All financial data and statements concerning the Group Companies and the Projects that have been delivered to the Investor or its designees (including without limitation, the Financial Statements) are true, complete and correct and, to the extent thereof, accurately represents in all material aspects the financial condition and results of the operations of the applicable Person as at the date thereof and have been prepared in accordance with US GAAP applied on a basis consistent with the past practices in all material aspects.

3.2 Position since Execution Date

Since the execution date of the Original Investment Agreement, except where prior written consent from the Investor has been obtained:-

(a) each Group Company has conducted its business in and only in Ordinary Course of Business;

(b) there has been no Material Adverse Effect (as defined under the Original Investment Agreement) in the turnover, operating results or financial position of any Group Company;

(c) no resolution of the shareholders of any Group Company that is in violation of the provisions of this Agreement has been passed;

(d) no change has occurred in the accounting methods, principles or practices applied by a Group Company and there has been no revaluation by any Group Company of any of its assets; and

(e) there has been no material damage, destruction or loss, whether or not covered by insurance, affecting the assets, properties or business of any Group Company.

3.3 Dividends and Distributions

Save as disclosed in this Agreement and/or the Disclosure Schedule, no dividend or distribution of profits or assets has been or agreed to be declared, made or paid by any Group Company since their respective date of incorporation.

3.4 Borrowings and Guarantees

1. Save as disclosed in this Agreement and the Disclosure Schedule, no Group Company has any outstanding Indebtedness, or any Liability (whether present or future, fixed or contingent, recorded or unrecorded) in respect of any guarantee or indemnity.

2. No event has occurred which would entitle any third party (with or without the giving of notice) to call for the repayment of Indebtedness of any Group Company prior to the normal maturity date.

3. Any and all bank loans, financings and other borrowings of similar nature are obtained in full compliance of the Applicable Laws in all material aspects.

3.5 Capital Commitment

Except as set out in the Disclosure Schedule, the Group Companies do not have any commitment on capital account outstanding.

3.6 Related Party Transaction

Except as set out in the Disclosure Schedule, there exist no Related Party transactions in respect of any of the Group Companies.

3.7 Undisclosed Liabilities

1. There are no material Liabilities of any Group Company, other than Liabilities (i) reflected or reserved against on the Financial Statements, or (ii) incurred in the Ordinary Course of Business consistent with past practice. Reserves are reflected on the Financial Statements against all Liabilities of the Group Companies in amounts that have been established on a basis consistent with the past practices of the Group Companies and in accordance with US GAAP applied on a basis consistent with the past practices of the Group Companies.

2. None of the Group Companies is a party to, or has any commitment to become a party to, any joint venture, off balance sheet partnership or any similar contract (including any structured finance, special purpose or limited purpose vehicle or other "off-balance sheet arrangement").

4. COMMERCIAL MATTERS

4.1 Contracts and Outstanding Offers

1. All contracts of the Group Companies set out in the Restructuring and Transaction Plan (the "**Material Contracts**") have been provided to the Investor before the date of the Original Investment Agreement. Each Material Contract is legally binding on the parties to it in accordance with its terms.

2. No Group Company is in material breach of any Material Contract and no Group Company has given written notice to any counterparty to a Material Contract that such counterparty is in breach of the relevant Material Contract. No counterparty to any Material Contract has given written notice of its intention to terminate, or has sought to repudiate or disclaim under, any Material Contract.

3. The entry into, delivery and performance of the obligations under the Transaction Documents do not and will not result in:-

   (i) a breach of any Material Contract or give the counterparty to a Material Contract the right to terminate, or vary the terms of, such Material Contract; or

   (ii) the creation of an Encumbrance on any assets of any Group Company or any shares or other securities of any Group Company.

4. Save as disclosed in this Agreement and/or the Disclosure Schedule, none of the Group Companies is a party to any contract entered into otherwise than on an arm's length basis and in the Ordinary Course of Business thereof.

5. Any and all contracts, agreements and other arrangements entered into by any Group Company with any Government Entities are valid, binding on and enforceable against the relevant parties thereto, and no event has occurred in which any of such contracts, agreements or other arrangements may be rescinded or terminated.

4.2 Intellectual Property

None of the Group Companies owns any intellectual property. Each Group Company is the sole, unencumbered, legal and beneficial owner of or is otherwise duly authorised to use the intellectual property used in the conduct of its business. To the best knowledge of Vianet and the Group Companies, none of the Group Companies has ever infringed upon any intellectual property owned or claimed by a third party.

5. TAXATION

1. The Group Companies shall have paid any and all Taxes that are due and payable prior to the closing of the acquisition of the corresponding Group Company.

2. Each of the Group Companies has duly filed required Tax Returns and supplied other required information to the relevant Government Entity. All such returns, notices and information are complete and accurate in material respects. No Group Company is or has been the subject of an on-going investigation by the relevant Tax authority and to the best knowledge of Vianet and the Group Companies, there are no facts which are likely to result in such investigation.

3. In relation to stamp duty assessable or payable in the PRC or elsewhere in the world, all documents the enforcement of which any Group Company may be interested have been duly stamped and no document belonging to any Group Company now or at the JV Co 2 Closing which is subject to stamp duty is or will be unstamped or insufficiently stamped.

4. No relief from stamp duty has been improperly obtained, nor has any event occurred as a result of which any such duty from which any Group Company has obtained relief, has become payable.

5. All stamp duty, other taxes and governmental charges payable upon any transfer of shares in any Group Company before the JV Co 2 Closing has been duly paid.

6. Neither the entering into of this Agreement nor the JV Co 2 Closing will affect or result in the withdrawal of any stamp duty relief granted to any Group Company on or before the JV Co 2 Closing.

6. PROPERTIES

6.1 General

The Existing Projects constitute all the real property owned or leased (or that will be owned or leased by any Group Company upon completion of the Restructuring) by all the Group Companies (collectively, the "**Properties**"). Such Existing Projects comprise all the land and premises owned, rented and occupied or otherwise used in connection with the business of the Group Companies or in which any Group Company has any right or interest. The Group Companies do not own, lease or hold any real property other than the Properties and the registered offices of the Group Companies.

6.2 Ownership of Properties

1. The Group Companies are the legal and beneficial owners and/or users of, and are entitled to and has exclusive possession of and/or lease of, the Properties. The Project Companies have, or will by Completion have, lawfully and validly obtained in its own name by way of grant method the State-owned land use right for those land required for business operation and own the buildings above such land free and clear of all claims, charges, mortgages, liens, encumbrances, leases, tenancies, options, rights of pre-emption or rights of first refusal or other third party rights.

2. The title to the land and to the buildings under construction thereon is properly constituted by and can be deduced from the land use right certificates and building ownership certificates (where applicable) which are, or will by the JV Co 2 Closing be, in the possession and under the control of the Project Companies and each Project Company is, or will by Completion be, the registered and beneficial owner of the relevant Properties and there are no entries in any relevant PRC government land bureaus or registries or agencies against the Properties which will on the JV Co 2 Closing be adverse to the title of the Project Companies and, to the best of the knowledge, information and belief of Vianet, no matter exists which is capable of registration against the Properties.

3. The Properties held by the Project Companies by way of leasehold are based on effective, subsisting and enforceable lease agreements.

4. The Project Companies have in material aspects fully performed all contracts relating to the Properties and in material aspects complied with restrictions, provisions, conditions as required by Applicable Laws relating to the Properties.

6.3 Projects

1. The relevant Group Company has completed as required under the Applicable Law to obtain necessary certificates and permits for the development, construction, operation and management of the Projects including without limitation the relevant NDRC approvals, MOFCOM approvals and/or filings (if applicable), land use rights certificates, building ownership rights certificates, land planning permits, construction planning permits, construction permits and other necessary permits. Such certificates and permits have been or will be properly issued or granted to the relevant Group Company and are valid and subsisting. All the relevant Group Companies have paid or will pay to the relevant Government Entity in charge of land administration in the PRC or other Government Entities all costs and expenses relating to the land acquisition such as land premium, relocation compensation fees and consultation fees.

2. No Group Company has done or omitted to do anything which might lead to the foregoing certificates or permits (including without limitation land use rights certificates, building ownership rights certificates, land planning permits, construction planning permits and construction permits over any Projects) being suspended, revoked or varied in any respect which is adverse to the interests of the Group Companies and its Subsidiaries in any respect. There are no outstanding or pending disputes, notices, complaints or events which affect or may in the future affect the development, construction, operation, management and use of the Projects consistent with its present use.

3. There is no covenant, restriction, burden or stipulation affecting any Projects in any material respect which is of an onerous or unusual nature or inconsistent with its present use.

4. Except as set out in the Disclosure Schedule, the AIC registration of each of the Project Companies shall have been duly registered and filed to the effect that the business scope of each of the Project Companies shall be sufficient to conduct its business.

5. Except as set out in the Disclosure Schedule, there is no restriction on lease, sale or transfer of any Project or any part thereof.

6. In respect of the Xi'an Project, notwithstanding the □□□□□□□□□□□□□□□□□□□□ dated 28 December 2015 between 21Vianet VNB and □□□□□□□□□□□□□□□ or any other agreements related thereto, (a) 21Vianet VNB and the Xi'an Project Company may lease, transfer, encumber or otherwise dispose of any and all assets and equipment placed within the Xi'an Project that are owned by 21Vianet VNB and the Xi'an Project Company without any restriction as long as such lease, transfer, encumbrance or disposal does no harm to the cooperation with □□□□□□□□□□□□□□□□; (b) any and all proceeds from the foregoing lease, transfer or disposal shall belong to 21Vianet VNB and/or the Xi'an Project Company and shall have nothing to deal with □□□□□□□□□□□□ □□□; and (c) □□□□□□□□□□ □□□□□□ will not remove any equipment owned by it (the "**Xi'an Telecom Owned Assets**") or suspend any utilization thereof on the ground of the foregoing lease, transfer or disposal.

7. In respect of the Foshan Project, notwithstanding the □□□□□□□□□□□□□□□□□□□□ dated 3 June 2013 between □□□□□□□□□□□□□□□□□ and □□□□□□□□□□□□□□□□ or any other agreements related thereto, (a) □□□□□□□□□□□□□□□□□ and the Foshan Project Company may lease, transfer, encumber or otherwise dispose of any and all assets and equipment placed within the Foshan Project that are owned by □□□□□□□□□□□□□□□□□ and the Foshan Project Company without any restriction as long as such lease, transfer or disposal does no harm to the cooperation with □□□□□□□□□□□□□□□□; (b) any and all proceeds from the foregoing lease, transfer, encumbrance or disposal shall belong to □□□□□□□□□□□□□□□□ and/or the Foshan Project Company and shall have nothing to deal with □□□□□□□□□□□□□□□□; and (c) □□□□□□□□□□□□□□□□ shall not remove any equipment owned by it (the "**Foshan Telecom Owned Assets**") or suspend any utilization thereof on the ground of the foregoing lease, transfer or disposal.

7. EMPLOYEES, PENSIONS AND INCENTIVES

(a) As at the closing of the relevant transactions in respect of each Existing Project as provided herein, there is no employee of the Existing Project Company undertaking such Existing Project.

(b) None of the Group Companies is a party to any profit sharing scheme, share option scheme, share incentive scheme or any other scheme under which any director, officer or employee of the company is entitled to participate in the profit sharing of any of the Group Companies or has any rights in respect of any shares of any Group Companies, other than previous bonuses.

(c) There are no material outstanding Liabilities on any of the Group Companies to pay severance compensation to any present or former employee.

(d) Each Group Company has at all relevant times complied with, in all material aspects, its statutory obligations concerning retirement, social security (including without limitation pension insurance, medical insurance, unemployment insurance, work-related injury insurance, maternity insurance and housing fund), health and safety at work of its employees. There are no outstanding claims made by any employee or third party in respect of any accident or injury. Each Group Company has performed in all material aspects its contractual obligations and other legal duties concerning retirement, social security, health and safety at work of its employees.

(e) There are not in existence any contracts of service with the employees of the Group Companies, nor any consultancy agreements with the Group Companies, which cannot be terminated by three (3) months' notice or less or (where not reduced to writing) by reasonable notice without giving rise to any claim for damages or compensation.

(f) No notice to terminate the contract of employment of any employee of any Group Company (whether given by any such Group Company or by the employee) is pending, outstanding or threatened and no dispute is outstanding between any Group Company and any of its current or former employees relating to their employment, its termination.

(g) Each Group Company is not involved in nor has it received notice of any industrial or trade dispute or any dispute or negotiation with any trade union or association of trade unions or organisation or body of employees and there is nothing likely to give rise to such a dispute or claim.

8. EFFECTIVE CONTROL OVER PROJECTS

Vianet has effective control over the Projects.

9. SOLVENCY AND NO WINDING-UP

No Order has been made or Actions commenced or resolutions passed or steps taken by a Person for the winding-up or dissolution of or ending the corporate existence of any Group Company. To the knowledge of Vianet and the Group Companies, no circumstance which may reasonably be expected to result in such Order, Actions, resolutions or steps has arisen. No liquidator, receiver, custodian, sequestrator, manager or anyone in a similar capacity has been appointed in respect of the business or any asset of any Group Company. No circumstance which may reasonably be expected to result in such appointment has arisen.

10. BROKER

No finder, broker, agent, financial advisor, or other intermediary has acted on behalf of Vianet or any Group Company in connection with the negotiation or consummation of this Agreement or any of the Transactions contemplated hereby. All the negotiations, consummation, or performance of this Agreement or any of the Transactions contemplated hereby will not give rise to any valid claim against the Investor or any Group Company for any brokerage or finder's commission, fee, or similar compensation.

Exhibit 9.6

Covenants of Vianet

1. Vianet undertakes that it shall, and shall cause its respective Affiliates and the Group Companies to, at the cost of Vianet, complete all of the following matters, actions and transactions as soon as practicable or within such other time limit as mutually agreed upon by the Shareholders after the JV Co 2 Closing Date (as defined under the Original Investment Agreement):-

   (a) Any and all of the registered capital of the Existing Project Companies that has not yet been paid shall be paid in accordance with the provisions of their respective articles of association and Applicable Laws;

   (b) Vianet shall use Best Efforts to cause a separate land use right certificate in respect of the underlying land of the Xi'an Project be obtained by the Xi'an Project Company;

   (c) If any mortgage or transfer of the Xi'an Project or any part thereof requires any action from the holder of the underlying land use right of the Xi'an Project, Vianet shall use its Best Efforts to cause such holder of such land use right to take such action in a timely manner; and

   (d) Vianet shall take any and all actions to ensure that the Group Companies shall be granted with all available tax incentives/subsidies to the extent permitted by Applicable Laws.

Exhibit 10.3

Reserved Matters

With respect to any Group Company:-

1. establishment of a Group Company; any entry into of any joint venture, partnership or other similar arrangement, acquisition of any share or equity capital or other securities of any company or business entity, or entry into a new investment project (including any funding thereof) with a total amount of such acquisition or new investment of RMB80,000,000 or more; Transfer of any shares or equity interests in a Group Company (other than those permitted in this Agreement);

2. acquisition or disposal of material assets by any Group Company:-

   (a) with a value above 10% of the total fixed assets owned by such Group Company, either individually in a single transaction or in aggregate in a series of connected transactions; or

   (b) outside of the Ordinary Course of Business;

3. except as expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget, creation of any Encumbrance over any asset of any Group Company with a value of more than 10% of the total fixed assets owned by such Group Company (either individually or in a series of related transactions) or outside of the Ordinary Course of Business; or the incurring of any debt, guarantees or liabilities (including contingent liabilities) by any Group Company in an amount of more than 10% of the total fixed assets owned by such Group Company (either individually or in a series of related transactions) or outside of the Ordinary Course or Business;

4. an initial public offering of any and all of the shares, equity interests, security or equivalent of any of the Group Company, or any merger or division of any Group Company;

5. creation, issue, purchase, redemption or other reorganisation of its share or registered capital, or the payment of any dividend or other distribution in specie that is not on a *pro rata* basis (unless otherwise allowed under this Agreement), return or reduction of capital, or capitalization of reserves;

6. except as expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget, incurring of any capital expenditure, investment or cash outflows by any Group Company above 10% of the total fixed assets owned by such Group Company in any one transaction or in a series of related transactions;

7. any change in the nature or material change in the scope of the business of any Group Company, or any amendment to the Group Company's constitutional documents;

8. any winding up, cessation or change of business, termination, liquidation, bankruptcy or similar proceeding of any Group Company (unless otherwise provided in this Agreement);

9. any Related Party Transaction (except for those contemplated by and pursuant to a Master Service Agreement);

10. any change in any Group Company's accounting policies, accounting standards, auditors or financial year end;

11. any form of material reorganization, including without limitation, amalgamation, reconstruction, merger or consolidation or scheme of arrangement or other business combination with or into any other Person;

12. provision of any guarantee for any third party, which is not expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget;

13. any filing, withdrawing or settling of any litigation, arbitration or other legal proceeding with a subject amount of more than RMB1,000,000;

14. except as otherwise provided in the foregoing, the entry into a contract or a series of related contracts (other than a Sub-Contracting Agreement) with a value of above RMB10,000,000, that are not included in the then-prevailing approved Annual Business Plan and Budget; and

15. entering into any agreement or making any commitment for any of the foregoing.

Exhibit 10.5

Investor's Information and Inspection Rights

1. The Investor shall be entitled to the following information rights:

1.1 As soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of JV Co 1, audited annual consolidated financial statements for the Group Companies for such fiscal year prepared in accordance with US GAAP, audited and certified by one of the Big Four Accounting Firms duly appointed by the board of JV Co 1 to serve as JV Co 1's auditors.

1.2 As soon as practicable, but in any event within sixty (60) days after the end of each quarter, an unaudited report, which shall include without limitation, the consolidated income statements and statements of cash flows for such quarter, balance sheets, lists of debts, bank loans and other borrowings as well as capital expenditures for the Group Companies, and the respective quarterly balance sheets, income statements and statements of cash flows for each of the Group Companies for such fiscal quarter.

1.3 As soon as practicable, but in any event within twenty (20) Business Days after the end of each month, an unaudited report, which shall include without limitation, the consolidated income statements and statements of cash flows for such month, balance sheets, lists of debts, bank loans and other borrowings as well as capital expenditures for the Group Companies, and the respective monthly balance sheets, income statements and statements of cash flows for each of the Group Companies for such fiscal month.

1.4 Copies of all other documents or other information sent to any Person in such Person's capacity as a shareholder of JV Co 1, and notice of any material liabilities incurred by or threatened against, and any material lawsuit or other material claim filed or threatened against, any Group Company.

1.5 Copies of any reports filed by the Group Companies with any relevant regulatory authority or governmental agency.

1.6 Any other document, material or information reasonably requested by the Investor.

2. The Investor shall be entitled to the following inspection rights:-

2.1 The right to inspect facilities, records and books of the Group Companies and their direct or indirect Subsidiaries and to make extracts and copies therefrom, at any time during regular working hours on reasonable prior notice to the applicable Group Company respectively; and

2.2 The right to discuss the business, operations and conditions of the Group Companies and their direct or indirect Subsidiaries with their respective directors, officers, employees, accountants, legal counsel and investment bankers.

Exhibit 11.7

Form of Deed of Adherence

THIS DEED is made on [date]
by [name] (the "**New Shareholder**").

WHEREAS:

(A) By a transfer dated [date], [name of transferring Shareholder] transferred to the New Shareholder [number] Class [*] shares with a par value of US$0.00001 each in the capital of [name of JV Co] (the "**Company**").

(B) This Deed is entered into in compliance with the terms of an amended and restated investment agreement dated 2019 made between the 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited as such agreement shall have been or may be amended, supplemented or novated from time to time (the "**Investment Agreement**").

THIS DEED WITNESSES as follows:

1. The New Shareholder undertakes to adhere to and be bound by the provisions of the Investment Agreement, and to perform the obligations imposed by the Investment Agreement which are to be performed on or after the date of this Deed, in all respects as if the New Shareholder were a Party to the Investment Agreement and named therein as a shareholder of the Company.

2. This Deed is made for the benefit of (a) the original Parties to the Investment Agreement and (b) any other Person or Persons who after the date of the Investment Agreement (and whether or not prior to or after the date of this Deed) adheres to the Investment Agreement.

3. The address of the New Shareholder for the purposes of the Investment Agreement is as follows:

If to the New Shareholder:-	with a copy to:-
Address: [*]	Address: [*]
Attention: [*]	Attention: [*]
Fax: [*]	Fax: [*]
Email: [*]	Email: [*]

4. This Deed shall be governed by and construed in accordance with the laws of Hong Kong without regard to the conflicts of law principles thereof.

IN WITNESS of which this Deed has been executed and delivered by the New Shareholder on the date which first appears above.

EXECUTED AS A DEED by

[New Shareholder]:

in the presence of:

Duly Authorised Signatory

Signature of Witness

Name:

Address:

Exhibit 12.3(b)

Appraisal Principles

In determining the fair market value pursuant to this Agreement, and the Appraiser shall:-

(1) determine the enterprise value of such Group Company, which shall be calculated on a going concern basis for a private company of a comparable size and in a comparable industry by applying a comparable company multiple analysis to such Group Company's EBITDA based on its last audited accounts or such other index customarily applied in market practice, given consideration of any real estate assets and other assets of such Group Company as well as any fund management, project management or other business of such Group Company.

(2) in calculating the equity value of a Group Company, deduct any debt and other liability as at the relevant date and add cash, cash equivalent and other asset as at the relevant date.

(3) specifically, when determining the enterprise value of a Group Company pursuant to the foregoing, (a) value a Group Company's real estate assets, other tangible assets and related liabilities, such valuation to reflect a sale between a willing seller and a willing purchaser, on an arm's length basis and without undue pressure on either the seller or purchaser to close the transaction; (b) adjust a Group Company's non-real estate tangible assets for any actual or probable impairments; (c) exclude any deferred Tax liabilities caused by differences in the appraised value and the historic Tax basis of the assets; (d) with respect to any debt or liability borne by a Group Company, adopt a calculation method that is consistent with the methodology of how similar liabilities have historically been paid or settled and accepted by the relevant counterparty; and (e) subtract any transaction costs and Taxes incurred or likely to be incurred, from the transfer of a Group Company to Vianet or its relevant Affiliate.

Exhibit 14.3

Vianet's Specific Indemnity Matters

1. Any material violation of Applicable Laws by any Group Company (including without limitation, those in connection with utilization of the land use right in respect of any Project and construction of any Project, environmental protection, energy saving, employment) prior to the JV Co 2 Closing Date (as defined under the Original Investment Agreement), whether or not such violation is found or accused after the JV Co 2 Closing Date;

2. Any breach by any Group Company of any Material Contract (including without limitation, any land use right grant contract with any Government Entity) prior to the JV Co 2 Closing Date, whether or not such breach is found or accused after the JV Co 2 Closing Date;

3. Any delay in the commencement or completion of the construction of any Existing Project prior to the JV Co 2 Closing Date, whether or not such delay is found or accused after the JV Co 2 Closing Date;

4. Any utilization of any Existing Project or its underlying land use right in violation of the relevant land use right grant contract or other similar documents;

5. Any failure to complete any environmental impact assessment or energy saving assessment in respect of any Existing Project (excluding those arising due to change of Applicable Laws) prior to the JV Co 2 Closing Date, whether or not such failure is found or accused after the JV Co 2 Closing Date;

6. Any failure of any Group Company to duly perform any construction-related contracts in respect of any Existing Project in any material aspect prior to the JV Co 2 Closing Date, whether or not such failure is found or accused after the JV Co 2 Closing Date;

7. Any ceasing to have effect or becoming null and void of any leases in respect of any Existing Project due to any defect or another reason that exists prior to the JV Co 2 Closing Date (except for those conducted pursuant to the Restructuring and Transaction Plan (as defined under the Original Investment Agreement));

8. Any penalty imposed by any Government Entity against any Group Company due to a reason that exists prior to the JV Co 2 Closing Date;

9. Any cost for acquiring the Xi'an Telecom Owned Assets and/or the Foshan Telecom Owned Assets or replacement thereof, and any cost for settling any dispute with the owner of the Xi'an Telecom Owned Assets and/or the Foshan Telecom Owned Assets;

10. Any Liability incurred by any Group Company or the Investor in connection with the Restructuring (as defined under the Original Investment Agreement) due to Vianet's breach of this Agreement, the Original Investment Agreement or other Transaction Documents;

11. Any Tax Liability or reduction of Tax basis of the Projects or the Group Companies arising from or in connection with the Restructuring (as defined under the Original Investment Agreement) or the transaction steps provided in Section 4 (Investment Commitment) of the Original Investment Agreement;

12. Any Liability arising from or otherwise in connection with the issues set forth in the punch list in Section 1(b) of Exhibit 9.8 to the Original Investment Agreement;

13. Notwithstanding anything to the contrary, any Liability arising from the issue set forth in item 7 of Project Company 1 of Subsection 2 of Section 2 (□□□□□□□□□□□□□□□7□) and item 4 of Project Company 2 of Subsection 2 of Section 2 (□□□□□□□□□□□□□□□4□) in the Disclosure Schedule under the condition that problems caused by such issue fail to be solved by the Shareholders using commercially best efforts within thirty (30) days in a way satisfactory to the Investor; and

14. Any Liability imposed by any Government Entity on the Investor or any Group Company due to any failure to obtain any approval by, registration or filing with any Government Entity in respect of the Transactions contemplated hereby, and any Liability arising from or in connection with any unwinding of the Transactions contemplated hereby required by any Government Entity.

Exhibit 16.8

Address of Notices

If to VNET or Vianet:-

Address: Guanjie Building Southeast 1st Floor,
10# Jiuxianqiao East Road, Chaoyang District,
Beijing, 100016, China

Attention: Amber Gong (Gong Bo)

Fax: +86 10 8456 4234

Email: gong.bo@21vianet.com

If to WP:-

Address: Marble Stone Holdings Limited
c/o Warburg Pincus Asia LLC, Suite 6703,
Two International Finance Center, 8 Finance Street,
Hong Kong

Attention: Ellen Ng

Fax: +852 2521 3869

Email: ellen.ng@warburgpincus.com

with a copy to:-

Address: Marble Stone Holdings Limited
c/o Warburg Pincus Asia LLC, Suite 6703,
Two International Finance Center, 8 Finance Street,
Hong Kong

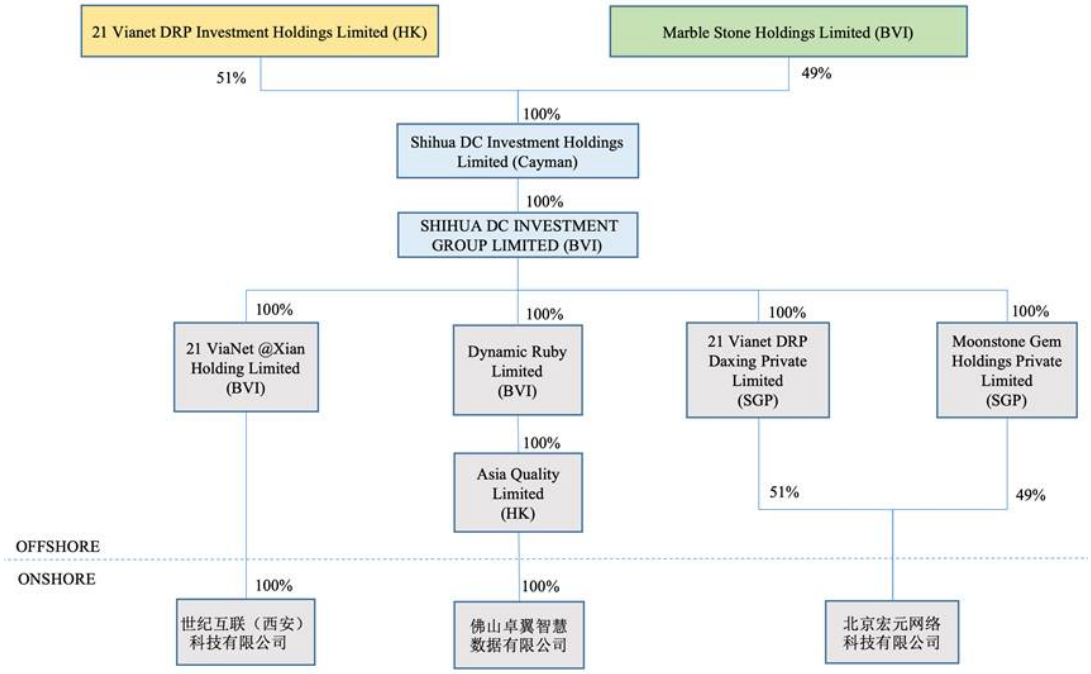
Attention: Frank Marinaro

Fax: +852 2521 3869

Email: frank.marinaro@warburgpincus.com

Schedule 2.1

Existing Structure



Schedule A

List of Projects and Project Companies

Project Name	Location	Existing Project Company(ies)
Daxing Project	□□□□□□□□□□□□□□2□□1□□	□□□□□□□□□□□□□(the "**Daxing Project Company**")
Xi'an Project	□□□□□□□□□□□□□□□□□□□□□□□□□□□1□10101□10201□10301□10401	□□□□□□□□□□□□□□□(the "**Xi'an Project Company**") 21ViaNet@Xian Holding Limited
Foshan Project	□□□□□□□□□□□□□4□	□□□□□□□□□□□□□(the "**Foshan Project Company**") Asia Quality Limited (□□□□□□) Dynamic Ruby Limited

Schedule B

Annual Business Plan and Budget

The Annual Business Plan and Budget shall contain the following information:-

1. Detailed forecast / financial budget for the next year (with material line items broken out);
2. Line item variance analysis between historical accounts and budget (i.e., explanations on material differences);
3. Current and forecasted occupancy and rental rates;
4. Summary of operations for the preceding twelve (12) months (including without limitation performance of the business, key challenges, the identified areas for improvement, assessment of the performance of Key Management, etc.);
5. Market analysis (including without limitation analysis on current tenants, competition or competitors, market strength or weakness, etc.);
6. Execution plan for the next twelve (12) months (including without limitation focus, responsible personnel, etc.);
7. Current status of financing and any planned re-financing of each asset or entity for the next twelve (12) months;
8. Any plans with respect to material asset acquisitions, capital expenditures, investment or cash outflows for the next twelve (12) months;
9. Comparison of current development status to the original development plans (if applicable) and a detailed variance analysis;
10. A comprehensive update of the development plans (if applicable) to reflect the current status of such development;
11. An update on and schedule for undertaking any new Projects; and
12. Other details/items as requested by the board of JV Co 1 or the board of directors of any other Group Company.

Exhibit 4.29

DATE: 24 July 2019

21VIANET GROUP, INC.

21VIANET DRP INVESTMENT HOLDINGS LIMITED

AND

MARBLE STONE HOLDINGS LIMITED

RESTRUCTURING AGREEMENT

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THIS RESTRUCTURING AGREEMENT (this "**Agreement**") is entered into on 24 July 2019,

BY AND AMONG:-

(1) **21VIANET GROUP, INC.** (Company Number: MC-232198), a NASDAQ listed company duly incorporated and validly existing under the laws of the Cayman Islands with its registered office address at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands ("**VNET**");

(2) **21VIANET DRP INVESTMENT HOLDINGS LIMITED** (Company Number: 2476123), a private company limited by shares duly incorporated and validly existing under the laws of Hong Kong with its registered office address at the offices of Flat/Room 716, 7/F., 12W Phase 3 Hong Kong Science Park, Pak Shek Kok, Shatin, New Territories, Hong Kong ("**Vianet**"); and

(3) **MARBLE STONE HOLDINGS LIMITED** (Company Number: 1923409), a business company duly incorporated and validly existing under the laws of the British Virgin Islands with its registered office address at P.O. Box 3340, Road Town, Tortola, British Virgin Islands ("**WP**" or the "**Investor**").

Vianet and WP are hereinafter collectively referred to as the "**Shareholders**", and individually as a "**Shareholder**". VNET, Vianet and WP are hereinafter collectively referred to as the "**Parties**", and individually as a "**Party**".

RECITALS

WHEREAS:-

(A) The Parties hereto have entered into an Investment Agreement on 5 March 2017 (the "**Original Investment Agreement**", and "**Investment Agreement**" shall mean the Original Investment Agreement as amended, restated or supplemented from time to time).

(B) Pursuant to the Original Investment Agreement, the Shareholders have incorporated Shihua DC Investment Holdings Limited ("**JV Co 1**"), Shihua DC Investment Holdings 2 Limited ("**JV Co 2**") and Shihua DC Investment Management Limited ("**JV Co 3**"); and have consummated (i) the Xi'an Closing, the Foshan Closing and the Daxing Closing (each as defined under the Original Investment Agreement), (ii) the Tranche Closings (as defined under the Original Investment Agreement) corresponding to the Xi'an Closing, the Foshan Closing and the Daxing Closing respectively, and (iii) the subscription of additional shares in JV Co 1 following the Daxing Closing (as provided under Section 4.1(h) of the Original Investment Agreement).

(C) JV Co 2 has consummated the acquisition of Waigaoqiao #1 Project and is in the progress of consummating the acquisition of Fengxian Project and Nanjing Project, and JV Co 2 has entered into investment agreement (or agreement of a similar nature) with local government in respect of Nantong Project and Wuxi Project (details of the above Projects are set out in Schedule A).

(D) As at the date of this Agreement, the structure of the Group Companies is as set forth in Schedule B.

(E) On or about the even date herewith, the Parties executed a First Amended and Restated Investment Agreement to amend and restate the Original Investment Agreement, which First Amended and Restated Investment Agreement shall not become effective unless and until pursuant to Section 2.4 (First Amended and Restated Investment Agreement) hereof.

(F) The Parties intend to restructure JV Co 1, JV Co 2 and JV Co 3 and incorporate JV Co 4 (defined as below) (collectively, the "**Transaction**") upon the terms and subject to the conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual promises, agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:-

1. INTERPRETATION

1.1 Definitions. Unless otherwise defined in this Agreement, capitalized terms used in this Agreement shall have the meanings set forth Exhibit 1.1 (Definitions).

1.2 Interpretation. For all purposes of this Agreement, except as otherwise expressly provided, (a) the terms defined herein shall include the plural as well as the singular, (b) all accounting terms not otherwise defined herein have the meanings assigned under US GAAP, (c) all references in this Agreement to designated "Sections" and other subdivisions are to the designated Sections and other subdivisions of the body of this Agreement, (d) pronouns of either gender or neuter shall include, as appropriate, the other pronoun forms, (e) the words "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section or other subdivision, (f) all references in this Agreement to designated exhibits, annexes, appendices or schedules are to the exhibits, annexes, appendices or schedules attached to this Agreement unless explicitly stated otherwise, (g) unless the context otherwise requires, "onshore" means in the PRC, and "offshore" means outside the PRC, (h) "include," "including," "are inclusive of" and similar expressions are not expressions of limitation and shall be construed as if followed by the words "without limitation", and (i) if a period of time is specified and dates from a given day or the day of a given act or event, such period shall be calculated exclusive of that day.

1.3 Foreign Exchange Rate. Unless otherwise specified herein, the arithmetic average of the intermediate exchange rates between US Dollars and RMB as promulgated by the People's Bank of China (or its authorized agency) respectively in the ten (10) Business Days immediately prior to the actual payment date of any payment shall apply with respect to any conversion between US Dollars and RMB.

2. JV COS RESTRUCTURING

2.1 JV Co 1 Restructuring.

(a) Shareholding Structure of JV Co 1. The Parties agree that the shareholding structure of JV Co 1 and its Subsidiaries shall maintain intact after the execution date hereof unless otherwise provided herein or in the Investment Agreement.

(b) Restructuring of JV Co 1. The Parties agree that JV Co 1 shall be restructured as follows (each a "**JV Co 1 Restructuring Action**"):-

(i) within the nine (9) months period following the execution date hereof, the Shareholders shall procure that (A) the LTV Ratio of JV Co 1 be increased to forty percent (40%) or higher, or (B) even though the LTV Ratio of JV Co 1 fails to reach forty percent (40%) or higher, JV Co 1 achieves another financing plan accepted by both Shareholders;

(ii) Vianet shall (and shall procure its Affiliates to), as soon as possible (but in no event later than one month) after the execution date hereof, pay off in full all the payables due from Vianet (or its Affiliates) to JV Co 1 (or its Subsidiaries), and any outstanding payables due from Vianet (or its Affiliates) to JV Co 1 (or its Subsidiaries) as of each Distribution Cut-off Date (as defined below) shall be deducted from the Available Cash (as defined below) distributable to Vianet;

(iii) on the thirtieth (30th) day following the execution date hereof the Shareholders shall procure JV Co 1 (and its Subsidiaries) to distribute, via entrustment loans (unless the Shareholders otherwise agree on any other manner of distribution), all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of 30 June 2019 (the "**First Distribution Cut-off Date**") to the Shareholders (or their respective designated Affiliates) on a pro rata basis based on their then respective Shareholding Percentages in JV Co 1;

(iv) within fifteen (15) Business Days after every 31 December during the term of JV Co 1 (each an "**Annual Distribution Cut-off Date**"), the Shareholders shall procure JV Co 1 (and its Subsidiaries) to distribute, via entrustment loans (unless the Shareholders otherwise agree on any other manner of distribution), all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of the relevant Annual Distribution Cut-off Date to the Shareholders (or their respective designated Affiliates) on a pro rata basis based on their then respective Shareholding Percentages in JV Co 1; and

(v) the entrustment loans via which the Available Cash in JV Co 1 (and its Subsidiaries) is distributed to the Shareholders (or their respective designated Affiliates) shall bear interest at a rate equal to the PBOC benchmark lending rate for one (1)-year term loan, and the initial term of each entrustment loan shall be one (1) year, automatically renewed for another one (1) year upon expiry of each one (1)-year term. The Shareholders agree that upon either Shareholder's full exit from its investment in JV Co 1 (including without limitation to WP's exit upon its exercise of the exit rights pursuant to Section 13 (Exit) of the Investment Agreement), the entrustment loans having been distributed to such exiting Shareholder shall be repaid in full, which repayment shall be completed via set off mechanisms permitted under Applicable Law to minimize actual cash flow.

If item (i) of the JV Co 1 Restructuring Action provided above fails to be completed by the expiry of nine (9) months following the execution date hereof (such expiry date, the "**Ad hoc Distribution Cut-off Date**", together with the First Distribution Cut-off Date and the Annual Distribution Cut-off Dates, each a "**Distribution Cut-**

off Date"), then, at the request of WP, the Shareholders shall procure JV Co 1 (and its Subsidiaries) to immediately distribute (and in no event later than fifteen (15) Business Days after the Ad hoc Distribution Cut-off Date), via entrustment loans (unless the Shareholders otherwise agree on any other manner of distribution), all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of the Ad hoc Distribution Cut-off Date to the Shareholders (or their respective designated Affiliates) on a pro rata basis based on their then respective shareholding percentages in JV Co 1.

(c) Determination of Available Cash.

(i) "**Available Cash**" shall be calculated pursuant to the following formula:-

Available Cash = A — B

Where,

"A" = Cash and Cash Equivalent Investments on the book of JV Co 1 as of the relevant Distribution Cut-off Date + receivables due from Vianet (or its Affiliates) to JV Co 1 (or its Subsidiaries) under the Master Service Agreements (as defined under the Investment Agreement) — payables due from JV Co 1 (or its Subsidiaries) to Vianet (or its Affiliates) under the Sub-contracting Agreements (as defined under the Investment Agreement)); and

"B" = RMB40,000,000 cash buffer.

(ii) The Shareholders shall arrange for the Available Cash of JV Co 1 (and its Subsidiaries) to be determined as follows:-

(A) within five (5) days after the execution date hereof, the Shareholders shall jointly appoint Ernst & Young (the "**Restructuring Auditor**") to determine the Available Cash of JV Co 1 as of each Distribution Cut-off Date; and the Restructuring Auditor may be replaced upon mutual written consent of the Shareholders;

(B) the Restructuring Auditor shall submit a report setting out the amount of Available Cash of JV Co 1 (and its Subsidiaries) as of the First Distribution Cut-off Date and the calculation thereof within fifteen (15) days of its appointment and shall submit a report setting out the amount of Available Cash of JV Co 1 (and its Subsidiaries) as of the Ad hoc Distribution Cut-off Date (if applicable) and each Annual Distribution Cut-off Date and the calculation thereof within fifteen (15) days of the relevant Distribution Cut-off Date; and

(C) the Available Cash as determined by the Restructuring Auditor in the foregoing report shall be final and binding on the Parties in the absence of manifest error.

The Shareholders shall (and shall cause JV Co 1 and its Subsidiaries to) provide the Restructuring Auditor with all information reasonably required for the purposes of determining the Available Cash of JV Co 1 (and its Subsidiaries). The cost of such auditor shall be paid and borne by JV Co 1.

(d) Amendment to the Original Investment Agreement. With effect from the date hereof,

(i) the first paragraph of Section 13 (Exit) of the Original Investment Agreement shall be deleted and replaced in its entirety to read as follows:

"If: (a) neither an IPO nor a REIT of JV Cos and/or its assets occurs by the end of four (4) years (or any other time period mutually agreed to by the Shareholders in writing) after the execution date of the Restructuring Agreement then, at any time after expiry of the foregoing four (4) years (or any other time period mutually agreed to by the Shareholders in writing); (b) any Material Breach under this Agreement or other Transaction Documents or any RA Material Breach occurs; or (c) JV Co 4 fails to undertake any new Project for a period of any consecutive twenty-four (24) months following the JV Co 4 Establishment Date, then the Investor shall be entitled to, in its sole discretion, exit from its investments in the Group Companies via one or more of the following exit mechanisms:-"

(ii) the following definitions shall be added to Exhibit 1.1 (Definitions) of the Original Investment Agreement:

"**JV Co 4**" shall have the meaning as defined under the Restructuring Agreement.

"**JV Co 4 Establishment Date**" shall have the meaning as defined under the Restructuring Agreement.

"**RA Material Breach**" shall have the meaning ascribed to the term "Material Breach" under the Restructuring Agreement.

"**Restructuring Agreement**" shall mean a restructuring agreement entered into by and among the same Parties hereto on 24 July 2019."

(iii) the Shareholders agree that they will no longer proceed with the Yizhuang Closing (as defined under the Original Investment Agreement), nor the Tranche Closing (as defined under the Original Investment Agreement) corresponding to the Yizhuang Closing.

(e) WP's Exit Rights with respect to JV Co 1. In the event WP elects to exit from its investment in JV Co 1 by exercising the Dissolution Exit Option pursuant to Section 13.4(b) (Dissolution Exit) of the Original Investment Agreement, then, within thirty (30) Business Days (the "**Exit Put/Call Exercise Period**") after the fair market value of JV Co 1 is determined pursuant to the provisions of Section 13.4(b) (Dissolution Exit) of the Original Investment Agreement (assuming the principal of the entrustment loans extended to the Shareholders pursuant to this Agreement and the interest accrued thereon have been repaid in full),

(i) WP is entitled to, by serving a written notice to Vianet (the "**WP Put Notice**"), require Vianet to purchase all (but not less than all) the shares then held by WP in JV Co 1 (the "**WP Put Shares**") at a price equal to the product of such fair market value multiplied by WP's then Shareholding Percentage in JV Co 1 (the "**WP Put Price**") (the "**WP Put Option**"), and Vianet shall be obligated to purchase all the WP Put Shares at the WP Put Price, which WP Put Price shall be paid by Vianet to an account designated by WP no later than twenty (20) Business Days after delivery of the WP Put Notice; and

(ii) Vianet is entitled to, by serving a written notice to Vianet (the "**Vianet Call Notice**"), require WP to sell all (but not less than all) the shares then held by WP in JV Co 1 (the "**Vianet Call Shares**") at a price equal to the product of such fair market value multiplied by WP's then Shareholding Percentage in JV Co 1 (the "**Vianet Call Price**") (the "**Vianet Call Option**"), and WP shall be obligated to sell all the Vianet Call Shares at the Vianet Call Price, which Vianet Call Price shall be paid by Vianet to an account designated by WP no later than twenty (20) Business Days after delivery of the Vianet Call Notice.

If (x) neither WP exercises the foregoing WP Put Option nor Vianet exercises the foregoing Vianet Call Option within the Exit Put/Call Exercise Period or (y) each Shareholder has indicated in writing to the other Shareholder that it will not exercise the WP Put Option or the Vianet Call Option (as applicable) (and if the circumstances described in this item (y) occurs, the Exit Put/Call Exercise Period shall be deemed as early terminated upon such occurrence), WP shall be entitled to trigger the asset distribution pursuant to Section 13.4(c) (Asset Distribution) of the Original Investment Agreement immediately upon the expiry or early termination (whichever is earlier) of the Exit Put/Call Exercise Period. For the avoidance of doubt, WP shall not be allowed to trigger the asset distribution under Section 13.4(c) (Asset Distribution) of the Original Investment Agreement during the Exit Put/Call Exercise Period (or the early terminated Exit Put/Call Exercise Period, as applicable).

(f) Amendment to MSA upon WP's Exit. The Parties acknowledge and agree that upon WP's exercise of its exit rights with respect to its investment in JV Co 1 pursuant to Section 13 (Exit) of the Investment Agreement (as amended hereby), WP shall use commercially reasonable efforts to procure the Master Service Agreement between the relevant Project Company and Vianet's relevant Affiliate be amended to allow such Project to satisfy the requirements of VNET's finance lease accounting treatment, provided that the amendments will not impose any negative economic impact on the relevant Project Company (including any additional Tax burden), nor impair the marketability or value of the Projects upon WP's (or its Affiliates') direct or indirect sale thereof via sale of shares, asset sale or a combination of both (comparing to the situation where there is no amendment to satisfy the finance lease treatment).

(g) Cooperation of the Parties. The Parties agree to cooperate with each other to complete the distribution of the Available Cash of JV Co 1 pursuant to the provisions of Section 2.1(b) (Restructuring of JV Co 1), including without limitation that the Shareholders shall duly authorize the payment of the distributed JV Co 1 Available Cash and do all such thing to give effect to such distribution and payment. In the event any Available Cash of JV Co 1 fails to be distributed to any Shareholder in

such amount and at such time as provided under Section 2.1(b) (Restructuring of JV Co 1) above and such failure is neither due to any Force Majeure Event, nor reasons attributable solely to any Government Entity or the relevant entrusted bank, the overdue sum shall bear an interest at the rate of 0.05% per diem accrued from the applicable due date until the date when all the overdue sum and interest accrued thereon is paid in full to the relevant Shareholder, which interest shall be distributed to the Shareholders together with the Available Cash.

2.2 JV Co 2 Restructuring.

(a) Asset Distribution of JV Co 2. The Parties agree that JV Co 2 shall distribute its assets to the Shareholders on a pro rata basis based on their respective then prevailing Shareholding Percentages in JV Co 2, which distribution shall comply with the following:-

(i) Waigaoqiao #1 Project shall be distributed to Vianet, which distribution shall be completed by leaving Vianet's shareholding in JV Co 2 intact but having all other Projects of JV Co 2 transferred to WP according to the provisions in item (ii) below;

(ii) all other Projects owned by JV Co 2 (i.e., Fengxian Project, Nanjing Project, Nantong Project and Wuxi Project) together with all other Hong Kong incorporated Subsidiaries of JV Co 2 (except for (A) the Subsidiary that indirectly hold Waigaoqiao #1 Project, i.e., Shihua DC Investment SH1 Limited; and (B) Silver DC Investment Limited) (collectively, the "**HK SPVs**") shall be distributed to WP, and WP or its designated Affiliate shall enter into a share sale and purchase agreement with JV Co 2 (or the relevant Subsidiary of JV Co 2) in form and substance as set forth in Exhibit 2.2(a)(ii) (Form of JV Co 2 Distribution SPA) in relation to the transfer of each of Fengxian Project, Nanjing Project and Nantong Project to WP (each a "**Distribution SPA**"), with the transfer of Wuxi Project and the HK SPVs to be completed pursuant to the procedures set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap);

(iii) if, upon completing the distribution of Projects provided in items (i) and (ii) above, the following inequality is obtained:

$$\frac{A}{B} \neq \frac{C}{D}$$

Where,

A = the amount received by WP from the distribution of Projects provided in item (ii) above, which equals the original investment cost paid by JV Co 2 and/or any Subsidiary of JV Co 2 that directly or indirectly owns the Projects (the "**Project Cost**" of each Project) with respect to the Projects received by WP (the "**WP Project Distribution Amount**");

B = the amount received by Vianet from the distribution of Project provided in item (i) above, which equals the Project Cost with

respect to the Project received by Vianet (the "**Vianet Project Distribution Amount**");

C = WP's Shareholding Percentage in JV Co 2 as of the execution date hereof; and

D = Vianet's Shareholding Percentage in JV Co 2 on the same date

(the Shareholder whose Project distribution amount constitutes a larger portion of the total Project distribution by JV Co 2 than its Shareholding Percentage in JV Co 2 shall be referred to as the "**More Favored Shareholder**", whereas the other Shareholder shall be referred to as the "**Less Favored Shareholder**"),

then, the actions provided in items (1) and (2) below shall be taken in sequence so that the following equation (the "**JV Co 2 Distribution Equation**") is obtained:

$$\frac{(E+F)}{(G-H)} = \frac{I}{J}$$

Where,

E = WP Project Distribution Amount (or the Vianet Project Distribution Amount, as applicable) received by the Less Favored Shareholder;

F = the sum of JV Co 2/3 Net Cash and Cash Compensation (in each case as defined below);

G = WP Project Distribution Amount (or the Vianet Project Distribution Amount, as applicable) received by the More Favored Shareholder;

H = the amount of Cash Compensation (as defined below);

I = the Less Favored Shareholder's Shareholding Percentage in JV Co 2 as of the time immediately prior to the asset distribution provided under this Section 2.2(a) (Asset Distribution of JV Co 2); and

J = the More Favored Shareholder's Shareholding Percentage in JV Co 2 as of the same date.

(1) The Net Cash of JV Co 2 and JV Co 3 (on a consolidated basis) (the "**JV Co 2/3 Net Cash**") shall be distributed (or deemed as distributed pursuant to Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap)) to the Less Favored Shareholder, and

(2) the More Favored Shareholder shall pay cash in US Dollars to the Less Favored Shareholder (via PropCo 2) (such cash paid by the More Favored Shareholder, the "**Cash Compensation**").

The JV Co 2/3 Net Cash and the Cash Compensation shall be paid to the Less Favored Shareholder or its Affiliates (including JV Co 2 and its Subsidiaries) within fifteen (15) Business Days following the earlier of:

(I) completion of the JV 2/3 Audit (as defined under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap)); and

(II) expiry of one (1) month following the last Completion Date of Formalities under the Distribution SPAs;

(iv) The Shareholders shall arrange for the Net Cash of JV Co 2 and JV Co 3 (on a consolidated basis), the Cash Compensation and the Project Cost with respect to each Project owned directly or indirectly by JV Co 2 be determined as follows:-

(A) the estimated Project Cost with respect to each Project (the "**Estimated Project Cost**" of such Project) owned directly or indirectly by JV Co 2, the estimated JV Co 2/3 Net Cash (the "**Estimated JV Co 2/3 Net Cash**") and the estimated Cash Compensation (the "**Estimated Cash Compensation**"), in each case as of 30 April 2019 shall be as set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap);

(B) the Restructuring Auditor shall be appointed to determine (1) the Project Cost of each Project owned directly or indirectly by JV Co 2 as of the Closing Date (as defined under the Distribution SPA regarding such Project) and (2) the JV Co 2/3 Net Cash and the Cash Compensation as of the Audit Reference Date (as defined under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap)), in each case based on the principles set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap);

(C) the Restructuring Auditor shall submit an Audit Report (as defined under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap)) in accordance with the provisions set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) ;

(D) the Project Cost, the JV 2/3 Net Cash and the Cash Compensation as determined by the Restructuring Auditor in the Audit Report shall be final and binding on the Parties in the absence of manifest error; and

(E) notwithstanding the foregoing provisions in Section 2.2(a)(iv)(D), the Estimated Project Cost, the Estimated JV Co 2/3 Net Cash and the Estimated Cash Compensation shall be deemed as the final Project Cost, the final JV Co 2/3 Net Cash and the final Cash Compensation respectively until submission of the Audit Report by the Restructuring Auditor; and in the event the final Project Cost of any Project, the final JV Co 2/3 Net Cash and/or the final Cash Compensation as determined in the Audit Report does not equal the Estimated Project Cost of such Project, the Estimated JV Co

2/3 Net Cash and/or the Estimated Cash Compensation (as applicable), the Shareholders shall (and shall procure JV Co 2 and its Subsidiaries to) settle the difference in the manner provided under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) such that the JV Co 2 Distribution Equation shall be (or remain) obtained;

(v) the Shareholders shall use Best Efforts to procure: (A) the Closing contemplated under each of the Distribution SPAs be closed within five (5) Business Days following the execution date hereof pursuant to the provisions hereof and thereof, and (B) the Completion Date of Formalities under each of the Distribution SPAs shall occur within fifteen (15) days after the Closing contemplated under such Distribution SPA; and

(vi) the JV Co 2 asset distribution described above in this Section 2.2(a) (Asset Distribution of JV Co 2) shall be implemented pursuant to the steps set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap).

(b) Cooperation of the Parties. The Parties agree to cooperate with each other to complete the foregoing distribution of JV Co 2 assets pursuant to the provisions of Section 2.2(a) (Asset Distribution of JV Co 2), Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) and the Distribution SPAs, including without limitation that the Shareholders shall cooperate with each other in the payment of the distributed JV Co 2 assets (including the payments made pursuant to Section 2.2(a)(iii) above). Commencing from the execution date hereof, the Shareholders shall cooperate with each other to prepare for the handover of the assets, management and operation of each Project of JV Co 2 to the Shareholder who receives such Project in the asset distribution, and during the period commencing from the execution date hereof and ending on the completion of transfer of all Projects of JV Co 2, the Shareholder who receives certain Project shall be solely entitled to operate such Project.

(c) JV Co 2/3 Accounts Payable and Receivable. The Shareholders shall procure that all of the receivables and payables of JV Co 2, JV Co 3 and their respective Subsidiaries (including those resulting from Related Party Transactions, and loans between JV Co 2, JV Co 3 (or any of their respective Subsidiaries) and its Related Parties) shall be fully repaid, settled and cleared as soon as practicable pursuant to the arrangements set forth in Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap).

2.3 JV Co 3 Restructuring.

(a) Allocation of Employees.

(i) The Shareholders shall use their respective Best Efforts to terminate employment relationship with all existing employees of JV Co 3 and its Subsidiaries as soon as possible (but in no event later than one (1) month after the execution date hereof) so that JV Co 3 and its Subsidiaries shall no longer have any employee; provided that certain employees (as agreed by both Shareholders) will stay for an additional three (3) months following the expiry of the foregoing one (1) month period (or other time period as

mutually agreed by both Shareholders) to take care of the work in relation to the restructurings contemplated by this Agreement.

(ii) Despite the foregoing employee allocation, WP shall remain entitled to assign a finance representative to JV CO 1 and its Subsidiaries to exercise the rights entitled to the Chief Financial Officer that WP is entitled to appoint under the Investment Agreement, including continuing to enjoy the approval rights over matters of JV Co 1 that WP (or its designated Persons) enjoys as at the date hereof under the OA approval system of JV Co 1; provided that such approval rights shall not be inconsistent with the Reserved Matters as provided under the Investment Agreement and shall reflect WP's right to appoint the Chief Financial Officer of JV Co 1 and its Subsidiaries.

(iii) The Shareholders shall each bear its own cost and expenses incurred in receiving the JV Co 3 employees. The Parties further agree that any terminated employees of JV Co 3 with severance compensation paid by JV Co 3 shall not be rehired by the Shareholders or their respective Affiliates. The cost and expenses (including without limitation severance compensation paid by JV Co 3) incurred in terminating employees of JV Co 3 (except for Shareholders' own cost and expenses incurred in receiving the JV Co 3 employees) shall be borne by each Shareholder pursuant to its Shareholding Percentage in JV Co 3.

(b) Liquidation of JV Co 3. The Parties agree that upon completion of employee termination pursuant to Section 2.3(a) (Allocation of Employees) above, the Shareholders shall immediately liquidate and terminate JV Co 3 and its Subsidiaries (but in no event later than three (3) months after such completion) with any remaining assets of JV Co 3 or its Subsidiaries (if any) distributed to the Shareholders on a pro rata basis based on their respective then prevailing Shareholding Percentages in JV Co 3. Any and all Taxes arising from the liquidation provided under this Section 2.3(b) (Liquidation of JV Co 3) shall be borne by the Shareholders pro rata according to their respective Shareholding Percentages in the corresponding JV Co as at the execution date hereof.

2.4 First Amended and Restated Investment Agreement. The Parties agree that immediately upon the Major Project Closing Date (as defined under Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap)), the First Amended and Restated Investment Agreement that the Parties have executed on or about the even date herewith shall take effect.

2.5 Cost of Restructuring. The cost of the restructuring of the JV Cos provided hereunder shall be borne by the Shareholders pro rata according to their respective Shareholding Percentages in the corresponding JV Co as at the execution date hereof, except as otherwise expressly provided in this Agreement or other Transaction Documents.

3. JV CO 4 INVESTMENT

(I) INCORPORATION OF JV CO 4

3.1 Incorporation.

(a) As at the execution date hereof, SHIHUA DC INVESTMENT GROUP 2 LIMITED ("**PropCo 2**"), a wholly owned Subsidiary of JV Co 2, has established a wholly owned Subsidiary in Hong Kong named Silver DC Investment Limited (company number 2758697, "**JV Co 4**") and PropCo 2 holds 1 share of a single class issued by JV Co 4.

(b) As soon as practicable after the execution date hereof, (i) PropCo 2 shall sell and transfer to WP, and WP shall purchase from PropCo 2, 1 share in JV Co 4 at the transfer price of US$1.00; (ii) JV Co 4 shall issue and allot to WP, and WP shall purchase and subscribe from JV Co4, 48 fully-paid shares at an aggregate subscription of US$48.00; and (iii) JV Co 4 shall issue and allot to Vianet, and Vianet shall purchase and subscribe from JV Co4, 51 fully-paid shares at an aggregate subscription of US$51.00 (transactions set forth in items (i) through (iii), collectively, the "**JV Co 4 Establishment Transactions**"). Upon closing of the JV Co 4 Establishment Transactions (the "**JV Co 4 Closing**"), the issued shares of JV Co 4 shall be 100 shares of a single class, among which Vianet shall hold 51 shares representing 51% of all the issued share capital of JV Co 4, and WP shall hold 49 shares representing 49% of all the issued share capital of JV Co 4.

(c) On the execution date hereof (the "**JV Co 4 Establishment Date**"), the Shareholders shall and shall procure the relevant JV Cos Group Companies to execute all such agreements, instruments, resolutions and other documents necessary to effect the JV Co 4 Establishment Transactions.

3.2 Articles. The Shareholders shall take any and all actions to procure that the articles of association of JV Co 4 (the "**JV Co 4 Articles**") shall duly reflect the provisions hereof and shall be in such form and substance as mutually agreed upon by the Shareholders.

3.3 Intermediate Companies. Subject to approval of the JV Co 4 Board, one or more tiers of intermediate companies may be added into the JV Co 4 Group to hold, directly or indirectly, the companies incorporated for the Projects of JV Co 4.

3.4 Board of Directors. The Shareholders shall ensure that upon the JV Co 4 Closing, the board of directors of JV Co 4 shall consist of five (5) directors, three (3) of which shall be appointed, removed or replaced (with or without cause) by Vianet and the other two (2) of which shall be appointed, removed or replaced (with or without cause) by the Investor.

3.5 Shareholders' Actions.

(a) The Shareholders shall procure JV Co 4 to engage a Hong Kong company secretary satisfactory to each Shareholder to complete any and all procedures required for the JV Co 4 Establishment Transactions and shall cause such company secretary to, immediately upon or as soon as practicable after the JV Co 4 Closing, deliver to the Shareholders documents in respect of the their respective shareholding in JV Co 4 (including without limitation, share certificate, copies of register of members and register of directors).

(b) Any and all costs in connection with the JV Co 4 Establishment Transactions (including any stamp duty in relation thereto, the "**Incorporation Costs**") shall be advanced by JV Co 3 and borne by the Shareholders on a pro rata basis pursuant to their respective Shareholding Percentages in JV Co 3.

3.6 Cash Sweep. The Shareholders agree that to the extent (i) there is any Available Cash in JV Co 1 (or its Subsidiaries) and (ii) any funds are required by JV Co 4 or its Subsidiaries to engage in any new project as approved by the Shareholders, the Shareholders shall, upon request of the JV Co 4 Board, cause JV Co 1 (or a Subsidiary of JV Co 1) to extend to JV Co 4 (or a Subsidiary of JV Co 4) certain Available cash (excluding requisite reserve to ensure the normal operation and sufficient working capital of JV Co 1 and its Subsidiaries) at an interest rate equal to LIBOR to satisfy the funding need of JV Co 4. For the avoidance of doubt, the JV Co 4 Board may elect to address the funding need of JV Co 4 either via requesting for cash sweep as provided in this Section 3.6 (Cash Sweep) and/or via making Capital Call pursuant to Section 1.2 (Capital Call) of Exhibit 3.7 (JV Co 4 Related Provisions).

3.7 Other JV Co 4 Related Provisions. Except for the provisions set forth in this Section 3 (JV Co 4 Investment), the other provisions in relation to JV Co 4 are set forth in Exhibit 3.7 (JV Co 4 Related Provisions).

(II) JV CO 4 MASTER SERVICE ARRANGEMENT

3.8 Vianet's ROFO and Group Company's ROFO.

(a) Vianet's ROFO Mechanism. With respect to any future Project to be undertaken by JV Co 4, the Shareholders shall cause JV Co 4 to, before the earlier of (i) entering into a definitive binding wholesale lease or master service agreement with a third party in respect of 50% or more of the area or capacity of such future Project and (ii) three (3) months prior to the time when such future Project becomes ready to use, issue a written notice to Vianet requesting Vianet's decision on whether to lease such future Project. Vianet shall reply in writing to JV Co 4 within two (2) months after receipt of the foregoing written notice issued by JV Co 4. If Vianet decides to lease such future Project, Vianet shall reply in writing within the foregoing two (2)-month period with an express rate of rental (the "**Vianet Offered Rental**"), and JV Co 4 may elect to lease such future Project to Vianet or to any third party at a rate of rental no less than the Vianet Offered Rental (and if such Group Company elects to lease such future Project to Vianet, Vianet and such Group Company shall enter into a definitive agreement within two (2) months after such election). If Vianet fails to make the foregoing reply to JV Co 4 within the foregoing two (2)-month period or a definitive agreement fails to be entered into within the foregoing subsequent two (2)-month period, JV Co 4 shall be entitled to lease to or otherwise cooperate with any third party in respect of such future Project at any rate of rental as JV Co 4 may deem fit. For the avoidance of doubt, Vianet shall (and shall cause its appointed directors to) exercise its rights as a shareholder (or a director, as applicable) of JV Co 4 towards the best interest of JV Co 4.

(b) Exemptions. The provisions of Section 3.8(a) (Vianet's ROFO Mechanism) shall not apply to: (i) any future Project to be acquired by any JV Co 4 Group Company already occupied or engaged with leases and tenants; (ii) any future Project under any joint venture or other similar cooperation methods between any JV Co 4 Group Company, on one hand, and one or more third parties, on the other hand; or (iii) any lease of any future Project in respect of less than 50% of the area or capacity of such future Project.

3.9 Master Service Agreement. For each future Project that Vianet leases and receives master services from the relevant JV Co 4 Group Company, Vianet shall (or shall cause its Affiliates

to) enter into a master service agreement with such JV Co 4 Group Company (each a "**JV Co 4 Master Service Agreement**") in such form and substance as mutually agreed upon by the Shareholders with reference to the form mutually agreed upon by the Shareholders for the Existing Projects.

3.10 Sub-Contracting Agreement. For each future Project that Vianet leases in the entirety of such Project and receives master services from the relevant JV Co 4 Group Company, Vianet shall have a priority right to be sub-contracted with certain services under the JV Co 4 Master Services Agreement under equal terms and conditions, and if Vianet (of its Affiliates) is selected as a sub-contractor pursuant to the preceding sentence, Vianet shall (or shall cause its Affiliates to) enter into a sub-contracting agreement with such JV Co 4 Group Company in such form and substance as mutually agreed upon by the Shareholders (any amendment thereto or termination thereof without the prior consent of WP or its nominated director shall be deemed as a Material Breach by Vianet). Each such service agreement so executed shall be referred to as a "**JV Co 4 Sub-Contracting Agreement**".

(III) JV CO 4 EXIT

The relevant Shareholder shall be entitled to exit rights with respect to its investment in JV Co 4 upon (i) JV Co 4's failure to undertake any new Project for a period of any consecutive twenty-four (24) months following the JV Co 4 Establishment Date, (ii) expiry of four (4) years after execution date hereof or (iii) Vianet (or WP) commits any Material Breach or IA Material Breach (or Investor Material Breach or IA Investor Material Breach, as applicable) (provided that with respect to the exit event set forth in this item (iii), the breaching Shareholder may not exercise its exit rights relying on such breach), in one or more of the following ways:-

3.11 Exit ROFO.

(a) Sale Notice. Either Shareholder shall be entitled to give a Sale Notice to the Non-Transferring Shareholder pursuant to Section 4.3(a) (Sale Notice) of Exhibit 3.7 (JV Co 4 Related Provisions) and the Non-Transferring Shareholder shall be entitled to the right of first offer pursuant to the provisions of Section 4.3 (Right of First Offer) of Exhibit 3.7 (JV Co 4 Related Provisions).

(b) Negative Decision Notice. If (i) the Non-Transferring Shareholder elects not to exercise its right of first offer pursuant to Section 4.3 (Right of First Offer) of Exhibit 3.7 (JV Co 4 Related Provisions); or (ii) the Non-Transferring Shareholder fails to pay the non-refundable deposit pursuant to the provisions of Section 4.3(b) (Completion Period) of Exhibit 3.7 (JV Co 4 Related Provisions), then, (x) the Transferring Shareholder is at liberty to Transfer its Subject Shares to any third party, at a price no less than the price set forth in the Sale Notice, and (y) (only in the event the Investor is the Transferring Shareholder) the Transferring Shareholder shall be entitled to trigger the Trade Sale pursuant to the provisions of Section 3.12 (Trade Sale). Furthermore, in the event Vianet is the Transferring Shareholder, the Investor shall be entitled to exercise its tag-along right pursuant to the provisions of Section 4.4 (Tag Along Right) of Exhibit 3.7 (JV Co 4 Related Provisions).

3.12 Trade Sale. If and only if the Investor is entitled to trigger this Section 3.12 (Trade Sale) pursuant to Section 3.11(b) (Negative Decision Notice) above, the Investor may appoint an investment bank of international repute or a property broker to procure a sale by JV Co 4 of all or substantially all of their assets and undertakings (whether by way of a share sale, an asset

sale or a combination of both) at a valuation acceptable to WP (a "**Trade Sale**"); provided that each buyer in such Trade Sale shall be a bona fide third party, and the Shareholders shall extend all necessary cooperation and assistance to facilitate the sale (including providing assistance to the potential purchasers and their advisers in the conduct of any due diligence investigation in respect of the JV Co 4 Group Companies). Upon completion of the trade sale, the Shareholders shall take the necessary steps to distribute the sale proceeds from the sale of JV Co 4 to the Shareholders on a *pro rata* basis pursuant to their respective then-current Shareholding Percentages in JV Co 4. For the avoidance of doubt, any sale or transfer in connection with the Trade Sale shall not be subject to the Transfer restrictions set forth in Section 4 (Transfer Restrictions) of Exhibit 3.7 (JV Co 4 Related Provisions).

3.13 Dissolution Exit.

(a) Dissolution Notice. If the Investor has not fully exited from its investment in JV Co 4 pursuant to Section 3.11 (Exit ROFO) or 3.12 (Trade Sale) above within three (3) months after the Investor issues a Sale Notice pursuant to Section 3.11(a) (Sale Notice), the Investor may (but is not obligated to), in its sole discretion, elect to exit (the "**Dissolution Exit Option**") from its investment in JV Co 4 pursuant to Section 3.13(b) (Dissolution Exit) by serving a written notice to Vianet (the "**Dissolution Notice**"). For the avoidance of doubt, any sale or transfer in connection with the exercise of the Dissolution Exit Option shall not be subject to the Transfer restrictions set forth in Section 4 (Transfer Restrictions) of Exhibit 3.7 (JV Co 4 Related Provisions).

(b) Dissolution Exit. After serving the Dissolution Notice, the Investor may initiate the break-up of JV Co 4 (the "**Dissolution Exit**") and arrange for the fair market value of JV Co 4 to be determined as follows:-

(A) Each of the Shareholders shall appoint an Appraiser within five (5) days after the date of service of the Dissolution Notice to each determine the fair market value of JV Co 4, based on the principles set forth in Exhibit 3.13(b) (Appraisal Principles);

(B) The Appraisers shall submit a valuation report setting out the fair market value within one (1) month of their respective appointment; and

(C) The fair market value of JV Co 4 shall be the arithmetic average of the fair market values submitted by the two (2) Appraisers.

The Shareholders shall (and shall cause the JV Co 4 Group Companies to) provide the Appraisers with all information reasonably required for the purposes of determining the fair market value of JV Co 4. The cost of such appraisal shall be paid and borne by JV Co 4.

(c) Asset Distribution. The Shareholders shall take turns to select project companies of JV Co 4 to be transferred to itself or its Affiliates until each of the Shareholders (or their respective Affiliates, as applicable) receives its share in the fair market value of JV Co 4 based on its Shareholding Percentage in JV Co 4; provided, however, that (i) the Investor shall have the right to the first selection, and Vianet shall have the right to the second selection; and (ii) the Investor shall be entitled to a priority to be distributed all available cash of JV Co 4. If, after completion of the foregoing

selection, there is any shortfall between the fair market value of the Project Companies selected by any Shareholder and the amount that should be distributed to such Shareholder pursuant to this Section 3.13(c) (Asset Distribution), such shortfall shall be made up for in cash by the other Shareholder that receives any excess distribution. The Shareholders shall use their respective Best Efforts to cause the transfer or disposal of each project company of JV Co 4 to be completed within 180 days after the date of service of the Dissolution Notice.

3.14 Amendment to JV Co 4 MSA. The Parties acknowledge and agree that upon the Investor's exercise of its exit rights with respect to its investment JV Co 4 pursuant to this Section 3(III) (JV Co 4 Exit), the Investor shall use commercially reasonable efforts to procure the JV Co 4 Master Service Agreement (if any) between the relevant project company and Vianet's relevant Affiliate be amended to allow such Project to satisfy the requirements of VNET's finance lease accounting treatment, provided that (i) the amendments will not impose any negative economic impact on the relevant project company (including any additional Tax burden), nor impair the marketability or value of the Projects upon WP's (or its Affiliates') direct or indirect sale thereof via sale of shares, asset sale or a combination of both (comparing to the situation where there is no amendment to satisfy the finance lease treatment); and (ii) Vianet shall, as soon as possible after WP's exercise of its aforementioned exit right, notify WP in writing setting forth in reasonable detail the amendments necessary to satisfy such finance lease treatment.

3.15 Actions to Effectuate Investor's Exit. Vianet shall, and shall cause its Affiliates, appointed directors, permitted successors, transferees or assignees to, procure the JV Co 4 Group Companies take any and all necessary actions to effectuate the Investor's exit pursuant to the provisions of this Section 3(III) (JV Co 4 Exit).

3.16 Late Payment Fee. If either Shareholder fails to pay to the other Shareholder any due and payable amount in a timely manner under this Section 3(III) (JV Co 4 Exit), such default Shareholder shall pay to the other Shareholder a late payment fee at a daily interest rate of 0.05%.

3.17 Taxes. Without prejudicing the rights and interests of the Investor under this Section 3(III) (JV Co 4 Exit), each Shareholder shall pay and bear the Taxes arising from or in connection with the exit mechanism set forth in this Section 3(III) (JV Co 4 Exit) payable by said Shareholder pursuant to the Applicable Law; provided, however, that the Shareholders shall use their respective Best Efforts to ensure that the exit mechanism set forth in this Section 3(III) (JV Co 4 Exit) be implemented in the most tax-efficient way.

4. REPRESENTATIONS AND WARRANTIES

4.1 Mutual Representations and Warranties. As at date of this Agreement and each Closing Date, each Party hereby represents and warrants to the other Parties as follows:-

(a) Incorporation. It is duly incorporated, validly existing and (where applicable) in good standing under the laws of the place of its incorporation and it has the requisite power and authority to conduct its business in accordance with its business license, certificate of incorporation, memorandum and articles of association, or similar constitutional documents;

(b) Authority. It has all requisite power, authority, approval and third-party consent required to enter into this Agreement and other Transaction Documents and has all

requisite power, authority, approval and third-party consent to fully perform each of its obligations hereunder and under other Transaction Documents;

(c) Corporate Actions. It has taken all necessary internal corporate actions to authorize it to enter into this Agreement and other Transaction Documents, and its representative whose signature is affixed hereto is given full authority to sign this Agreement and other Transaction Documents, if applicable; and

(d) No Violation. Neither the execution of this Agreement and other Transaction Documents, if applicable, nor the performance of its obligations hereunder and thereunder, will conflict with, or result in a breach of, any provision of its constitutional documents, or any law, rule, regulation, authorization, or approval of any Government Entity, or of any contract or agreement to which it is a party or is subject.

5. ADDITIONAL COVENANTS

5.1 Further Assurances. The Parties shall act in good faith to take any and all actions necessary or advisable to consummate the Transactions contemplated hereby, including without limitation, to (a) procure that each of the JV Cos Group Companies and their respective directors, officers and employees shall fulfill their respective obligations under this Agreement and other Transaction Documents; and (b) provide all reasonably necessary and advisable assistance to the JV Cos Group Companies and WP in obtaining all applicable Government Approvals, and complete the Transactions.

5.2 Confidentiality and Publicity.

(a) Confidentiality. From the date hereof, each Party shall, and shall cause each Person who is Controlled by such Party to, keep confidential the terms, conditions and existence of this Agreement, any related documentation, the identities of any of the Parties and any other information of a non-public nature received from any other Party or prepared by such Party exclusively in connection herewith or therewith (collectively, the "**Confidential Information**") except as the Parties otherwise mutually agree; provided, however, that any Party may disclose the Confidential Information or permit the disclosure of the Confidential Information (i) to the extent required by Applicable Law so long as, where such disclosure is to a Government Entity, such Party shall use all reasonable efforts to obtain confidential treatment of the Confidential Information so disclosed, (ii) to the extent required by the rules of any stock exchange, (iii) to its officers, directors, employees and professional advisors, and in the case of the Investor, its Affiliates, as necessary for the performance of its obligations in connection herewith so long as such Party advises each Person to whom any Confidential Information is so disclosed as to the confidential nature thereof, and (iv) to its investors, prospective investors and any Person otherwise providing substantial debt or equity financing to such Party so long as the Party advises each Person to whom any Confidential Information is so disclosed as to the confidential nature thereof. Each Party shall ensure that any of the foregoing permitted disclosed Persons to which such Party discloses the Confidential Information shall have the same confidentiality obligation and liability as such Party.

Further, the Investor acknowledges that it is aware that VNET is a NASDAQ listed company and is subject to the securities laws and regulations of the Securities and Exchange Commission of the United States of America ("**SEC**"). Therefore, the Investor and/or its Subsidiaries that receive non-public information from VNET about VNET will be subject to inside trading provisions under the rules of SEC.

For the avoidance of doubt, the Confidential Information does not include information that (i) was already in the possession of the receiving Party (the "**Receiving Party**") before such disclosure by the disclosing Party (the "**Disclosing Party**"), (ii) is or becomes available to the public other than as a result of disclosure by the Receiving Party in violation of this Section 5.2 (Confidentiality and Publicity) or (iii) is or becomes available to the Receiving Party from a third party not known by the Receiving Party to be in breach of any legal or contractual obligation not to disclose such information to it; and in each case, if the Receiving Party determines that the foregoing information may have any material adverse effect on the JV Co 4 Group Companies, the Receiving Party shall immediately notify the other Parties and take reasonable and necessary measures to avoid further disclosure of the foregoing information.

(b) Publicity. No public announcement or disclosure (including any general announcement to employees, customers or suppliers) will be made by any Party with respect to the subject matter of this Agreement or the Transaction without the prior written consent of the other Parties; provided that the provisions of this Section 5.2(b) (Publicity) shall not prohibit (i) any disclosure required by any Applicable Law (in which case the disclosing Party will provide the other Parties with the opportunity to review and comment in advance of such disclosure if legally permitted and practicable) or (ii) any disclosure made in connection with the enforcement of any right or remedy relating to this Agreement or the Restructuring.

Each of the Parties shall not, and shall procure that their respective Affiliates will not, without the prior written consent of the other Parties, (i) use in advertising, publicity, or otherwise the name of the other Parties or their respective Affiliates, nor any trade name, trademark, trade device, service mark, symbol or any abbreviation, contraction or simulation thereof owned by the other Parties or their respective Affiliates, or (ii) represent, directly or indirectly, that any product or any service provided by any JV Co 4 Group Company has been approved or endorsed by the other Parties or their respective Affiliates.

5.3 U.S. Tax Matters. The Parties shall procure that JV Co 4, together with any other JV Co 4 Group Companies shall use commercially reasonable Best Efforts to assist WP in (1) determining annually whether any of the JV Co 4 Group Companies is a passive foreign investment company ("**PFIC**") within the meaning of IRC Section 1297 and the Treasury Regulations promulgated thereunder, (2) providing WP with any information necessary for WP to comply with annual reporting requirements in respect of such PFIC, (3) obtaining (i) PFIC Annual Information Statements as described in Treasury Regulation Section 1.1295-1(g)(1) so as to permit WP (or its direct or indirect investors) to timely make and maintain at all times a qualified electing fund election in accordance with IRC Section 1295 or (ii) information necessary to make a mark-to-market election on the PFIC in accordance with IRC Section 1296. The aforesaid assistance is limited to providing necessary information or documents to WP for it to comply with obligations in respect of PFIC, and shall under no

circumstances be taken as agreement to submit or file any documents to any U. S. government authorities on behalf of WP.

6. INDEMNITY

6.1 General. If there occurs any misrepresentation, breach of warranty, breach of covenant, or other violation by any Party under this Agreement or any other Transaction Documents, such Party shall indemnify and hold harmless other Parties, their respective Affiliates, together with the senior management, directors, employees thereof, from and against any and all Indemnifiable Losses suffered by such other Parties, such Affiliates, such senior management, directors or employees, directly or indirectly, in relation to the foregoing.

6.2 Non-Exclusive. The foregoing indemnity provisions are not in derogation of other contractual and statutory remedies and rights any Party may have under this Agreement, other Transaction Documents and Applicable Law. For the avoidance of doubt, no Party is entitled to any repetitive payment and indemnity arising from or in relation to the same breach or default by any other Party.

7. TERMINATION

7.1 Termination of Agreement. This Agreement may be terminated:-

(a) by all the Parties upon their unanimous written consent;

(b) by the Investor if the Investor elects to exercise the Dissolution Exit Option pursuant to Section 3.13 (Dissolution Exit);

(c) by any Shareholder upon the winding up of JV Co 4 and completion of the distribution of proceeds, if any, from such winding up;

(d) with respect to a Shareholder, upon the date on which such Shareholder ceases to hold any shares in JV Co 4; provided, however, that such Shareholder's cessation to hold any shares shall not be a breach of this Agreement;

(e) by the Investor if Vianet fails to pay any tranche of the Vianet Subscription Price and such failure is not cured within forty (40) days;

(f) by Vianet if the Investor fails to pay any tranche of the WP Subscription Price, and such failure is not cured within forty (40) days;

(g) by the Investor if there is a Material Breach or an IA Material Breach;

(h) by Vianet if there is an Investor Material Breach or an IA Investor Material Breach; or

(i) by either Shareholder if any Government Entity having relevant jurisdiction or power mandatorily requires that the Transaction contemplated hereby be terminated and the Shareholders fail to resolve such requirement by such Government Entity after using Best Efforts within 180 days after the date of such requirement by such Government Entity.

7.2 Effects of Termination. If this Agreement is terminated pursuant to the provisions of Section 7.1 (Termination of Agreement):-

(a) No Further Effect. This Agreement shall become invalid and have no further effect; provided, however, that termination of this Agreement (howsoever occasioned) shall not affect any accrued rights or liabilities to any Shareholder, nor shall it affect the effect of any provision hereof which is expressly or by implication intended to come into or continue in force on or after such termination, including those sections set out in Section 7.3 (Survival) below;

(b) Termination of Ancillary Agreements. The Parties hereby agree that they shall take any and all necessary actions to terminate any ancillary agreements entered into in connection with this Agreement; and

7.3 Survival. Notwithstanding any other provisions, the provisions of Section 3(III) (JV Co 4 Exit), Section 5.2 (Confidentiality and Publicity), Section 6 (Indemnity), this Section 7 (Termination) and Section 8 (Miscellaneous) shall survive any expiration or termination of this Agreement.

8. MISCELLANEOUS

8.1 Taxes and Expenses.

(a) Taxes. Each of the Parties shall bear all Taxes arising from the Transaction contemplated hereby pursuant to the requirements of Applicable Laws.

(b) Expenses. In the event that the Transaction contemplated hereby are not consummated, each of the Parties shall bear its own due diligence costs, advisory fees and costs and expenses incurred in connection with their respective negotiation and preparation of this Agreement and any other related agreements.

8.2 Binding Effect; Assignment. This Agreement shall be binding upon and shall be enforceable by each Party, its successors and permitted assigns. Subject to Section 4.2 (Permitted Transfers) of Exhibit 3.7 (JV Co 4 Related Provisions), no Party may assign any of its rights or obligations hereunder without the prior written approval of the other Parties.

8.3 Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of Hong Kong without regard to conflict of laws principles thereunder.

8.4 Dispute Resolution.

(a) Dispute. Any dispute, controversy or claim (each, a "**Dispute**") arising out of or relating to this Agreement, or the interpretation, breach, termination or validity hereof, shall be referred to and finally resolved by arbitration administered by the Hong Kong International Arbitration Center ("**HKIAC**") in accordance with the HKIAC Administrated Arbitration Rules (the "**Rules**") in effect when the Notice of Arbitration is submitted, which Rules are deemed to be incorporated by reference into this Section 8.4 (Dispute Resolution). The seat of arbitration shall be Hong Kong. Before resolving the Dispute by way of arbitration as provided in this Section 8.4 (Dispute Resolution), the Dispute shall be resolved at the first instance through consultation between the Parties to such Dispute. Such consultation shall

begin immediately after any Party has delivered written notice to any other Party to the Dispute requesting such consultation (the "**Notice of Escalation of Dispute**"). If the Dispute is not resolved within thirty (30) days following receipt of the Notice of Escalation of Dispute in accordance with Section 8.7 (Notices), the Dispute shall be submitted to arbitration by any of the Parties in accordance with this Section 8.4 (Dispute Resolution). The thirty (30)-day consultation period set out in this Section 8.4(a) (Dispute) shall not apply to applications seeking conservatory or interim relief.

(b) Arbitration Tribunal. The arbitral tribunal shall be composed of three (3) arbitrators. The arbitration proceedings shall be conducted in English. If the Rules are in conflict with the provisions of this Section 8.4 (Dispute Resolution), including but not limited to the provisions concerning the appointment of arbitrators, the provisions of this Section 8.4 (Dispute Resolution) shall prevail. The arbitrators shall decide any Dispute submitted by the Parties strictly in accordance with the substantive law of Hong Kong.

(c) Matters Not in Dispute. When any Dispute occurs and when any Dispute is under arbitration, except for the matters in dispute, the Parties shall continue to fulfill their respective obligations and shall be entitled to exercise their rights under this Agreement. The award of the arbitral tribunal shall be final and binding upon the Parties and shall be enforceable in any court of competent jurisdiction. The costs of arbitration shall be borne by the losing Party on full indemnity basis, unless otherwise determined by the arbitral tribunal.

(d) Exclusive Remedy. The Dispute resolution provisions of this Section 8.4 (Dispute Resolution) shall be the sole and exclusive remedy and process to resolve any Disputes under or pursuant to this Agreement. Nothing in this Section 8.4 (Dispute Resolution) shall be construed as preventing any Party from seeking conservatory or interim relief (including injunction, specific performance or other similar or comparable forms of equitable relief) from any court of competent jurisdiction. For the avoidance of doubt, the thirty (30)-day consultation period set out in Section 8.4(a) (Dispute) shall not apply to applications seeking conservatory or interim relief.

8.5 Language. This Agreement shall be executed in English, provide that Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) shall be in Chinese.

8.6 Effectiveness and Amendments. Except as otherwise permitted herein, this Agreement and its provisions may be amended, changed, waived or terminated only by a writing signed by each of the Parties. This Agreement shall enter into effect from the date when this Agreement is executed by all of the Parties or their respective duly authorized representatives.

8.7 Notices. All notices, claims, requests, demands and other communications under this Agreement shall be made in writing and shall be delivered to any Party hereto by hand or sent by facsimile, or sent, postage prepaid, by reputable overnight courier services at the address given for such Party on Exhibit 8.7 (Address of Notices) (or at such other address for such Party as shall be specified by like notice), and shall be deemed given when so delivered by hand, or if sent by facsimile, upon receipt of a confirmed transmission receipt, or if sent by overnight courier, seven (7) days after delivery to or pickup by the overnight courier service. Any of the foregoing notices and other communications may be accompanied with (but not replaced by) email to the email address given for a Party on Exhibit 8.7 (Address of Notices) (or at such other email address for such Party as shall be specified by like notice). Each Party

shall promptly (and in any event within fourteen (14) days of the event taking place) notify the other Parties shall there be a change in the address of service.

8.8 Entire Agreement. This Agreement and all other Transaction Documents (together with documents mentioned herein and therein) constitute the entire agreement among the Parties with respect to the subject matter hereof and supersedes all prior written or oral understandings or agreements.

8.9 Severability. If any provision of this Agreement shall be held invalid or unenforceable to any extent, the remainder of this Agreement shall not be affected thereby and shall be enforced to the greatest extent permitted by Applicable Law.

8.10 Specific Performance. The Parties hereto acknowledge and agree that irreparable harm may occur for which money damages would not be an adequate remedy in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the Parties shall be entitled to injunctive relief to address breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement.

8.11 Counterpart Execution. This Agreement shall be executed in three (3) counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Each Party shall hold one (1) counterpart.

8.12 Drafting Presumption. This Agreement shall be construed fairly as to each Party regardless of which Party drafted it. Each Party acknowledges and agrees that each of them played a significant and essential role in the preparation, drafting and review of this Agreement.

8.13 Conflicts among Documents. In the case of any conflict between this Agreement and other Transaction Documents, this Agreement shall prevail as among the Parties only, and the Parties shall procure that the constitutional documents of the relevant JV Co 4 Group Companies are promptly amended, to the extent permitted by Applicable Laws, in order to remove such conflict. In the case of any conflict between this Agreement and the Original Investment Agreement, this Agreement shall prevail as among the Parties.

8.14 Limitation on Benefits of this Agreement. A person who is not a party (or the successor or assignee, immediate or otherwise, of a party, or the person becoming a party by novation) to this Agreement shall not have any rights under the Contracts (Rights of Third Parties) Ordinance (Cap. 623) to enforce any term of this Agreement.

[Remainder of this page intentionally left blank; signature pages to follow.]

IN WITNESS WHEREOF, each of the Parties hereto has caused this Agreement to be executed by their duly authorized signatories on the date first set forth above.

21VIANET GROUP, INC.

By: /s/ Sheng Chen
Name: Sheng Chen
Title: Director

By:
Name:
Title: Director

21VIANET DRP INVESTMENT HOLDINGS LIMITED

By: /s/ Shiqi WANG
Name: Shiqi WANG
Title: Director

By: /s/ Xiao LIU
Name: Xiao LIU
Title: Director

IN WITNESS WHEREOF, each of the Parties hereto has caused this Agreement to be executed by their duly authorized signatories on the date first set forth above.

MARBLE STONE HOLDINGS LIMITED

By: /s/ Ellen Hoi Ying Ng
Name: Ellen Hoi Ying Ng
Title: Director

Exhibit 1.1

Definitions

1. The following terms shall have the following meanings:-

"**Action**" means any claim, action, suit, arbitration, inquiry, proceeding or investigation by or before any Government Entity.

"**Affiliate**" with respect to a specified Person means (a) in the case of an individual, such Person's siblings, spouse and lineal descendants or antecedent (whether natural or adopted) and any trust formed and maintained solely for the benefit of such Person, such Person's siblings, spouse and/or such lineal descendants or antecedent, and (b) in the case of any Person, a Person that directly, or indirectly through one or more intermediaries, Controls or is Controlled by, or is under common Control with, the Person specified, and with respect to each of the Parties, excludes JV Cos and any of their respective Subsidiaries or other Affiliates unless otherwise provided in this Agreement. In the case of any of the Parties being an investment fund (or a Subsidiary of an investment fund), the term "Affiliate" shall include, without limitation, any other investment fund (or a Subsidiary of any such investment fund) managed by the same manager of such investment fund (or, if such Party is a Subsidiary of an investment fund, the same manager of the investment fund of which such Party is a Subsidiary).

"**Anti-Bribery Laws**" means (a) the US Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations issued thereunder, (b) the PRC Criminal Law, the PRC Anti-Unfair Competition Law, the Interim Rules of the State Administration for Industry and Commerce on Prohibition of Commercial Bribery, and any other PRC law, rule, regulation, judicial interpretation, or other legally binding measure that contains anti-bribery or corruption provisions or that otherwise relates to bribery or corruption, and (c) any other law, rule, regulation, or other legally binding measure of any jurisdiction that relates to bribery or corruption.

"**Applicable Law**" or "**Applicable Laws**" means, with respect to any activities or matters conducted by or happen to any Person, any and all provisions of any law, regulation, code, rule, judgment, rule of common law, Order, decree, award, injunction, governmental approval, license, directive, or other governmental restriction or any similar form of decision of, or determination by, or any interpretation or administration of any of the foregoing by, any Government Entity, applicable to such Person or any of its assets or undertakings at the time when such activities are conducted or when such matters happen (as applicable).

"**Appraiser**" means any of Jones Lang LaSalle, CB Richard Ellis, Savills Property Services, DTZ Debenham Tie Leung or Colliers International, or such other internationally reputable appraiser agreed by the Shareholders in writing.

"**Best Efforts**" means, in relation to a Person, taking all steps that a prudent Person desirous of achieving a result would take in similar circumstances to achieve that result as expeditiously as possible.

"**Big Four Accounting Firm**" means any of (i) Ernst & Young, (ii) PricewaterhouseCoopers, (iii) Deloitte & Touche Tohmatsu and (iv) KPMG.

"**Borrowings**" means, at any time, the aggregate outstanding principal, capital or nominal amount (and any fixed or minimum premium payable on prepayment or redemption) of any Indebtedness of members of the JV Co 1 Group for or in respect of (without double counting) moneys borrowed at banks or other financial institutions that bear interest (excluding, for the avoidance of doubt, any intercompany loan or balance owed by any member of the JV Co 1 Group to any other member of the JV Co 1 Group);

"**Business Day**" means a day (other than a Saturday or Sunday) when banks in China, Hong Kong, the Cayman Islands, the British Virgin Islands, Singapore and New York are open for business.

"**Cash**" means, at any time, cash in hand or at bank and (in the latter case) credited to an account in the name of any member of the JV Co 1 Group with a bank or financial institution and to which that member of the JV Co 1 Group is alone (or together with other members of the JV Co 1 Group) beneficially entitled and for so long as (a) that cash is repayable on demand or in any event within thirty (30) days after the relevant date of calculation; (b) repayment of that cash is not contingent on the prior discharge of any other Indebtedness of that member of the JV Co 1 Group or of any other person whatsoever or on the satisfaction of any other condition; and (c) there is no Encumbrance over that cash except for any Encumbrance created to secure repayment of any Borrowings of any member of the JV Co 1 Group or any Encumbrance constituted by a netting or set-off arrangement entered into by members of the JV Co 1 Group in the ordinary course of their banking arrangements.

"**Cash Equivalent Investments**" means investments that are short term investments (excluding equity investments) which are (a) readily convertible into cash without incurring any significant premium or penalty and (b) not subject to any Encumbrance except for any Encumbrance created to secure repayment of any Borrowings of any member of the JV Co 1 Group.

"**Chairman**" means the chairman of the board of JV Co 4 (or the relevant JV Co 4 Group Company, as applicable) from time to time.

"**Control**" (including the correlative meanings of the terms "**Controlling**", "**Controlled by**" and "**under common Control with**") means, with respect to any Person, direct or indirect possession of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of securities or title to properties, by contract or otherwise.

"**EBITDA**" means, with respect to any JV Cos Group Company, the earnings before interest, income taxes, depreciation and amortization. If the subject JV Cos Group Company is in operation for less than a full fiscal year, such EBITDA shall be annualized as if that JV Cos Group Company has been in operation for a full fiscal year. For the avoidance of doubt, business taxes and value added taxes (if applicable) shall be deducted for the calculation of the EBITDA and any extraordinary, non-cash or non-recurring revenues shall be explicitly excluded from the EBITDA. EBITDA shall be assumed to be zero if the calculated amount is less than zero.

"**Encumbrance**" means and includes, without limitation, any interest or equity of any person (including, without limitation to any right to acquire, option or right of pre-emption) or any mortgage, pledge, lien, option, charge, assignment, hypothecation, contractor's lien, or other agreement or arrangement which has the same or a similar effect to the granting of security or a security interest over or in the relevant property.

"**Existing Projects**" shall have the meaning ascribed to it under the Original Investment Agreement.

"**Force Majeure Event**" means (a) any natural disaster such as typhoon, earthquake and seaquake, epidemic, fire, war, riot, strike, lockout (excluding any riot, strike or lockout initiated directly or indirectly by any Party), terrorism attack or expropriation or mandatory acquisition by any Government Entity, that (i) causes a material adverse impact on the conditions and operations of the JV Cos Group Companies (taken as a whole); AND (ii) directly causes a specific provision of this Agreement to be unable to be performed and such non-performance is not remedied in a timely manner, and/or (b) any change in laws, regulations, government policies or government orders (such policies and orders shall

be issued by a Government Entity in written form and shall be publicly available) applicable to this Agreement that renders the fulfillment of any of the conditions or obligations hereunder illegal.

"**Government Approval**" means any consent, approval, authorization, waiver, permit, grant, franchise, concession, license, ruling, judgment, decree, exemption or order of, registration, certificate, declaration, filing, report, notice, right or privilege by, to, or with any Government Entity.

"**Government Entity**" means

(a) the government of any jurisdiction (or any political or administrative subdivision thereof), whether provincial, state or local, and any department, ministry, agency, instrumentality, court, central bank or other authority thereof, including without limitation any entity directly or indirectly owned or controlled thereby;

(b) any public international organization or supranational body (including without limitation the European Union) and its institutions, departments, agencies and instrumentalities; and

(c) any quasi-governmental or private body or agency lawfully exercising, or entitled to exercise, any administrative, executive, judicial, legislative, regulatory, licensing, competition, tax or other governmental or quasi-governmental authority.

"**Government Official**" means any officer, employee or representative of a Government Entity (including without limitation, for purposes of this definition, any entity or enterprise owned or Controlled by a government), any Person acting in an official capacity for or on behalf of any such Government Entity, or any candidate for political office or an person acting on his or her behalf.

"**Hong Kong**" means the Hong Kong Special Administrative Region of the People's Republic of China.

"**IA Investor Material Breach**" shall have the meaning ascribed to the term "Investor Material Breach" under the Investment Agreement.

"**IA Material Breach**" shall have the meaning ascribed to the term "Material Breach" under the Investment Agreement.

"**Indebtedness**" means any indebtedness for or in respect of:-

(a) moneys borrowed;

(b) any amount raised by acceptance under any acceptance credit facility;

(c) any amount raised pursuant to any note purchase facility or the issue of bonds, notes, debentures, loan stock or any similar instrument;

(d) the amount of any liability in respect of any lease or hire purchase contract which would be treated as a finance or capital lease;

(e) receivables sold or discounted (other than any receivables to the extent they are sold on a non-recourse basis);

(f) any amount raised under any other transaction (including any forward sale or purchase agreement) having the commercial effect of a borrowing;

(g) any derivative transaction entered into in connection with protection against or benefit from fluctuation in any rate or price (and, when calculating the value of any derivative transaction, only the marked to market value shall be taken into account);

(h) any counter-indemnity obligation in respect of a guarantee, indemnity, bond, standby or documentary letter of credit or any other instrument, in each case, issued by a bank or financial institution; and

(i) the amount of any liability in respect of any guarantee or indemnity for any of the items referred to in paragraphs (a) to (h) above.

"**Indemnifiable Loss(es)**" means, with respect to any Person, any action, cost, damage, disbursement, expense, Liability, loss, deficiency, diminution in value, obligation, penalty or settlement of any kind or nature as recognized by the Parties or HKIAC. Notwithstanding anything to the contrary provided in the preceding sentence, "**Indemnifiable Loss(es)**" shall include, but shall not be limited to, (i) interest or other costs, penalties, legal, accounting and other professional fees and expenses reasonably incurred in the investigation, collection, prosecution or defense of claims and amounts paid in settlement, that have been imposed on or otherwise incurred or suffered by such Person; and (ii) any Taxes that have been payable by such Person by reason of the indemnification of any Indemnifiable Loss hereunder, other than Taxes that would have been payable notwithstanding the event giving rise to indemnification.

"**Investor Material Breach**" means the occurrence of any of the following at any time:-

(a) a breach of any provision of Section 2 (JV Cos Restructuring), Section 4 (Representations and Warranties) by the Investor that is:-

(i) not capable of remedy; or

(ii) a second breach within eighteen (18) months of a previous breach (that is capable of remedy); or

(iii) capable of remedy but not remedied within the cure period (if any) as expressly provided under the relevant Transaction Document,

in the case of items (i) and (ii) above, such breach has a negative monetary impact of at least RMB5,000,000 on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the JV Co 4 Group Companies taken as a whole; or

(b) a default under Section 1 (JV Co 4 Investment Commitment) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 3.3 (Reserved Matters) of Exhibit 3.7 (JV Co 4 Related Provisions) or Section 4 (Transfer Restrictions) of Exhibit 3.7 (JV Co 4 Related Provisions) by the Investor, subject to the relevant cure period provided herein.

"**IRC**" means U.S. Internal Revenue Code of 1986 (as amended from time to time).

"**JV Co 1 Group**" means JV Co 1 and its direct and indirect Subsidiaries.

"**JV Cos**" means JV Co 1, JV Co 2, JV Co 3 and JV Co 4, collectively; and "**JV Co**" means any of them.

"**JV Cos Group Companies**" means, collectively, JV Co 1, JV Co 2, JV Co 3, JV Co 4 and their respective direct or indirect Subsidiaries (including any company that would become a Subsidiary upon completion of the Restructuring) and "**JV Cos Group Company**" means any one of them.

"**Key Management**" means the chief executive officer, the chief financial officer, the chief operation officer, the general manager and the head of each department of JV Co 4 and other JV Co 4Group Companies.

"**Liability**" or "**Liabilities**" means, with respect to any Person, liabilities owed by such Person of any nature, whether accrued, absolute, contingent, fixed or otherwise, direct or indirect, actual or consequential, or whether known or unknown, and whether due or to become due or otherwise.

"**LIBOR**" means, in relation to any loan:

(a) the applicable Screen Rate as of 10:00 a.m. on the day falling two (2) days before the drawdown date of that loan for US Dollars and for a period equal in length to the interest period of that loan and, if any such rate is below zero, LIBOR will be deemed to be zero; or

(b) (if no Screen Rate is available), a rate to be separately agreed upon by the Shareholders.

"**LTV Ratio**" of JV Co 1 means the ratio (expressed as a percentage), as of the date of determination, of:

(a) the aggregate amount of all obligations of JV Co 1 Group for or in respect of Borrowings but deducting the aggregate amount of Cash and Cash Equivalent Investments held at such time by the JV Co 1 Group (the "**Total Debt**"); to

(b) the fair market value of the JV Co 1 Group determined according to the procedures set forth in Section 3.13(b) (Dissolution Exit) (assuming the principal of the entrustment loans extended to the Shareholders pursuant to this Agreement and the interest accrued thereon have been repaid in full), *mutatis mutandis* (the "**FMV**"); and for the avoidance of doubt, FMV shall refer to the enterprise value of the JV Co 1 Group.

provided that, (i) if, at the time of calculation of the LTV Ratio, JV Co 1 does not, in the aggregate, directly or indirectly, own 100% of the ownership interests in any Project, then solely for the purposes of calculating the LTV Ratio, the Total Debt with respect to such Project shall be decreased to an amount equal to the product of the then Total Debt with respect to such Project times JV Co 1's ownership interest percentage in such Project, and the FMV with respect to such Project shall be decreased to an amount equal to the product of the then FMV with respect to such Project times JV Co 1's ownership interest percentage in such Project; and (ii) the FMV shall be determined on an expedited basis so as to ensure that the distribution of Available Cash can take place within 15 Business Days after the Ad hoc Distribution Cut-off Date pursuant to Section 2.1(b) to the extent such distribution is applicable pursuant to Section 2.1(b).

"**Material Breach**" means the occurrence of any of the following at any time:-

(a) A breach of any provision of Section 4 (Representations and Warranties), Section 2.3(a) (General Compliance) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 2.3(d) (Additional Anti-Bribery Covenants) of Exhibit 3.7 (JV Co 4 Related Provisions) by Vianet that is:-

(i) not capable of remedy; or

(ii) a second breach within eighteen (18) months of a previous breach (that is capable of remedy); or

(iii) capable of remedy but not remedied within the cure period (if any) as expressly provided under the relevant Transaction Document,

in the case of items (i) and (ii) above, such breach has a negative monetary impact of at least RMB5,000,000 on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the JV Co 4 Group Companies taken as a whole; or

(b) a default under Section 2 (JV Cos Restructuring) (including without limitation the failure on the Part of Vianet to duly approve and/or execute the distribution of Available Cash in accordance with Section 2.1 (JV Co 1 Restructuring)), Section 1 (JV Co 4 Investment Commitment) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 2.3(b) (FCPA) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 2.3(e) (Audit Rights) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 3.3 (Reserved Matters) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 3.5 (Information and Inspection Rights of Investor) of Exhibit 3.7 (JV Co 4 Related Provisions), Section 4 (Transfer Restrictions) of Exhibit 3.7 (JV Co 4 Related Provisions), or Section 3(III) (JV Co 4 Exit) by VNET or Vianet (as applicable), subject to the relevant cure period provided herein; or

(c) a Misconduct Event.

"**Misconduct Event**" means the occurrence of any of the following at any time:-

(a) any of Vianet, the JV Co 4 Group Companies, their Affiliates, or any of their employees, directors or agents (excluding (x) the Investor Directors, and (y) any agent engaged by the Investor):-

(i) having committed fraud, wilful misconduct or negligence; or

(ii) having committed misappropriation, theft or conversion of, or with respect to, any funds, revenues, assets, proceeds or payments,

under any of the Transaction Documents, or otherwise in relation to any JV Co 4 Group Company, provided that, an event in respect of an employee, director or agent (for the avoidance of doubt, excluding the Investor Directors and any agent engaged by the Investor):-

(iii) under paragraph (a)(i) above, the event or a series of related or similar events has a negative monetary impact of at least RMB1,000,000 (RMB5,000,000 for negligence) on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the JV Co 4 Group Companies taken as a whole; or

(iv) under paragraph (a)(ii) above, the event has occurred twice where the first event has a negative monetary impact of at least RMB400,000 and the second event (whether or not it relates to the same employee, director or agent) has a monetary impact of RMB40,000, or where two events have occurred with an aggregate negative monetary impact of RMB440,000 or more on the business, prospects, operations, assets, Liabilities, results of operations or conditions (financial or otherwise) of the JV Co 4 Group Companies taken as a whole; or

(b) Vianet has committed a crime, or is subject to any criminal detention for a period longer than forty (40) days or administrative detention for a period longer than thirty (30) days, and which

detention causes loss or damage (including any loss of reputation) to any of the JV Co 4 Group Companies.

"**Net Cash**" means □□□ as calculated pursuant to Schedule 3 to Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap).

"**Order**" means any writ, judgment, decree, injunction, award or similar order of any Government Entity (in each case whether preliminary or final).

"**Person**" means any natural person, limited liability company, joint stock company, joint venture, partnership, enterprise, trust, unincorporated organization or any other entity or organization.

"**PRC**" or "**China**" means the People's Republic of China, solely for purposes of this Agreement, excluding Hong Kong, the Macau Special Administrative Region and Taiwan.

"**Project**" means any data center project invested, acquired and developed by any JV Co or any other JV Cos Group Companies, and "**Projects**" means all of them.

"**Project Company**" shall have the meaning ascribed to it under the Original Investment Agreement.

"**Related Party**" means with respect to any specified Person, any Person (a) that is a "connected person" of such Person as defined in the U.S Securities Act of 1933 and the U.S. Securities Exchange Act of 1934, or (b) whose assets, or a portion thereof, are consolidated with its net earnings, or (c) over which it or any of the Persons described in (a) and (b) above exercises Control or significant influence through voting, position, ownership, contract or otherwise.

"**Representatives**" means, with respect to a Person, that Person's senior managers, directors, accountants, counsel, investment bankers, financial advisors, agents and other representatives.

"**RMB**" means Renminbi, the lawful currency of the PRC.

"**Screen Rate**" means the London interbank offered rate administered by ICE Benchmark Administration Limited (or any other person which takes over the administration of that rate) for US Dollars and a period of six (6) months displayed on page LIBOR01 or LIBOR02 of the Reuters screen (or any replacement Reuters page which displays that rate), or on the appropriate page of such other information service which publishes that rate from time to time in place of Reuters. If such page or service ceases to be available, the Shareholders may specify another page or service displaying the relevant rate.

"**Securities**" means, with respect to any Person, such Person's capital stock, membership interests, partnership interests, registered capital, joint venture or other ownership interests or any options, warrants or other Securities that are directly or indirectly convertible into, or exercisable or exchangeable for, such capital stock, membership interests; partnership interests, registered capital, joint venture or other ownership interests (whether or not such derivative Securities are issued by such Person).

"**Shareholding Percentage**" means, with respect to any given JV Co, the ratio of the number of the issued shares held by a Shareholder in such JV Co as at a certain date to the total number of the issued shares of such JV Co as at the same date.

"**Subsidiary**" means, with respect to any given Person, any other Person that is not a natural person and that is directly or indirectly Controlled by such given Person.

"**Tax**" or "**Taxes**" means any national, provincial or local tax, assessment or duty on or in relation to any income, sales and use, excise, franchise, real and personal property, gross receipt, capital stock, production, business and employment, payroll, severance or withholding tax or any other type of tax, assessment or custom duty imposed by any Government Entity, any interest, tax penalties and other penalties (civil or criminal) related thereto or to the nonpayment thereof, and any loss or Tax Liability incurred in connection with the determination, settlement or litigation of any Liability arising therefrom.

"**Transaction Documents**" means this Agreement, the JV Co 4 Articles, constitutional documents of other JV Co 4 Group Companies, the JV Co 4 Master Service Agreements, the JV Co 4 Sub-Contracting Agreements and any material agreement, contract, deed or other documents in connection with this Agreement or the Transactions contemplated hereby.

"**Transfer**" means any direct or indirect transfer (including but not limited to transfer of holding companies), sale, assignment, pledge, hypothecation, encumbrance, gift or other disposition, whether voluntary or by operation of law, of all or any share or other securities of a company or entity.

"**Treasury Regulations**" means the U.S. federal income tax laws and regulations issued pursuant to IRC.

"**US$**" and "**US Dollars**" means the lawful currency of the United States of America.

"**US GAAP**" means the generally accepted accounting principles in the United States of America from time to time.

2. The following terms are defined in the following sections of this Agreement:-

Term	Section
"**Ad hoc Distribution Cut-off Date**"	Section 2.1(b)
"**Agreement**"	Preamble
"**Annual Business Plan and Budget**"	Exhibit 3.7
"**Annual Distribution Cut-off Date**"	Section 2.1(b)(iv)
"**Available Cash**"	Section 2.1(c)(i)
"**Capital Call**"	Exhibit 3.7
"**Capital Call Event**"	Exhibit 3.7
"**Capital Call Notice**"	Exhibit 3.7
"**Cash Compensation**"	Section 2.2(a)(iii)(2)
"**Closing**"	Exhibit 3.7
"**Closing Date**"	Exhibit 3.7
"**Confidential Information**"	Section 5.2(a)
"**Conflicted Shareholder**"	Exhibit 3.7
"**Disclosing Party**"	Section 5.2(a)
"**Dispute**"	Section 8.4(a)
"**Dissolution Exit**"	Section 3.13(b)
"**Dissolution Exit Option**"	Section 3.13(a)
"**Dissolution Notice**"	Section 3.13(a)
"**Distribution Cut-off Date**"	Section 2.1(b)
"**Distribution SPA**"	Section 2.2(a)(ii)

Term	Section
"**Employment Contract**"	Exhibit 3.7
"**Estimated Cash Compensation**"	Section 2.2(a)(iv)(A)
"**Estimated JV Co 2/3 Net Cash**"	Section 2.2(a)(iv)(A)
"**Estimated Project Cost**"	Section 2.2(a)(iv)(A)
"**Exit Put/Call Exercise Period**"	Section 2.1(e)
"**First Distribution Cut-off Date**"	Section 2.1(b)(iii)
"**First Re-scheduled Meeting**"	Exhibit 3.7
"**Funding Shareholder**"	Exhibit 3.7
"**HKIAC**"	Section 8.4(a)
"**HK SPVs**"	Section 2.2(a)(ii)
"**Incorporation Costs**"	Section 3.5(b)
"**Investment Agreement**"	Recitals
"**Investor**"	Preamble
"**Investor Directors**"	Exhibit 3.7
"**JV Co 1**"	Recitals
"**JV Co 1 Restructuring Action**"	Section 2.1(b)
"**JV Co 2**"	Recitals
"**JV Co 2 Distribution Equation**"	Section 2.2(a)(iii)
"**JV Co 2/3 Net Cash**"	Section 2.2(a)(iii)(1)
"**JV Co 3**"	Recitals
"**JV Co 4**"	Section 3.1(a)
"**JV Co 4 Articles**"	Section 3.2
"**JV Co 4 Board**"	Exhibit 3.7
"**JV Co 4 Closing**"	Section 3.1(b)
"**JV Co 4 Establishment Date**"	Section 3.1(c)
"**JV Co 4 Establishment Transactions**"	Section 3.1(b)
"**JV Co 4 Group**"	Exhibit 3.7
"**JV Co 4 Group Company(ies)**"	Exhibit 3.7
"**JV Co 4 Master Service Agreement**"	Section 3.9
"**JV Co 4 Sub-Contracting Agreement**"	Section 3.10
"**Less Favored Shareholder**"	Section 2.2(a)(iii)
"**More Favored Shareholder**"	Section 2.2(a)(iii)
"**Non-funding Shareholder**"	Exhibit 3.7
"**Non-Transferring Shareholder**"	Exhibit 3.7
"**Notice of Escalation of Dispute**"	Section 8.4(a)
"**Original Investment Agreement**"	Recitals
"**Part(ies)**"	Preamble
"**Permitted Transfer**"	Exhibit 3.7
"**PFIC**"	Section 5.3

Term	Section
"**Project Cost**"	Section 2.2(a)(iii)
"**PropCo 2**"	Section 3.1(a)
"**Receiving Party**"	Section 5.2(a)
"**Related Party Transaction**"	Exhibit 3.7
"**Requesting Shareholder**"	Exhibit 3.7
"**Reserved Matters**"	Exhibit 3.7
"**Restructuring Auditor**"	Section 2.1(c)(ii)(A)
"**ROFO Completion Period**"	Exhibit 3.7
"**ROFO Negotiation Period**"	Exhibit 3.7
"**Rules**"	Section 8.4(a)
"**Sale Notice**"	Exhibit 3.7
"**SEC**"	Section 5.2(a)
"**Second Re-scheduled Meeting**"	Exhibit 3.7
"**Shareholder(s)**"	Preamble
"**Shareholder's Commitment Cap**"	Exhibit 3.7
"**Shareholder's Subscription Price**"	Exhibit 3.7
"**Subject Shares**"	Exhibit 3.7
"**Tag-Along Notice**"	Exhibit 3.7
"**Total JV Co 4 Commitments**"	Exhibit 3.7
"**Trade Sale**"	Section 3.12
"**Transaction**"	Recitals
"**Transferring Shareholder**"	Exhibit 3.7
"**Vianet**"	Preamble
"**Vianet Call Notice**"	Section 2.1(e)(ii)
"**Vianet Call Option**"	Section 2.1(e)(ii)
"**Vianet Call Price**"	Section 2.1(e)(ii)
"**Vianet Call Shares**"	Section 2.1(e)(ii)
"**Vianet Commitment Cap**"	Exhibit 3.7
"**Vianet Directors**"	Exhibit 3.7
"**Vianet Offered Rental**"	Section 3.8(a)
"**Vianet Project Distribution Amount**"	Section 2.2(a)(iii)
"**Vianet Subscription Price**"	Exhibit 3.7
"**Vianet Subscription Shares**"	Exhibit 3.7
"**VNET**"	Preamble
"**WP**"	Preamble
"**WP Commitment Cap**"	Exhibit 3.7
"**WP Project Distribution Amount**"	Section 2.2(a)(iii)
"**WP Put Notice**"	Section 2.1(e)(i)
"**WP Put Option**"	Section 2.1(e)(i)

Term	Section
"**WP Put Price**"	Section 2.1(e)(i)
"**WP Put Shares**"	Section 2.1(e)(i)
"**WP Subscription Price**"	Exhibit 3.7
"**WP Subscription Shares**"	Exhibit 3.7

Exhibit 2.2(a)(ii)

Form of JV Co 2 Distribution SPA

Exhibit 2.2(a)(vi)

JV Co 2 Asset Distribution Roadmap

Exhibit 3.7

JV Co 4 Related Provisions

1. JV CO 4 INVESTMENT COMMITMENT

1.1 Total Equity Commitment. Unless otherwise provided herein or agreed by the Shareholders, the total capital commitment made by each Shareholder in JV Co 4 shall be capped at the aggregate amount of the Available Cash distributed by JV Co 1 to such Shareholder pursuant to Section 2.1 (JV Co 1 Restructuring) of the Agreement (for the avoidance of doubt, the Available Cash set off against the payables due from Vianet (or its Affiliates) shall nevertheless be deemed as having been distributed to Vianet) (the "**Vianet Commitment Cap**" or the "**WP Commitment Cap**", as applicable; the Vianet Commitment Cap together with the WP Investor Commitment Cap, the "**Total JV Co 4 Commitments**" and individually, the "**Shareholder's Commitment Cap**"). Immediately upon each Closing (as defined below), unless otherwise provided herein or agreed by the Shareholders in writing, the Shareholding Percentages of Vianet and WP in JV Co 4 shall be 51% and 49% respectively.

1.2 Capital Call. Upon occurrence of any Capital Call Event (as defined below), the JV Co 4 Board may serve a written notice (the "**Capital Call Notice**") simultaneously to each Shareholder in form and substance as set forth in Appendix 1.2 (Form of Capital Call Notice) to require the Shareholders to contribute capital to JV Co 4 (each, a "**Capital Call**"); *provided that*:

(a) the Capital Call Notice shall state the exact amount of capital called from each Shareholder; *provided that* the aggregate amount of capital that JV Co 4 may call from each Shareholder shall not exceed the relevant Shareholder's Commitment Cap unless otherwise agreed by both Shareholders in writing;

(b) the Capital Call Notice shall also state the exact amount of subscription price that each Shareholder shall pay to JV Co 4 as at the relevant Closing, the corresponding number of the subscription shares that JV Co 4 shall authorize, allot and issue to such Shareholder as at the relevant Closing and the specific date to complete such Closing by each Shareholder; and the per share subscription price payable for any subscription shares provided in the respective Capital Call Notice by each Shareholder shall be the same;

(c) unless otherwise agreed by the Shareholders, the relative proportion of the amount of subscription price payable by Vianet and WP for each Closing shall be 51:49; and

(d) the designated date to complete the Closing provided in each Capital Call Notice shall be at least ten (10) Business Days after the date of such Capital Call Notice (or such other earlier date when the relevant amount payable under the Capital Call Event become due) but no later than one (1) month after the date of such Capital Call Notice.

The Shareholders shall simultaneously complete the applicable Closing on the designated date specified in the relevant Capital Call Notice pursuant to Section 1.3 (JV Co 4 Closing) of this Exhibit 3.7 (JV Co 4 Related Provisions).

"**Capital Call Event**" means any of the following events:

(a) there occurs any amount payable by JV Co 4 and/or any of its Subsidiaries for acquiring new Project as approved by the Shareholders; and

(b) any other events as mutually agreed in writing by the Shareholders.

1.3 JV Co 4 Closing.

(a) Issuance and Subscription of Shares.

(i) At each Closing Date (as defined below), against Vianet's full fulfilment of its obligations under Section 1.3(b)(ii)(B) of this Exhibit 3.7 (JV Co 4 Related Provisions), JV Co 4 shall authorize, allot and issue to Vianet, and Vianet shall subscribe for such number of fully paid shares of JV Co 4 provided in the corresponding Capital Call Notice (each, the "**Vianet Subscription Shares**"), for such total subscription price provided in the corresponding Capital Call Notice (each, the "**Vianet Subscription Price**").

(ii) At each Closing Date (as defined below), against WP's full fulfilment of its obligations under Section 1.3(b)(ii)(A) of this Exhibit 3.7 (JV Co 4 Related Provisions), JV Co 4 shall authorize, allot and issue to WP, and WP shall subscribe for such number of fully paid shares of JV Co 4 provided in the corresponding Capital Call Notice (each, the "**WP Subscription Shares**"), for such total subscription price provided in the corresponding Capital Call Notice (each, the "**WP Subscription Price**", together with the Vianet Subscription Price, each a "**Shareholder's Subscription Price**").

(b) Closing.

(i) Each closing of the issuance and subscription of the relevant WP Subscription Shares and the relevant Vianet Subscription Shares (each, the "**Closing**") shall take place concurrently, remotely via the exchange of documents and signatures on the designated date to complete such Closing provided in corresponding Capital Call Notice to each Shareholder (the date on which each Closing occurs shall be each referred to as the "**Closing Date**").

(ii) On each Closing Date, (A) WP shall pay the US Dollar amount equivalent to the corresponding WP Subscription Price and (B) Vianet shall pay the US Dollar amount equivalent to the corresponding Vianet Subscription Price in immediately available funds in full to the designated bank account of JV Co 4 pursuant to the relevant Capital Call Notice.

(iii) On each Closing Date, JV Co 4 shall deliver to WP and Vianet, respectively, against the full payment of (to the extent applicable) the relevant subscription price by the relevant Shareholder at the relevant Closing Date pursuant to item (ii) above:

(A) the original of the share certificates for the corresponding WP Subscription Shares and the corresponding Vianet Subscription Shares, respectively; and

(B) a photocopy of the duly updated Register of Members of JV Co 4, evidencing WP as the holder of the corresponding WP Subscription Shares and Vianet as the holder of the corresponding Vianet Subscription Shares, certified as a true copy by a director or the registered office provider of JV Co 4.

1.4 Failure to Fund.

(a) Failure to Fund. If any Shareholder (the "**Non-funding Shareholder**") fails to pay all or part of its own Shareholder's Subscription Price to JV Co 4 when due as described in Section 1.3 (JV Co 4 Closing) of this Exhibit 3.7 (JV Co 4 Related Provisions), then: (i) such Non-funding Shareholder shall have a period of thirty (30) days or any extension thereof mutually agreed upon by the Shareholders to cure its breach; and (ii) if such breach is not cured within the foregoing thirty (30)-day period, such Non-funding Shareholder shall pay to the JV Co 4 a late payment interest on the overdue amount at a daily interest rate of 0.05% and, at the election of any of the other Shareholder (the "**Funding Shareholder**"), Section 1.4(b) (Funding Shareholder's Option) of this Exhibit 3.7 (JV Co 4 Related Provisions) shall apply.

(b) Funding Shareholder's Option. The Funding Shareholder may choose, in its sole discretion, to fund part of or the entire amount of the Non-funding Shareholder's remaining Shareholder's Subscription Price to JV Co 4 in lieu of the Non-funding Shareholder; provided, however, that:-

(i) the Funding Shareholder shall have duly paid its own Shareholder's Subscription Price to JV Co 4; and

(ii) any other remedies or rights available to the Funding Shareholder under this Agreement or other Transaction Documents shall not be limited or prejudiced in any respect.

For the avoidance of doubt, after the Funding Shareholder actually pays the additional amount, (x) the Non-funding Shareholder may not cure its non-funding breach by providing additional funding; and (y) the late payment interest provided in Section 1.4(a) (Failure to Fund) of this Exhibit 3.7 (JV Co 4 Related Provisions) shall cease to accrue.

(c) Dilution. The Non-funding Shareholder's Shareholding Percentage in JV Co 4 shall be diluted accordingly.

2. ADDITIONAL COVENANTS

2.1 Further Assurances. The Parties shall act in good faith to take any and all actions necessary or advisable to consummate the Transactions contemplated hereby, including without limitation, to (a) procure that each of the JV Co 4 Group Companies and their respective directors, officers and employees shall fulfill their respective obligations under this Agreement and other Transaction Documents; and (b) provide all reasonably necessary and advisable assistance to the JV Co 4 Group Companies and WP in obtaining all applicable Government Approvals, and complete the Transactions.

2.2 Disclosure of Related Party Transactions. Without prejudice to Section 3.3 (Reserved Matters) of this Exhibit 3.7 (JV Co 4 Related Provisions), each Shareholder (the "**Conflicted Shareholder**") hereby covenants to the other Shareholder that any and all transactions (each, a "**Related Party Transaction**") between JV Co 4, on one hand, and the Conflicted Shareholder or its Affiliates or a Related Party, on the other hand, from and after the date hereof will be on an "arms-length" basis, in compliance with Applicable Laws and listing rules and shall be disclosed to the other Shareholder in writing at the end of each calendar quarter. The Shareholders acknowledge and agree that in relation to any dispute arising from and/or in connection with any Related Party Transaction, the Conflicted Shareholder shall, and shall procure its nominee directors at any JV Co 4 Group Company to, abstain from voting on any matter relating to such dispute (including in respect of the enforcement by any JV Co 4 Group Company of any of its rights, the defense by any JV Co 4 Group Company of any claims against it, and the settlement of any rights or claims).

2.3 Compliance.

(a) General Compliance. The Shareholders shall ensure that all activities with respect to JV Co 4 and their respective direct or indirect Subsidiaries (including any company that would become a Subsidiary upon completion of the Transaction) (the "**JV Co 4 Group Companies**" or the "**JV Co 4 Group**", and "**JV Co 4 Group Company**" means any one of them) and the Projects of JV Co 4 shall be conducted in compliance with respective Applicable Law (including without limitation, the Applicable Laws governing acquisition of land use rights, bidding, auction and listing, and anti-corruption and bribery etc.).

(b) FCPA. Without limiting the generality of Section 2.3(a) (General Compliance) of this Exhibit 3.7 (JV Co 4 Related Provisions), Vianet shall ensure that none of Vianet/Vianet's Affiliates (when acting on behalf of the JV Co 4 Group Companies), the Investor shall ensure that none of the Investor/the Investor's Affiliates (when acting on behalf of the JV Co 4 Group Companies), and the Shareholders shall ensure that none of the JV Co 4 Group Companies, the JV Co 4 Group Companies' Affiliates and the JV Co 4 Group Companies directors, officers, agents, employees, Representatives and any other Person associated with or acting on behalf of any of the foregoing (for the purpose of this Section 2.3 (Compliance) of this Exhibit 3.7 (JV Co 4 Related Provisions), any reference to an Affiliate of the Investor shall not include any Affiliate of the Investor that is an investment portfolio entity invested by the Investor or any of its Affiliates):-

(i) makes, gives, offers, promises, or authorizes any financial or other advantage (including any payment, loan, gift or transfer of anything of value), directly or indirectly, either (A) to or for the use or benefit of any Government Official, political party or official thereof, any candidate for political office or another person at the request or with the assent or acquiescence of any of the foregoing or (B) knowing or being aware of a high probability that all or a portion of such financial or other advantage (including any payment, loan, gift or transfer of anything of value) would be offered, given or promised, directly or indirectly, to or for the use or benefit of any Government Official, political party, official thereof, candidate for political office, or another person at the request or with the assent or acquiescence of any of the foregoing, for the purpose of:-

(A) (x) influencing any act or decision of such Government Official, political party, party official, or candidate in his or its official capacity; (y) inducing such Government Official, political party, party official or candidate to do or omit to do any act in violation of the lawful duty of such Government Official, political party, party official or candidate; or (z) securing any improper advantage; or

(B) inducing such Government Official, political party, party official, or candidate to use his or its influence with any Government Entity to affect or influence any act or decision of such Government Entity

in order to assist any of the JV Co 4 Group Companies and the Shareholders in obtaining, retaining or soliciting business; or

(ii) engage in any other conduct which would violate the Anti-Bribery Laws.

(c) Licenses and Permits. Except as otherwise provided in this Agreement, Vianet shall be responsible for obtaining all and any applicable license, permit and regulatory approval as required for JV Co 4 and other JV Co 4 Group Companies to operate their respective businesses on a standalone basis, including without limitation, serving third party wholesale data center customers. If such license, permit and regulatory approval cannot be obtained for reasons including but not limited to foreign ownership threshold under applicable laws, Vianet shall (and shall cause its Affiliates to) make alternative arrangements satisfactory to the Shareholders to achieve the same commercial outcome. The Investor shall provide commercially reasonable assistance. The Shareholders shall discuss in good faith as to the sharing of any direct cost associated with such alternative arrangements.

(d) Additional Anti-Bribery Covenants. The Shareholders shall procure that each JV Co 4 Group Company shall:-

(i) on or before 30 days after the establishment of JV Co 4 and other JV Co 4 Group Companies, adopt, maintain, update and enforce adequate policies and procedures designed to achieve compliance with Anti-Bribery Laws by the JV Co 4 and other JV Co 4 Group Companies and their Representatives, and these policies and procedures shall: (A) fulfil all requirements imposed by the Anti-Bribery Laws and other Applicable Laws; (B) be in line with customary international best practices applicable to a similarly-situated company (taking into account laws and regulations applicable to companies in which the Investor has made an investment of this size and nature); and (C) be substantially similar to the Investor's anti-bribery policies or as otherwise agreed to between the Shareholders;

(ii) adopt such further policies and procedures as shall be reasonably required by the JV Co 4 Group Company and its direct or indirect Subsidiaries to fulfil its and their own legal and regulatory compliance obligations;

(iii) maintain books, records and accounts that, in reasonable detail, accurately and fairly reflect all of its transactions and dispositions of its assets, and

shall maintain a system of internal accounting controls sufficient to provide reasonable assurances that its transactions are executed, its funds are expended, and access to its assets is permitted, only in accordance with its management's authorization;

(iv) provide anti-bribery trainings at least annually to its directors, officers, agents, employees, Representatives and any other Person associated with or acting on behalf of the JV Co 4 Group Companies, including but not limited to those who deal with relationships with government agencies or state-owned enterprises; and

(v) adopt and maintain policies and procedures to ensure the prompt reporting of violations of law or fraud within the JV Co 4 Group Company and immediately report to the Shareholders such information.

(e) Audit Rights. Without limiting the generality of Section 3.5 (Information and Inspection Rights of Investor) of this Exhibit 3.7 (JV Co 4 Related Provisions) and in case in relation to the matters set out in Section 2.3(a) (General Compliance), Section 2.3(b) (FCPA) and Section 2.3(d) (Additional Anti-Bribery Covenants) of this Exhibit 3.7 (JV Co 4 Related Provisions), the Shareholders shall procure that each JV Co 4 Group Company shall immediately answer in reasonable detail any written or oral inquiry by any of the Shareholders (the "**Requesting Shareholder**"), and to facilitate the interview of staff employed by the JV Co 4 Group Company at any reasonable time specified by the Requesting Shareholder. The Shareholders shall procure that the Requesting Shareholder, and any independent accountants appointed by any of the Shareholders, shall have the right to review and audit the JV Co 4 Group Companies' books, records, accounts and internal accounting controls, and that the JV Co 4 Group Companies shall provide to the Requesting Shareholder such analysis and reports with respect thereof as the Requesting Shareholder may direct. The Shareholders shall make all reasonable efforts to cooperate with the Requesting Shareholder's any such review, audit, analysis and report.

2.4 Branding. Subject to applicable laws and listing rules and such terms and conditions as mutually agreed upon by the Parties, VNET and Vianet will allow, and cause their respective Affiliates to allow, the JV Co 4 Group Companies to use the intellectual property right (including without limitation, any brands, business names, logos, trademarks and copyrights) of VNET, Vianet and their respective Affiliates. Notwithstanding the foregoing, the Shareholders hereby agree and acknowledge that the JV Co 4 Group Companies shall develop and build their own intellectual property rights (including without limitation, any brands, business names, logos, trademarks and copyrights) which are distinct from those of VNET, Vianet and their respective Affiliates.

2.5 Financing. The Shareholders shall use commercially reasonable efforts to use leverage on JV Co 4 and its Subsidiaries in order to maximize the economic returns of the Shareholders.

3. CORPORATE GOVERNANCE

3.1 Board and Officers. The Shareholders hereby agree that:-

(a) Directors and Supervisors.

(i) The board of each of JV Co 4 (the "**JV Co 4 Board**") and its Subsidiaries shall consist of five (5) directors, three (3) of which shall be appointed, removed or replaced (with or without cause) by Vianet (the "**Vianet Directors**") and the other two (2) of which shall be appointed, removed or replaced (with or without cause) by the Investor (the "**Investor Directors**"). A director appointed by Vianet shall be appointed as the Chairman of the board of JV Co 4 and its Subsidiaries, who shall not have any casting vote.

(ii) Notwithstanding the foregoing, if any Shareholder's Shareholding Percentage in JV Co 4 is diluted pursuant to the provisions of this Agreement or other Transaction Documents, such Shareholder's corporate governance rights with respect to JV Co 4 and its Subsidiaries shall be adjusted according to the resultant dilution such that the number of directors that it can appoint to the board of JV Co 4 and its Subsidiaries will remain directly proportional to its Shareholding Percentage in JV Co 4. For the avoidance of doubt, if either Shareholder holds more than 60% of the then issued shares in JV Co 4, the board of JV Co 4 shall be enlarged to consist of six (6) directors, four (4) of which shall be appointed, removed or replaced by such Shareholder and the other two (2) of which shall be appointed, removed or replaced by the other Shareholder.

(iii) Each onshore Subsidiary of JV Co 4 shall have two (2) supervisors, one (1) of which shall be appointed, removed or replaced (with or without cause) by Vianet; and the other one (1) of which shall be appointed, removed or replaced (with or without cause) by the Investor. To the extent permitted by Applicable Law, the general manager of an onshore Subsidiary of JV Co 4 shall act as the legal representative of such onshore Subsidiary of JV Co 4.

(b) Senior Executives. Either Shareholder may recommend suitable candidate for appointment as any of the senior executives of each of JV Co 4 and its Subsidiaries (including without limitation the roles of chief executive officer, chief financial officer and general manager of each JV Co 4 Group Company), subject to the approval of the board of directors of the relevant JV Co 4 Group Company. Notwithstanding the foregoing, (i) Vianet shall be entitled to nominate the general manager of each JV Co 4 Group Company, who shall be subject to the approval of the board of directors of JV Co 4; and (ii) the Investor shall be entitled to nominate the chief financial officer of JV Co 4 Group Company, who shall be subject to the approval of the board of directors of JV Co 4 and shall (A) have authority over any and all bank accounts of JV Co 4 Group Companies, (B) have any other rights to ensure that the Investor or the Investor Directors may exercise their respective rights in respect of the Reserved Matters, and (C) have responsibility for compliance, including but not limited to anti-corruption compliance, and authority to report directly to the board, including but not limited to making reports on anti-corruption compliance to the board on at least an annual basis; and (iii) each Shareholder may request to dismiss the legal representative or other Key Management of any JV Co 4 Group Company if such legal representative or Key Management commits any Misconduct Event and the Shareholders shall take any and all actions to effectuate any dismissal requested by the requesting Shareholder. The replacement for the dismissed legal representative or other Key Management of the applicable JV Co 4

Group Company shall be nominated and approved following the normal procedures for the nomination and approval of such position as provided in this Section 3.1(b) (Senior Executives) of this Exhibit 3.7 (JV Co 4 Related Provisions).

(c) Appointment. The Shareholders shall, and shall procure each JV Co 4 Group Company to, take any and all necessary actions to duly appoint the director(s) respectively selected by the Shareholders to the board of the relevant JV Co 4 Group Company pursuant to this Section 3 (Corporate Governance) of this Exhibit 3.7 (JV Co 4 Related Provisions), including adoption of the relevant shareholder or board resolutions and obtaining all necessary Governmental Approvals.

3.2 Board Meetings and Rights of Shareholders.

(a) Board Meetings. A board meeting of each JV Co 4 Group Company may be called by the Chairman of the board of the applicable JV Co 4 Group Company or any of the Investor Directors with a prior written notice to all the other directors of the applicable JV Co 4 Group Company specifying the date, time, venue and agenda for such board meeting. Such notice must be sent at least seven (7) days prior to the proposed board meeting or such shorter notice period as mutually agreed upon by all directors of JV Co 4. Except otherwise provided herein and subject to Section 3.3 (Reserved Matters) of this Exhibit 3.7 (JV Co 4 Related Provisions), resolutions of the board of each JV Co 4 Group Company shall be passed by a simple majority at a duly convened meeting.

(b) Quorum. The quorum of a board meeting of each JV Co 4 Group Company shall be four (4) directors present in person or by proxy.

The Shareholders shall use their respective commercially reasonable efforts to ensure that the director(s) respectively appointed by them attend the board meetings. If a quorum is not present within an hour from the time specified for a board meeting, such board meeting shall be re-scheduled and a notice specifying the date, time and venue of a re-scheduled board meeting (the "**First Re-scheduled Meeting**") must be sent to all the directors of the applicable JV Co 4 Group Company at least seven (7) days prior to the proposed First Re-scheduled Meeting or such shorter notice period as mutually agreed upon by all of the directors.

If at the First Re-scheduled Meeting after all the meeting notices have been duly served, a quorum is still not present within an hour from the specified time of the First Re-scheduled Meeting, the First Re-scheduled Meeting shall be further re-scheduled and another notice specifying the date, time and venue of a further re-scheduled board meeting (the "**Second Re-scheduled Meeting**") must be sent to all the directors of the applicable JV Co 4 Group Company at least seven (7) days prior to the proposed Second Re-scheduled Meeting or such shorter notice period as mutually agreed upon by all of the directors.

If at the Second Re-scheduled Meeting after all the meeting notices have been duly served, a quorum is still not present within an hour from the specified time of the Second Re-scheduled Meeting, those directors present shall be deemed a quorum and may transact the business for which the original board meeting was originally convened.

For the avoidance of doubt, the foregoing board meeting, the First Re-scheduled Meeting and the Second Re-scheduled Meeting shall be the same board meeting with the same meeting topics and agenda. A board meeting with a different topic or agenda shall be deemed as a separate board meeting and the foregoing provisions shall apply separately.

(c) Frequency. Subject to Section 3.2(a) (Board Meetings) of this Exhibit 3.7 (JV Co 4 Related Provisions), the board of each JV Co 4 Group Company shall meet not less than quarterly.

(d) Written Resolutions. Subject to Applicable Laws, anything which may be done by resolution of the directors of any JV Co 4 Group Company may, without a meeting and without any previous notice being required, be done by resolution in writing signed by (and thereby signifying their approval thereof) all such directors of the relevant JV Co 4 Group Company whose affirmative vote is necessary for passing a resolution at a duly convened meeting (counting all directors of the relevant JV Co 4 Group Company as present).

(e) Chairman. The Chairman shall act as the chairman at all meetings of the board of the applicable JV Co 4 Group Company at which the Chairman is present. In the absence of the Chairman, any other director designated by the Chairman shall be entitled to act as the chairman in his place at the meeting. If the Chairman fails to make such designation, a chairman shall be appointed or elected by a simple majority of the directors of the applicable JV Co 4 Group Company present at the meeting.

(f) Participation. The directors of each JV Co 4 Group Company may participate in any meeting of the board of the applicable JV Co 4 Group Company by means of such telephone, electronic or other communication facilities as permit all persons participating in the meeting to communicate with each other simultaneously and instantaneously, and participation in such a meeting shall constitute presence in person at such meeting. Any Investor Director may require an interpreter to be present at a board meeting at the cost of the relevant JV Co 4 Group Company.

(g) Annual Business Plan and Budgets. On or before 15 November of a given year, the JV Co 4 Board shall prepare an annual business plan and budget for JV Co 4 and its Subsidiaries for the succeeding year on the basis of the principles set out in Schedule C (each an "**Annual Business Plan and Budget**"), which shall include without limitation, the consolidated operating budget, budget of capital expenditures, and strategic plan for the JV Co 4 Group Companies for the succeeding fiscal year. The Annual Business Plan and Budget shall be drafted and discussed by all members of the JV Co 4 Board, and all comments from all such members shall be reflected therein. The Annual Business Plan and Budget drafted by the JV Co 4 Board shall be subject to review and approval by the shareholders meeting of JV Co 4, which approval shall be granted on or before 15 December of that given year when the applicable Annual Business Plan and Budget is presented to the shareholders meeting of JV Co 4 for review and approval. The first Annual Business Plan and Budget shall be submitted to and approved by the shareholders meeting of JV Co 4 as soon as practical prior to the establishment of JV Co 4.

(h) Rights of Shareholders. The shareholders of each JV Co 4 Group Company shall have the right to receive notice of, attend, speak and vote at any meeting of the

shareholders of the applicable JV Co 4 Group Company. The shareholders of the applicable JV Co 4 Group Company shall be able to vote according to their then ownership interests in the applicable JV Co 4 Group Company, with its voting percentage equal to their then shareholding percentage (on a fully diluted basis) in the applicable JV Co 4 Group Company. Except otherwise provided herein and subject to Section 3.3 (Reserved Matters) of this Exhibit 3.7 (JV Co 4 Related Provisions) and Applicable Laws, resolutions of the shareholders meeting of JV Co 4 shall be passed by a simple majority at a duly convened shareholders meeting.

3.3 Reserved Matters. Without any prejudice to the Investor's rights and interests hereunder, the Shareholders shall procure that no JV Co 4 Group Company shall, without the prior written consent of both the Shareholders (or if permitted under Applicable Laws, the unanimous approval of all directors of the board of a JV Co 4 Group Company expressly in respect of a specific Reserved Matter), take any of the actions set forth in Appendix 3.3 (the "**Reserved Matters**"), provided that, where the approval of one of the Shareholders has not been obtained, then at a meeting at which such matter is considered, such Shareholder shall, in such vote, have such number of votes as equal to the Shareholder who voted in favor of the resolution plus one (as applicable).

3.4 Key Management. The Shareholders shall: (i) procure that the chief executive officer (or general manager, as applicable) and the chief financial officer of each JV Co 4 Group Company enter into employment contracts with the applicable JV Co 4 Group Company in form and substance as unanimously approved by the JV Co 4 Board (each an "**Employment Contract**"); and (y) procure the department heads of each JV Co 4 Group Company (if any) enter into employment contracts with the applicable JV Co 4 Group Company, which employment contracts may vary, in form and substance, from the Employment Contract (including without limitation, in terms of non-solicitation and non-competition clauses); provided, however, that such variation shall be subject to unanimous approval by the of JV Co 4 Board. The Shareholders shall cause each member of Key Management shall:-

(a) be an employee of a JV Co 4 Group Company;

(b) not work, whether formally or informally, for any other Person that is not a JV Co 4 Group Company; and

(c) comply with the terms of his or her Employment Contract with the applicable JV Co 4 Group Company and the Applicable Laws.

3.5 Information and Inspection Rights of Investor. Subject to compliance with Applicable Laws and listing rules, the Investor shall be entitled to the information and inspection rights set forth in Appendix 3.5 (Investor's Information and Inspection Rights).

4. TRANSFER RESTRICTIONS

4.1 Restrictions on Transfer. Unless otherwise provided under this Agreement or other Transaction Documents, none of the Shareholders may Transfer its shares in JV Co 4 without the prior

written consent of the other Shareholder until the expiration of five (5) years following the establishment of JV Co 4.

4.2 Permitted Transfers. The restrictions on Transfer set forth in this Section 4 (Transfer Restrictions) of this Exhibit 3.7 (JV Co 4 Related Provisions) shall not apply to the following Transfers (each such Transfer, a "**Permitted Transfer**"):-

(a) Any Transfers by any Shareholder to one or more of its Affiliates; provided that (i) the Transfer otherwise complies with Section 4.6 (Deed of Adherence) of this Exhibit 3.7 (JV Co 4 Related Provisions) where applicable; (ii) in the event such transferee would no longer qualify as an Affiliate of such Shareholder, such transferee shall immediately Transfer the shares in JV Co 4 to such Shareholder or to an Affiliate of such Shareholder; and (iii) in the event of any such Transfer in accordance with this Section 4.2 (Permitted Transfers) of this Exhibit 3.7 (JV Co 4 Related Provisions), such Shareholder shall provide prompt notice of such Transfer to the other Shareholders and JV Co 4;

(b) Any Transfer of any share, equity or other interest in any direct or indirect shareholder or investor of WP; or

(c) Any Transfers by the relevant Shareholder(s) pursuant to Section 3(III) (JV Co 4 Exit) of the Agreement (unless otherwise provided under Section 3(III) (JV Co 4 Exit)).

4.3 Right of First Offer. Subject to Section 4.2 (Permitted Transfers) of this Exhibit 3.7 (JV Co 4 Related Provisions) and Section 3(III) (JV Co 4 Exit) of the Agreement:-

(a) Sale Notice. If a Shareholder (the "**Transferring Shareholder**") intends to Transfer all or any portion of the shares owned by such Transferring Shareholder (such Shares to be Transferred, the "**Subject Shares**") in JV Co 4, the Transferring Shareholder shall give a written notice (the "**Sale Notice**") to the other Shareholder (the "**Non-Transferring Shareholder**") offering to sell all (but not less than all) of the Subject Shares to the Non-Transferring Shareholder, which notice shall set forth the price on which the Transferring Shareholder is willing to sell the Subject Shares (and, if the Transferring Shareholder has received any proposal from a potential transferee for the Transfer of the Subject Shares, the terms and conditions of such proposal and the identity of such potential transferee). For a period of forty-five (45) days following the Non-Transferring Shareholder's receipt of such notice (the "**ROFO Negotiation Period**"), the Transferring Shareholder and the Non-Transferring Shareholder shall negotiate in good faith with each other the terms and conditions upon which such Non-Transferring Shareholder may acquire all (but not less than all) of the Subject Shares from the Transferring Shareholder. During the ROFO Negotiation Period, the Transferring Shareholder may not engage in any negotiation or discussion with any potential transferee with respect to the Subject Shares other than the Non-Transferring Shareholder.

(b) Completion Period. In the event the Transferring Shareholder and the Non-Transferring Shareholder reach an agreement with respect to all of the Subject Shares within the ROFO Negotiation Period, (i) within twenty-one (21) days after the date of the foregoing agreement, the foregoing Non-Transferring Shareholder shall pay to the Transferring Shareholder a non-refundable deposit in an amount of 10% of the transfer price set forth in the Sale Notice; and (ii) the relevant Shareholders shall

enter into a share transfer agreement and an instrument of transfer and complete the Transfer of all of the Subject Shares within Forty-five (45) days of entry into such agreement (subject to extensions of up to 120 days as required to obtain requisite regulatory approvals) (the "**ROFO Completion Period**").

(c) Sale at Liberty. In the event (i) no agreement in writing with respect to all of the Subject Shares is reached between the Transferring Shareholder and the Non-Transferring Shareholder within the ROFO Negotiation Period, or (ii) such an agreement is reached but the Transfer contemplated thereunder fails to be completed within the ROFO Completion Period, then the Transferring Shareholder (unless the Transferring Shareholder causes the Transfer in this Section 4.3(c)(ii) of this Exhibit 3.7 (JV Co 4 Related Provisions) to fail to be completed) shall be entitled to engage in negotiations and discussions with any potential third party transferee, and to sell all (but not less than all) of the Subject Shares at a price not less than the price set forth in the Sale Notice within a period of 120 days (subject to extensions of up to 120 days as required to obtain requisite regulatory approvals) following the end of the ROFO Negotiation Period or the ROFO Completion Period, as applicable.

4.4 Tag-along Right. Without any prejudice to Section 4.2 (Permitted Transfers) through 4.3 (Right of First Offer) of this Exhibit 3.7 (JV Co 4 Related Provisions), if Vianet proposes to Transfer its shares in JV Co 4, in whole or in part, the Investor shall have the tag-along right pursuant to the following:-

(a) Tag-Along. The Investor shall have the right to participate in the proposed Transfer by Vianet to sell all or part of its shares in JV Co 4, on the same terms and subject to the same conditions as specified in the Sale Notice issued by Vianet pursuant to Section 4.3 (Right of First Offer) of this Exhibit 3.7 (JV Co 4 Related Provisions), by issuing to Vianet a written notice (the "**Tag-Along Notice**") within one (1) month after Investor's receipt of the Sale Notice. The Tag-Along Notice shall specify the series and number of shares of JV Co 4 which the Investor elects to sell. Unless the third party buyer of the shares to be Transferred by Vianet agrees to purchase more shares held by the Investor, the number of shares in JV Co 4 that can be sold by the Investor shall not exceed the total number of shares to be Transferred to such third party buyer multiplied by the Shareholding Percentage of the Investor in JV Co 4.

(b) Procurement. Vianet shall procure that:-

(i) All of the relevant parties to the Transfer shall execute such additional documents as may be necessary or appropriate to effectuate such Transfer; and

(ii) Vianet shall not Transfer any share in JV Co 4 to the foregoing proposed transferee unless and until the proposed transferee has purchased all of the shares set forth in the Tag-Along Notice from the Investor and the corresponding share purchase price has been paid to the Investor in full; and

(iii) The closing of the Transfer of shares held by the Investor in JV Co 4 shall occur prior to or simultaneously with the closing of the Transfer of shares held by Vianet.

4.5 No Indirect Transfer. The Parties agree that the Transfer restrictions in this Section 4 (Transfer Restrictions) of this Exhibit 3.7 (JV Co 4 Related Provisions) may not be avoided by and shall be applied to any Transfer of the shares (or other equity interests) in any direct or indirect shareholder of JV Co 4. Any Transfer of any shares (or other equity interests) in a direct or indirect shareholder of JV Co 4 in violation of this Section 4 (Transfer Restrictions) of this Exhibit 3.7 (JV Co 4 Related Provisions) shall be null and void and shall be deemed to be a breach of this Section 4 (Transfer Restrictions) of this Exhibit 3.7 (JV Co 4 Related Provisions) by the relevant direct shareholder of JV Co 4.

4.6 Deed of Adherence. No direct Transfer of any share in JV Co 4 shall be made, unless the Person to whom any such share is directly Transferred or issued shall first have executed and delivered a Deed of Adherence in the form set out in Appendix 4.6 (Form of Deed of Adherence). The Shareholders agree to extend the benefit of this Agreement to any Person who acquires shares in JV Co 4 in accordance with this Agreement and enters into a Deed of Adherence in the form set out in Appendix 4.6 (Form of Deed of Adherence), but without prejudice to the continuation inter se of the rights and obligations of the original Shareholders to this Agreement and all other Persons who have entered into such a Deed of Adherence.

4.7 Compliance of Restrictions. The Parties shall, and shall procure their respective Affiliates and the relevant directors thereof to fully comply with the restriction provided in this Section 4 (Transfer Restrictions) of this Exhibit 3.7 (JV Co 4 Related Provisions).

Exhibit 3.13(b)

Appraisal Principles

In determining the fair market value pursuant to this Agreement, and the Appraiser shall:-

(1) determine the enterprise value of such JV Co 4 Group Company, which shall be calculated on a going concern basis for a private company of a comparable size and in a comparable industry by applying a comparable company multiple analysis to such JV Co 4 Group Company's EBITDA based on its last audited accounts or such other index customarily applied in market practice, given consideration of any real estate assets and other assets of such JV Co 4 Group Company as well as any fund management, project management or other business of such JV Co 4 Group Company.

(2) in calculating the equity value of a JV Co 4 Group Company, deduct any debt and other liability as at the relevant date and add cash, cash equivalent and other asset as at the relevant date.

(3) specifically, when determining the enterprise value of a JV Co 4 Group Company pursuant to the foregoing, (a) value a JV Co 4 Group Company's real estate assets, other tangible assets and related liabilities, such valuation to reflect a sale between a willing seller and a willing purchaser, on an arm's length basis and without undue pressure on either the seller or purchaser to close the transaction; (b) adjust a JV Co 4 Group Company's non-real estate tangible assets for any actual or probable impairments; (c) exclude any deferred Tax liabilities caused by differences in the appraised value and the historic Tax basis of the assets; (d) with respect to any debt or liability borne by a JV Co 4 Group Company, adopt a calculation method that is consistent with the methodology of how similar liabilities have historically been paid or settled and accepted by the relevant counterparty; and (e) subtract any transaction costs and Taxes incurred or likely to be incurred, from the transfer of a JV Co 4 Group Company to Vianet or its relevant Affiliate.

Exhibit 8.7

Address of Notices

If to VNET or Vianet:-

Address: Guanjie Building Southeast 1st Floor,
10# Jiuxianqiao East Road, Chaoyang District,
Beijing, 100016, China

Attention: Amber Gong (Gong Bo)

Fax: +86 10 8456 4234

Email: gong.bo@21vianet.com

If to WP:-

Address: Marble Stone Holdings Limited c/o Warburg Pincus Asia LLC, Suite 6703, Two International Finance Center, 8 Finance Street, Hong Kong

Attention: Ellen Ng

Fax: +852 2521 3869

Email: ellen.ng@warburgpincus.com

with a copy to:-

Address: Marble Stone Holdings Limited c/o Warburg Pincus Asia LLC, Suite 6703, Two International Finance Center, 8 Finance Street, Hong Kong

Attention: Frank Marinaro

Fax: +852 2521 3869

Email: frank.marinaro@warburgpincus.com

Appendix 1.2

Form of Capital Call Notice

TO: [INSERT THE NAME OF SHAREHOLDER]

[Insert the date of this Capital Call Notice]

Dear Madam or Sir,

Capital Call Notice

Reference is made to a Restructuring Agreement (the "**Restructuring Agreement**") by and among 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited on _____ 2019. Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the Restructuring Agreement.

This capital call notice, issued by the JV Co 4 Board, is to call US$[*] out of the [Vianet Commitment Cap/WP Investor Commitment Cap].

Among which, US$[*] is to be paid to JV Co 4 in consideration of allotment and issuance of [*] Shares pursuant to Section 1 (JV Co 4 Investment Commitment) of Exhibit 3.7 (JV Co 4 Related Provisions) to the Restructuring Agreement.

SWIFT CODE: [*]

BANK: [*]

ACCOUNT NUMBER: [*]

ACCOUNT NAME: [*]

Please note that the funds are requested to be wired on or prior to [Insert the closing date of capital call] in accordance with the following wire instructions:

Yours faithfully,

[INSERT THE NAME OF DIRECTOR]

for and on behalf of the board of directors of [INSERT NAME OF JV CO 4]

By: _____

Appendix 3.3

Reserved Matters

With respect to any JV Co 4 Group Company:-

1. establishment of a JV Co 4 Group Company; any entry into of any joint venture, partnership or other similar arrangement, acquisition of any share or equity capital or other securities of any company or business entity, or entry into a new investment project (including any funding thereof) with a total amount of such acquisition or new investment of RMB80,000,000 or more; Transfer of any shares or equity interests in a JV Co 4 Group Company (other than those permitted in this Agreement);

2. acquisition or disposal of material assets by any JV Co 4 Group Company:-

   (a) with a value above 10% of the total fixed assets owned by such JV Co 4 Group Company, either individually in a single transaction or in aggregate in a series of connected transactions; or

   (b) outside of the ordinary course of business;

3. except as expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget, creation of any Encumbrance over any asset of any JV Co 4 Group Company with a value of more than 10% of the total fixed assets owned by such JV Co 4 Group Company (either individually or in a series of related transactions) or outside of the Ordinary Course of Business; or the incurring of any debt, guarantees or liabilities (including contingent liabilities) by any JV Co 4 Group Company in an amount of more than 10% of the total fixed assets owned by such JV Co 4 Group Company (either individually or in a series of related transactions) or outside of the Ordinary Course or Business;

4. an initial public offering of any and all of the shares, equity interests, security or equivalent of any of the JV Co 4 Group Company, or any merger or division of any JV Co 4 Group Company;

5. creation, issue, purchase, redemption or other reorganisation of its share or registered capital, or the payment of any dividend or other distribution in specie that is not on a *pro rata* basis (unless otherwise allowed under this Agreement), return or reduction of capital, or capitalization of reserves;

6. except as expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget, incurring of any capital expenditure, investment or cash outflows by any JV Co 4 Group Company above 10% of the total fixed assets owned by such JV Co 4 Group Company in any one transaction or in a series of related transactions;

7. any change in the nature or material change in the scope of the business of any JV Co 4 Group Company, or any amendment to the JV Co 4 Group Company's constitutional documents;

8. any winding up, cessation or change of business, termination, liquidation, bankruptcy or similar proceeding of any JV Co 4 Group Company (unless otherwise provided in this Agreement);

9. any Related Party Transaction (except for those contemplated by and pursuant to a Master Service Agreement);

10. any change in any JV Co 4 Group Company's accounting policies, accounting standards, auditors or financial year end;

11. any form of material reorganization, including without limitation, amalgamation, reconstruction, merger or consolidation or scheme of arrangement or other business combination with or into any other Person;

12. provision of any guarantee for any third party, which is not expressly described in detail and expressly approved in the then-prevailing approved Annual Business Plan and Budget;

13. any filing, withdrawing or settling of any litigation, arbitration or other legal proceeding with a subject amount of more than RMB1,000,000;

14. except as otherwise provided in the foregoing, the entry into a contract or a series of related contracts (other than a JV Co 4 Management Service Agreement or a JV Co 4 Sub-Contracting Agreement) with a value of above RMB10,000,000, that are not included in the then-prevailing approved Annual Business Plan and Budget; and

15. entering into any agreement or making any commitment for any of the foregoing.

Appendix 3.5

Investor's Information and Inspection Rights

1. The Investor shall be entitled to the following information rights:-

1.1 As soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of JV Co 4, audited annual consolidated financial statements for the JV Co 4 Group Companies for such fiscal year prepared in accordance with US GAAP, audited and certified by one of the Big Four Accounting Firms duly appointed by the board of JV Co 4 to serve as JV Co 4' auditors.

1.2 As soon as practicable, but in any event within sixty (60) days after the end of each quarter, an unaudited report, which shall include without limitation, the consolidated income statements and statements of cash flows for such quarter, balance sheets, lists of debts, bank loans and other borrowings as well as capital expenditures for the JV Co 4 Group Companies, and the respective quarterly balance sheets, income statements and statements of cash flows for each of the JV Co 4 Group Companies for such fiscal quarter.

1.3 As soon as practicable, but in any event within twenty (20) Business Days after the end of each month, an unaudited report, which shall include without limitation, the consolidated income statements and statements of cash flows for such month, balance sheets, lists of debts, bank loans and other borrowings as well as capital expenditures for the JV Co 4 Group Companies, and the respective monthly balance sheets, income statements and statements of cash flows for each of the JV Co 4 Group Companies for such fiscal month.

1.4 Copies of all other documents or other information sent to any Person in such Person's capacity as a shareholder of JV Co 4, and notice of any material liabilities incurred by or threatened against, and any material lawsuit or other material claim filed or threatened against, any JV Co 4 Group Company.

1.5 Copies of any reports filed by the JV Co 4 Group Companies with any relevant regulatory authority or governmental agency.

1.6 Any other document, material or information reasonably requested by the Investor.

2. The Investor shall be entitled to the following inspection rights:

2.1 The right to inspect facilities, records and books of the JV Co 4 Group Companies and their direct or indirect Subsidiaries and to make extracts and copies therefrom, at any time during regular working hours on reasonable prior notice to the applicable JV Co 4 Group Company respectively; and

2.2 The right to discuss the business, operations and conditions of the JV Co 4 Group Companies and their direct or indirect Subsidiaries with their respective directors, officers, employees, accountants, legal counsel and investment bankers.

Appendix 4.6

Form of Deed of Adherence

THIS DEED is made on [date]
by [name] (the "**New Shareholder**").

WHEREAS:

(A) By a transfer dated [date], [name of transferring Shareholder] transferred to the New Shareholder [number] shares with a par value of US$[0.00001] each in the capital of JV Co 4 (the "**Company**").

(B) This Deed is entered into in compliance with the terms of a restructuring agreement dated _____ made between the 21Vianet Group, Inc., 21Vianet DRP Investment Holdings Limited and Marble Stone Holdings Limited as such agreement shall have been or may be amended, supplemented or novated from time to time (the "**Restructuring Agreement**").

THIS DEED WITNESSES as follows:

1. The New Shareholder undertakes to adhere to and be bound by the provisions of the Restructuring Agreement, and to perform the obligations imposed by the Restructuring Agreement which are to be performed on or after the date of this Deed, in all respects as if the New Shareholder were a Party to the Restructuring Agreement and named therein as a shareholder of the Company.

2. This Deed is made for the benefit of (a) the original Parties to the Restructuring Agreement and (b) any other Person or Persons who after the date of the Restructuring Agreement (and whether or not prior to or after the date of this Deed) adheres to the Restructuring Agreement.

3. The address of the New Shareholder for the purposes of the Restructuring Agreement is as follows:

If to the New Shareholder:-	**with a copy to:-**
Address: [*]	Address: [*]
Attention: [*]	Attention: [*]
Fax: [*]	Fax: [*]
Email: [*]	Email: [*]

4. This Deed shall be governed by and construed in accordance with the laws of Hong Kong without regard to the conflicts of law principles thereof.

IN WITNESS of which this Deed has been executed and delivered by the New Shareholder on the date which first appears above.

EXECUTED AS A DEED by

[New Shareholder]:

Duly Authorised Signatory

in the presence of:

Signature of Witness

Name:

Address:

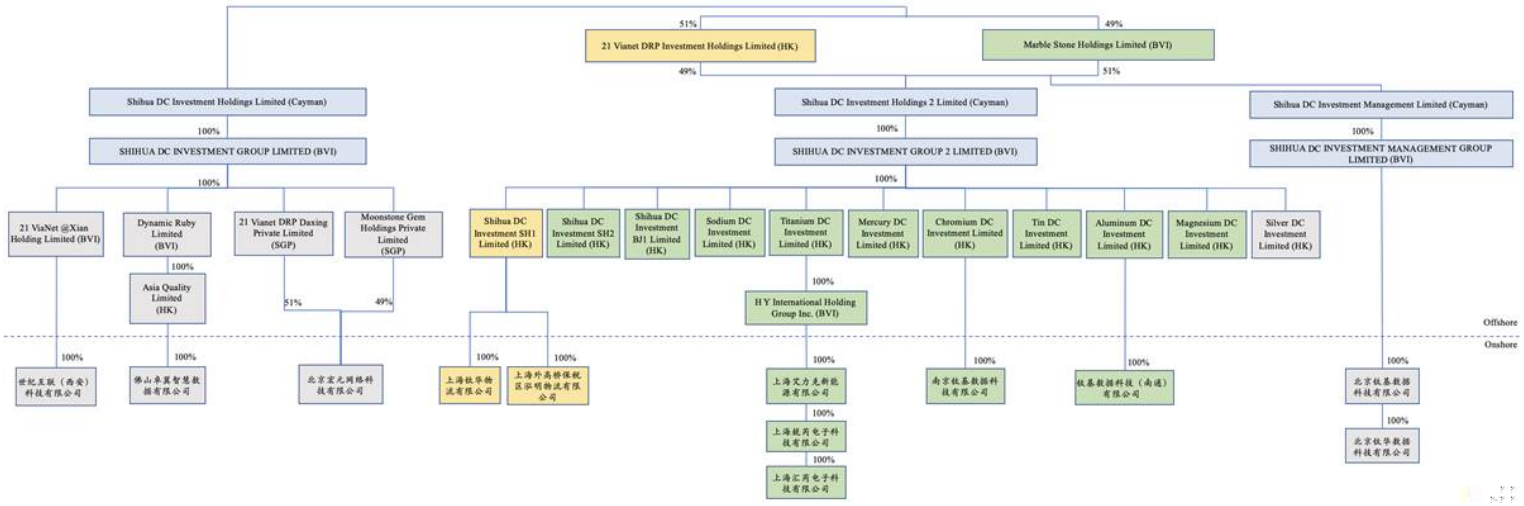
Schedule A

List of JV Co 2 Projects

Project Name	Company(ies) directly holding the Project
Waigaoqiao #1 Project	□□□□□□□□□□□□□□□□
Fengxian Project	□□□□□□□□□□□□□
Nanjing Project	□□□□□□□□□□□□□
Nantong Project	□□□□□□□□□□□□□□□
Wuxi Project	Mercury DC Investment Limited

Schedule B

Existing Structure



Schedule C

Annual Business Plan and Budget

The Annual Business Plan and Budget shall contain the following information:-

1. Detailed forecast / financial budget for the next year (with material line items broken out);
2. Line item variance analysis between historical accounts and budget (i.e., explanations on material differences);
3. Current and forecasted occupancy and rental rates;
4. Summary of operations for the preceding twelve (12) months (including without limitation performance of the business, key challenges, the identified areas for improvement, assessment of the performance of Key Management, etc.);
5. Market analysis (including without limitation analysis on current tenants, competition or competitors, market strength or weakness, etc.);
6. Execution plan for the next twelve (12) months (including without limitation focus, responsible personnel, etc.);
7. Current status of financing and any planned re-financing of each asset or entity for the next twelve (12) months;
8. Any plans with respect to material asset acquisitions, capital expenditures, investment or cash outflows for the next twelve (12) months;
9. Comparison of current development status to the original development plans (if applicable) and a detailed variance analysis;
10. An comprehensive update of the development plans (if applicable) to reflect the current status of such development;
11. An update on and schedule for undertaking any new Projects; and
12. Other details/items as requested by the board of JV Co 4 or the board of directors of any other JV Co 4 Group Company.

Exhibit 4.30

DATE: 15 January 2020

21VIANET GROUP, INC.

21VIANET DRP INVESTMENT HOLDINGS LIMITED

AND

MARBLE STONE HOLDINGS LIMITED

AMENDMENT TO RESTRUCTURING AGREEMENT

TABLE OF CONTENTS

THIS AMENDMENT TO RESTRUCTURING AGREEMENT (this "**Amendment**") is entered into on 15 January 2020,

BY AND AMONG:

(1) **21VIANET GROUP, INC.** (Company Number: MC-232198), a NASDAQ listed company duly incorporated and validly existing under the laws of the Cayman Islands with its registered office address at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands ("**VNET**");

(2) **21VIANET DRP INVESTMENT HOLDINGS LIMITED** (Company Number: 2476123), a private company limited by shares duly incorporated and validly existing under the laws of Hong Kong with its registered office address at the offices of Flat/Room 716, 7/F., 12W Phase 3 Hong Kong Science Park, Pak Shek Kok, Shatin, New Territories, Hong Kong ("**Vianet**"); and

(3) **MARBLE STONE HOLDINGS LIMITED** (Company Number: 1923409), a business company duly incorporated and validly existing under the laws of the British Virgin Islands with its registered office address at P.O. Box 3340, Road Town, Tortola, British Virgin Islands ("**WP**" or the "**Investor**").

Vianet and WP are hereinafter collectively referred to as the "**Shareholders**", and individually as a "**Shareholder**". VNET, Vianet and WP are hereinafter collectively referred to as the "**Parties**", and individually as a "**Party**".

RECITALS

WHEREAS:-

(A) The Parties hereto have entered into a Restructuring Agreement on 24 July 2019 (the "**Original Restructuring Agreement**").

(B) In accordance with Section 8.6 of the Original Restructuring Agreement, the Parties intend to amend and supplement the Original Restructuring Agreement as more particularly set forth below.

NOW, THEREFORE, in consideration of the mutual promises, agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:-

1. DEFINITIONS.

All capitalized terms used in this Amendment and not otherwise defined herein shall have the meanings assigned to them in the Original Restructuring Agreement.

2. AMENDMENT TO JV CO 1 RESTRUCTURING TERMS.

2.1 Section 2.1(b)(iii), (iv) and (v) and the last paragraph of Section 2.1(b) of the Original Restructuring Agreement shall be deleted and replaced in its entirety to read as follows:

(iii) no later than three (3) Business Days after 15 January 2020, the Shareholders shall procure an onshore Subsidiary of JV Co 1 to distribute, via intercompany loans, all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of 31 August 2019 (the "**First Distribution Cut-off Date**") to the Shareholders' respective designated onshore Affiliates on a pro rata basis based on their then respective Shareholding Percentages in JV Co 1;

(iv) within fifteen (15) Business Days after every 31 December during the term of JV Co 1 (each an "**Annual Distribution Cut-off Date**"), the Shareholders shall procure an onshore Subsidiary of JV Co 1 to distribute, via intercompany loans, all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of the relevant Annual Distribution Cut-off Date to the Shareholders' respective designated onshore Affiliates on a pro rata basis based on their then respective Shareholding Percentages in JV Co 1; and

(v) the intercompany loans via which the Available Cash in JV Co 1 (and its Subsidiaries) is distributed to the Shareholders' respective designated onshore Affiliates (the "**Interco Loans**") shall be interest free, and the initial term of each intercompany loan shall be one (1) year, automatically renewed for another one (1) year upon expiry of each one (1)-year term. The Shareholders agree that upon either Shareholder's full exit from its investment in JV Co 1 (including without limitation to WP's exit upon its exercise of the exit rights pursuant to Section 13 (Exit) of the Investment Agreement), the Interco Loans having been distributed to such exiting Shareholder shall be repaid in full, which repayment shall be completed via set off mechanisms to the extent permitted under Applicable Law to minimize actual cash flow. The Shareholders further agree that the Interco Loans shall be immediately due and repayable upon occurrence of a Cash Shortfall Event or upon mutual approvals by both Shareholders, in each case with written demand issued by the relevant lender of the Interco Loan to the relevant borrower, but only to the extent of such Cash Shortfall or the amount mutually approved by the Shareholders, and the amount of Interco Loans to be repaid by the Shareholders' respective designated onshore Affiliates shall be pro rata based on the Shareholders' respective Shareholding Percentages in JV Co 1.

Prior to disbursement of each Interco Loan, the Shareholders shall cause their respective designated onshore Affiliate acting as the borrower and the onshore Subsidiary of JV Co 1 acting as lender to enter into a loan agreement in form and substance as set out in Exhibit 2.1(b)(v) (Form of Interco Loan Agreement).

If item (i) of the JV Co 1 Restructuring Action provided above fails to be completed by the expiry of nine (9) months following the execution date hereof (such expiry date, the "**Ad hoc Distribution Cut-off Date**", together with the First Distribution Cut-off Date and the Annual Distribution Cut-off Dates, each a "**Distribution Cut-off Date**"), then, at the request of WP, the Shareholders shall procure an onshore Subsidiary of JV Co 1 to immediately distribute (and in no event later than fifteen (15) Business Days after the Ad hoc Distribution Cut-off Date), via Interco Loans, all the Available Cash (as defined below) in JV Co 1 (and its Subsidiaries) as of the Ad hoc Distribution Cut-off Date to the Shareholders' respective designated onshore Affiliates on a pro rata basis based on their then respective shareholding percentages in JV Co 1."

2.2 The following definition shall be added to Exhibit 1.1 of the Original Restructuring Agreement to read as follows:

"**Cash Shortfall Event**" means a funding deficit of JV Co 1 or any of its Subsidiary being identified by the board of JV Co 1 or a Shareholder at any time on the basis of the management accounts of JV Co 1 or said Subsidiary and the Annual Business Plan and Budget (as defined under the Investment Agreement); provided that such funding deficit shall impair or is likely to impair the normal operation of JV Co 1 or said Subsidiary (for the avoidance of doubt, the funding deficit for seeking a new Project (as defined under the Investment Agreement) shall not be deemed as a Cash Shortfall Event, unless JV Co 1 or any of its Subsidiaries has already entered into any binding commitment to invest in or acquire such new Project (as defined under the Investment Agreement))."

2.3 Exhibit A of this Amendment shall be annexed to the Original Restructuring Agreement as Exhibit 2.1(b)(v) (Form of Interco Loan Agreement).

2.4 All the references in the Original Restructuring Agreement to "entrustment loan" shall be replaced by the term "Interco Loan".

3. AMENDMENT TO JV CO 2 RESTRUCTURING TERMS

3.1 Sections 7 and 8 of Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) to the Original Restructuring Agreement shall be deleted and replaced in its entirety to read as follows:

"7. **JV 2/3**

(a) WP JV 2/3 15 PropCo 2 "**WP**" WP PropCo 2 WP

(b) Vianet PropCo 2 JV 2/3 15 WP "**WP**" WP PropCo 2 WP

JV Co 2 Vianet JV Co 2 WP (a) PropCo 2 WP PropCo 2 WP WP Vianet Cash Compensation

8 **HK SPVs JV Co 3**

WP Vianet WP PropCo 2"

3.2 Exhibit B of this Amendment shall be added to the end of Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) to the Original Restructuring Agreement as "".

3.3 The last paragraph (read as follows) of Sections 5 of Exhibit 2.2(a)(vi) (JV Co 2 Asset Distribution Roadmap) to the Original Restructuring Agreement shall be deleted in its entirety:

"□□□□□□□□□□□□□□□□□□JV Co 3□□□□□JV Co 2□□□□□□□□□□□□□□□JV Co 2□□□□□□Vianet□□□JV Co 2□□□□□□□□□□□□□□□□□□□□□□□□□□JV Co 3□□□□□□□□□□□□□□□□□□□JV Co 3□□□□□□□□□□□□□□□□□□□□□□□□□□□JV Co 3□□□□□□□□□□□□□□□□□JV Co 3□□□□□□□□□□□JV Co 3□□□□□□□□□□"

4. AMENDMENT TO JV CO 3 RESTRUCTURING TERMS

4.1 Section 2.3(b) (Liquidation of JV Co 3) of the Original Restructuring Agreement shall be deleted in its entirety.

4.2 The following paragraphs shall be added after Section 2.3(a) (Allocation of Employees) of the Original Restructuring Agreement as Sections 2.3(c), (d) and (e):

"(c) JV Co 3 Transfer.

(i) As soon as reasonably practicable following completion of employee termination pursuant to Section 2.3(a) (Allocation of Employees) above (but in no event later than the fifth (5th) Business Day following 15 January 2020), WP shall sell and transfer all the shares it held in JV Co 3 to Vianet, and Vianet hereby agree to purchase and take such transfer (the "**JV Co 3 Transfer**"). The consideration payable by Vianet for the JV Co 3 Transfer shall be US$1.00.

(ii) WP shall cause the directors, legal representatives, general managers and supervisors appointed or nominated by it to JV Co 3 and its Subsidiaries to sign and deliver to the relevant company written resignation letters to resign from all their positions in JV Co 3 and its Subsidiaries with effect from the closing of the JV Co 3 Transfer.

(iii) Upon the closing date of the JV Co 3 Transfer (the "**JV Co 3 Transfer Closing Date**", which for the avoidance of doubt shall not be later than the fifth (5th) Business Day following 15 January 2020), each of WP and Vianet shall deliver to each other and JV Co 3 an instrument of transfer duly executed by it, and WP and Vianet shall and shall cause their respectively appointed directors to duly pass necessary board and shareholders resolutions of JV Co 3 to approve the JV Co 3 Transfer and the resignation of directors appointed by WP to the board of directors of JV Co 3. WP and Vianet shall further cause the register of members and register of directors of JV Co 3 to be updated on the JV Co 3 Transfer Closing Date by the registered office provider of JV Co 3 to reflect the completion of the JV Co 3 Transfer and the cessation of WP appointed directors.

(iv) As soon as reasonably practicable following the JV Co 3 Transfer Closing Date, Vianet shall procure the register of directors of the offshore Subsidiary of JV Co 3 be updated by the registered agent of such company to reflect the cessation of WP appointed directors, and shall procure the onshore Subsidiary of JV Co 3 to file with the relevant Administration of Market Regulations ("**AMR**") and the Ministry of Commerce (if applicable, "**MOC**") in respect of the resignation of directors, legal representatives, general managers and supervisors appointed or nominated by WP to such onshore Subsidiaries. WP shall provide reasonably necessary and advisable assistance to Vianet and the Subsidiaries of JV Co 3 for their completion of the foregoing update of register of directors and the filings with AMR and MOC.

(d) Settlement of Outstanding Payables. Vianet hereby covenant to WP that it shall procure JV Co 3 and its Subsidiaries to pay off within thirty (30) Business Days following the JV Co 3 Transfer Closing Date all the payables owed by them to vendors, suppliers and other third parties as of the JV Co 3 Transfer Closing Date.

(e) Liquidation of JV Co 3. As soon as reasonably practicable following the JV Co 3 Transfer Closing Date, Vianet shall use best efforts to liquidate and terminate JV Co 3 and its Subsidiaries; provided that, Vianet shall, as soon as reasonably practicable upon the request of WP, change the names of JV Co 3 and its Subsidiaries to the effect that there is no wording of "Shihua", "SHIHUA", "Taiji (□□)" , "Warburg Pincus", "WP" and/or "□□" in the names of JV Co 3 and/or its Subsidiaries.

5. MISCELLANEOUS

5.1 Each of the Parties shall bear all Taxes arising from the transaction contemplated hereby pursuant to the requirements of Applicable Laws.

5.2 Section 5.2 (Confidentiality and Publicity) and Section 8 (Miscellaneous) (except for Sections 8.1 (Taxes and Expenses), 8.8 (Entire Agreement) and 8.13 (Conflicts among Documents)) of the Restructuring Agreement shall apply to this Amendment *mutatis mutandis* as if set forth verbatim herein, with all references therein to "this Agreement" deemed as references to this Amendment.

5.3 With effect from the date of this Amendment, (a) this Amendment together with the Original Restructuring Agreement shall be construed as one instrument, (b) all references to the Restructuring Agreement or in the Restructuring Agreement to "this Agreement" shall be deemed as references to such Restructuring Agreement as modified hereby, and (c) except as amended by this Amendment, the provisions of the Original Restructuring Agreement shall remain unaltered and in full force and effect.

5.4 In the case of any conflict between this Amendment and the Transaction Documents, this Amendment shall prevail.

[Remainder of this page intentionally left blank; signature pages to follow.]

Signature Page to the Amendment to Restructuring Agreement

IN WITNESS WHEREOF, each of the Parties hereto has caused this Amendment to be executed by their duly authorized signatories on the date first set forth above.

21VIANET GROUP, INC.

By:	/s/ Sheng Chen		By:	
	Name:	Sheng Chen	Name:	
	Title:	Director	Title:	Director

21VIANET DRP INVESTMENT HOLDINGS LIMITED

By:	/s/ Shiqi WANG		By:	/s/ Xiao LIU
	Name:	Shiqi WANG	Name:	Xiao LIU
	Title:	Director	Title:	Director

Signature Page to the Amendment to Restructuring Agreement

IN WITNESS WHEREOF, each of the Parties hereto has caused this Amendment to be executed by their duly authorized signatories on the date first set forth above.

MARBLE STONE HOLDINGS LIMITED

By: /s/ Ellen Hoi Ying Ng

Name: Ellen Hoi Ying Ng

Title: Director

EXHIBIT A

FORM OF INTERCO LOAN AGREEMENT

EXHIBIT B

FORM OF CONFIRMATION LETTER

Exhibit 4.31

SHARE SUBSCRIPTION AGREEMENT

This **SHARE SUBSCRIPTION AGREEMENT** (this "***Agreement***") is made as of October 14, 2019 by and between **21VIANET GROUP, INC.**, an exempted company incorporated in the Cayman Islands (the "***Company***") and **PERSONAL GROUP LIMITED** (the "***Subscriber***"), a company incorporated in British Virgin Islands and controlled by Mr. Sheng Chen (the "***Founder***"), the executive chairman of board of directors of the Company.

The Subscriber and the Company are each referred to herein as a "***Party,***" and collectively as the "***Parties.***"

W I T N E S S E T H:

WHEREAS, upon the terms and conditions of this Agreement, the Company desires to issue to the Subscriber, and the Subscriber wishes to subscribe for, class C ordinary shares, $0.00001 par value per share (the "***Class C Ordinary Shares***"), in the capital of the Company which have the special rights, restrictions, preferences and privileges set forth in Exhibit A hereto, in reliance on an exemption from registration under the U.S. Securities Act of 1933, as amended (the "***Securities Act***");

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual promises hereinafter set forth, the Parties hereto agree as follows:

ARTICLE 1

SUBSCRIPTION OF CLASS C ORDINARY SHARES

1.1 Subscription and Issuance of Class C Ordinary Shares.

(a) Pursuant to the terms and subject to the conditions of this Agreement, the Subscriber agrees to subscribe for, and the Company agrees to issue to the Subscriber, subject to the rights of participation of certain existing shareholders of the Company as described in Section 1.1 (b) below, up to 60,000 Class C Ordinary Shares with the rights, restrictions, preferences and privileges set forth in Exhibit A hereto (the "***Subscribed Shares***") at a price of US$1.35 per share.

(b) The Parties acknowledge that pursuant to Section 3.04 of the Investor Rights Agreement dated as of January 15, 2015 (the "***IRA***"), among (i) the Company, (ii) the Founder, (iii) Personal Group Limited, a British Virgin Islands company, Fast Horse Technology Limited, a British Virgin Islands company, and Sunrise Corporate Holding Ltd., a British Virgin Islands company (collectively, the "***Founder Affiliates***" and together with the Founder, the "***Founder Parties***"), (iv) King Venture Holdings Limited, a company incorporated under the laws of Cayman Islands ("***Kingsoft***"), and (v) Xiaomi Ventures Limited, a company incorporated under the laws of the British Virgin Islands ("***Xiaomi***"), Kingsoft, Xiaomi and each Founder Party shall have the right to purchase up to such party's respective Pro Rata Share (as such term is defined under the IRA) of the Subscribed Shares (the "***Right of Participation***"), and if the Right of Participation is exercised in full or in part, the number of Class C Ordinary Shares that the Subscriber may purchase will be reduced accordingly.

1.2 Payment and Delivery. Upon the receipt of the subscription price in immediately available cash, the Company shall (i) update the register of members of the Company (the "***Register of Members***") reflecting the issuance of the corresponding number of Subscribed Shares, and (i) if requested by the Subscriber, deliver a duly executed share certificate in original form, registered in the name of the Subscriber upon request by the Subscriber, together with a certified true copy of the register of members of the Company, evidencing the Subscribed Shares being issued to and registered in the name of the Subscriber.

1.3 **Legends**. The Register of Members and the share certificate representing the Subscribed Shares shall be endorsed with the following legends:

"THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (AS AMENDED, THE "ACT") OR UNDER THE SECURITIES LAWS OF ANY STATE. THIS SECURITY MAY NOT BE TRANSFERRED, SOLD OR OFFERED FOR SALE: (A) IN THE ABSENCE OF (1) AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT, OR (2) AN EXEMPTION OR QUALIFICATION UNDER APPLICABLE SECURITIES LAWS. ANY ATTEMPT TO TRANSFER OR SELL THIS SECURITY IN VIOLATION OF THESE RESTRICTIONS SHALL BE VOID.

THESE CLASS C ORDINARY SHARES HAVE SPECIAL VOTING RIGHTS AS SET FORTH IN A SHARE SUBSCRIPTION AGREEMENT, DATED OCTOBER 4, 2019, ENTERED INTO BY AND BETWEEN 21VIANET GROUP, INC. AND PERSONAL GROUP LIMITED."

ARTICLE 2

REPRESENTATIONS AND WARRANTIES

2.1 **Representations and Warranties of the Subscriber**. The Subscriber hereby represents and warrants to the Company, as of the date hereof and as of the Closing Date, as follows:

(a) **Authority**. The Subscriber has full power and authority to enter into, execute and deliver this Agreement and each agreement, certificate, document and instrument to be executed and delivered by the Subscriber pursuant to this Agreement and to perform his obligations hereunder and thereunder.

(b) **Valid Agreement**. This Agreement has been duly executed and delivered by the Subscriber and constitutes the legal, valid and binding obligation of the Subscriber, enforceable against it in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium, and other laws of general application affecting enforcement of creditors' rights generally, and (ii) as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.

(c) **Noncontravention**. Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby, will (i) violate any constitution, statute, regulation, rule, injunction, judgment, order, decree, ruling, charge, or other restriction of any government, governmental entity or court to which the Subscriber is subject, or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of or creation of an encumbrance under, or create in any party the right to accelerate, terminate, modify, or cancel, any agreement, contract, lease, license, instrument, or other arrangement to which the Subscriber is a party or by which the Subscriber is bound or to which any of the Subscriber's assets are subject. There is no action, suit or proceeding, pending or threatened against the Subscriber that questions the validity of this Agreement or the right of the Subscriber to enter into this Agreement or to consummate the transactions contemplated hereby.

(d) **Consents and Approvals**. Neither the execution and delivery by the Subscriber of this Agreement, nor the consummation by the Subscriber of any of the transactions contemplated hereby or thereby, nor the performance by the Subscriber of this Agreement in accordance with its terms requires the consent, approval, order or authorization of, or registration with, or the giving of notice to, any governmental or public body or authority or any third party, except such as have been or will have been obtained, made or given on or prior to the Closing Date and subject to the Right of Participation.

(e) **Sophisticated Investor**. The Subscriber is a sophisticated investor with knowledge and experience in financial and business matters such that the Subscriber is capable of

evaluating the merits and risks of its subscription of the Subscribed Shares. The Subscriber is able to bear the economic risks of the subscription and can afford a complete loss of such subscription. The Subscriber acknowledges and affirms that, with the assistance of its advisors, it has conducted and completed its own investigation, analysis and evaluation related to the subscription of the Subscribed Shares.

(f) **Not U.S. Person**. The Subscriber is not a "U.S. person" as defined in Rule 902 o Regulation S.

(g) **Restricted Securities**. The Subscriber acknowledges that the Subscribed Shares are "restricted securities" that have not been registered under the Securities Act or any applicable state securities law. The Subscriber further acknowledges that, absent an effective registration under the Securities Act, the Subscribed Shares may only be offered, sold or otherwise transferred (x) to the Company, or (y) pursuant to an exemption from registration under the Securities Act.

2.2 **Representations and Warranties of the Company**. The Company hereby represents and warrants to the Subscriber, as of the date hereof and as of the Closing Date, as follows:

(a) **Due Formation**. The Company is a company duly incorporated as an exempted company with limited liability, validly existing and in good standing under the laws of the Cayman Islands. The Company has all requisite power and authority to carry on its business as it is currently being conducted.

(b) **Authority**. The Company has full power and authority to enter into, execute and deliver this Agreement and each agreement, certificate, document and instrument to be executed and delivered by the Company pursuant to this Agreement and to perform its obligations hereunder and thereunder. The execution and delivery by the Company of this Agreement and the performance by the Company of its obligations has been duly authorized by all requisite actions on its part.

(c) **Valid Agreement**. This Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligations of the Company, enforceable against it in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium, and other laws of general application affecting enforcement of creditors' rights generally, and (ii) as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.

(d) **Due Issuance of the Subscribed Shares**. The Subscribed Shares have been duly authorized and, when issued and delivered to and paid for by the Subscriber pursuant to this Agreement, will be validly issued, fully paid and non-assessable and free and clear of any pledge, mortgage, security interest, encumbrance, lien, charge, assessment, title defect, right of first refusal, right of pre-emption, third party right or interest, claim or restriction of any kind or nature (collectively the "***Encumbrances***"), except for restrictions arising under the Securities Act or created by virtue of this Agreement, and upon delivery and entry into the register of members of the Company will transfer to the Subscriber good and valid title to the Subscribed Shares.

(e) **Noncontravention**. Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby and thereby, will (i) violate any provision of the organizational documents of the Company or violate any constitution, statute, regulation, rule, injunction, judgment, order, decree, ruling, charge, or other restriction of any government, governmental entity or court to which the Company is subject, or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of or creation of an encumbrance under, or create in any party the right to accelerate, terminate, modify, or cancel, any agreement, contract, lease, license, instrument, or other arrangement to which the Company is a party or by which the Company is bound or to which any of the Company's assets is subject. There is no action, suit or proceeding, pending or threatened against the Company that questions the validity of this Agreement or the right of the Company to enter into this Agreement or to consummate the transactions contemplated hereby.

(f) Consents and Approvals. Neither the execution and delivery by the Company of this Agreement, nor the consummation by the Company of any of the transactions contemplated hereby and thereby, nor the performance by the Company of this Agreement in accordance with its terms requires the consent, approval, order or authorization of, or registration with, or the giving notice to, any governmental or public body or authority or any third party, except such as have been or will have been obtained, made or given on or prior to the Closing Date.

ARTICLE 3

MISCELLANEOUS

3.1 Governing Law; Arbitration. This Agreement shall be governed and interpreted in accordance with the laws of the Cayman Islands. Any dispute arising out of or relating to this Agreement, including any question regarding its existence, validity or termination ("***Dispute***") shall be referred to and finally resolved by arbitration at the Hong Kong International Arbitration Centre in accordance with the Hong Kong International Arbitration Centre Administered Arbitration Rules then in force. There shall be three arbitrators. Each Party has the right to appoint one arbitrator and the third arbitrator shall be appointed by the Hong Kong International Arbitration Centre. The language to be used in the arbitration proceedings shall be English. Each of the Parties irrevocably waives any immunity to jurisdiction to which it may be entitled or become entitled (including without limitation sovereign immunity, immunity to pre-award attachment, post-award attachment or otherwise) in any arbitration proceedings and/or enforcement proceedings against it arising out of or based on this Agreement or the transactions contemplated hereby.

3.2 Amendment. This Agreement shall not be amended, changed or modified, except by another agreement in writing executed by the Parties hereto.

3.3 Binding Effect. This Agreement shall inure to the benefit of, and be binding upon, each of the Company and the Subscriber and their respective heirs, successors and permitted assigns and legal representatives.

3.4 Assignment. Neither this Agreement nor any of the rights, duties or obligations hereunder may be assigned by the Company or the Subscriber without the express written consent of the other Party, except that the Subscriber may assign all or any part of his rights and obligations hereunder to any affiliate controlled by the Subscriber without the consent of the Company, provided that no such assignment shall relieve the Subscriber of its obligations hereunder if such assignee does not perform such obligations. Any purported assignment in violation of the foregoing sentence shall be null and void.

3.5 Entire Agreement. This Agreement constitutes the entire understanding and agreement between the Parties with respect to the matters covered hereby, and all prior agreements and understandings, oral or in writing, if any, between the Parties with respect to the matters covered hereby are merged and superseded by this Agreement.

3.6 Severability. If any provisions of this Agreement shall be adjudicated to be illegal, invalid or unenforceable in any action or proceeding whether in its entirety or in any portion, then such provision shall be deemed amended, if possible, or deleted, as the case may be, from the Agreement in order to render the remainder of the Agreement and any provision thereof both valid and enforceable, and all other provisions hereof shall be given effect separately therefrom and shall not be affected thereby.

3.7 Execution in Counterparts. For the convenience of the Parties and to facilitate execution, this Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the day and year first above written.

COMPANY:

21VIANET GROUP, INC.

By: /s/ Yoshihisa Ueno
Name: Yoshihisa Ueno
Title: Director

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the day and year first above written.

SUBSCRIBER:

PERSONAL GROUP LIMITED

By: /s/ Sheng Chen
Name: Sheng Chen
Title: Director

SIGNATURE PAGE TO SHARE SUBSCRIPTION AGREEMENT

EXHIBIT A

Rights of Class C Ordinary Shares

1. Holders of Class C Ordinary Shares shall at all times vote together with holders of Class A Ordinary Shares and Class B Ordinary Shares as one class on all resolutions submitted to a vote by the Shareholders. Each Class C Ordinary Share shall only entitle the holder thereof to one (1) vote on matters subject to vote at general meetings of the Company, except that the Company shall only proceed with the following matters with the written consent of the holders holding a majority of the issued and outstanding Class C Ordinary Shares or with the sanction of a Special Resolution passed at a separate meeting of the holders of the issued and outstanding Class C Ordinary Shares:

   (a) any appointment or removal of Directors other than the appointment or removal of Directors that is made pursuant to a Shareholder's right under (i) the Investor Rights Agreement dated January 15, 2015 among the Company, King Venture Holdings Limited, Xiaomi Ventures Limited and certain other parties named therein; and (ii) the Share Subscription Agreement, dated May 23, 2016, between Company and Tuspark Innovation Venture Limited;

   (b) the entry into any agreement by the Company or its subsidiaries with any shareholder who holds more than 10% of the Company's issued and outstanding share capital or such shareholder's Affiliate, other than agreements entered into in the Company's ordinary course of business with a total contract amount below 10% of the Company's consolidated total revenue in the most recent completed fiscal year; and

   (c) any proposed amendments to the Company's memorandum and articles of associations that will amend, alter, modify or change the rights attached to Class C Ordinary Shares.

2. Each Class C Ordinary Share is convertible into one (1) Class A Ordinary Share at any time by the holder thereof. The right to convert shall be exercisable by the holder of the Class C Ordinary Share by delivering a written notice to the Company that such holder elects to convert a specified number of Class C Ordinary Shares into Class A Ordinary Shares.

3. Any number of Class C Ordinary Shares held by a holder thereof will be automatically and immediately converted into an equal number of Class A Ordinary Shares upon the occurrence of any of the following:

   (a) any sale, transfer, assignment or disposition of such number of Class C Ordinary Shares by the holder thereof or the direct or indirect transfer or assignment of the voting power attached to such number of Class C Ordinary Shares through voting proxy or otherwise to any person that is not an Affiliate of such holder;

   for the avoidance of doubt, the creation of any pledge, charge, encumbrance or other third party right of whatever description on any of Class C Ordinary Shares to secure contractual or legal obligations shall not be deemed as a sale, transfer, assignment or disposition unless and until any such pledge, charge, encumbrance or other third party right is enforced and results in a third party that is not an Affiliate of the holder holding directly or indirectly beneficial ownership or voting power through voting proxy or otherwise to the related Class C Ordinary Shares, in which case all the related Class C Ordinary Shares shall be automatically converted into the same number of Class A Ordinary Shares; or

   (b) the direct or indirect sale, transfer, assignment or disposition of a majority of the issued and outstanding voting securities of, or the direct or indirect transfer or assignment of the voting power attached to such voting securities through voting proxy or otherwise, or the direct or indirect sale, transfer, assignment or disposition of all or substantially all of the assets of, a holder of Class C Ordinary Shares that is an entity to any person that is not an Affiliate of such holder;

for the avoidance of doubt, the creation of any pledge, charge, encumbrance or other third party right of whatever description on the issued and outstanding voting securities or the assets of a holder of Class C Ordinary Shares that is an entity to secure contractual or legal obligations shall not be deemed as a sale, transfer, assignment or disposition under this clause (b) unless and until any such pledge, charge, encumbrance or other third party right is enforced and results in a third party that is not an Affiliate of the holder holding directly or indirectly beneficial ownership or voting power through voting proxy or otherwise to the related issued and outstanding voting securities or the assets.

4. Any conversion of Class C Ordinary Shares into Class A Ordinary Shares shall be effected by means of the re-designation of each relevant Class C Ordinary Share as a Class A Ordinary Share. Such conversion shall become effective forthwith upon entries being made in the Register to record the re-designation of the relevant Class C Ordinary Shares as Class A Ordinary Shares.

5. Class A Ordinary Shares are not convertible into Class C Ordinary Shares under any circumstances.

6. Save and except for voting rights and conversion rights as set out above, the Class A Ordinary Shares, the Class B Ordinary Shares and the Class C Ordinary Shares shall rank pari passu with one another and shall have the same rights, preferences, privileges and restrictions.

7. Capitalized terms that are not defined herein shall have the meaning ascribed to them under the Company's currently effective memorandum and articles of association.

Exhibit 8.1

List of Significant Subsidiaries and Principal Consolidated Affiliated Entities*

Significant Subsidiaries	Jurisdiction of Incorporation
21ViaNet Group Limited	Hong Kong
21Vianet Mobile Limited	Hong Kong
21Vianet Ventures Limited	Hong Kong
Diyixian.com Limited	Hong Kong
Dermot Holdings Limited	British Virgin Islands
21Vianet DRP Investment Holdings Limited	Hong Kong
Shihua DC Investment Holdings Limited	Cayman
Shihua DC Investment Holdings 2 Limited	Cayman
21Vianet Data Center Co., Ltd.	PRC
21Vianet Anhui Suzhou Technology Co., Ltd.	PRC
Joytone Infotech Co., Ltd.	PRC
21Vianet (Foshan) Technology Co., Ltd.	PRC
21Vianet (Xi'an) Technology Co., Ltd.	PRC
Abitcool (China) Broadband Inc.	PRC
21Vianet Hangzhou Information Technology Co., Ltd.	PRC
21Vianet Zhuhai Financial Leasing Co., Ltd.	PRC
Foshan Zhuoyi Intelligence Data Co., Ltd.	PRC
Shenzhen Diyixian Telecommunication Co., Ltd.	PRC
Beijing Hongyuan Network Technology Co., Ltd.	PRC
Shanghai Waigaoqiao Free Trade Zone Hongming Logistics Co., Ltd.	PRC

Principal Consolidated Affiliated Entities	
Beijing Yiyun Network Technology Co., Ltd. (previously known as Beijing aBitCool Network Technology Co., Ltd.)	PRC
Beijing iJoy Information Technology Co., Ltd.	PRC
Shanghai iJoy Information Technology Co., Ltd.	PRC
WiFire Network Technology (Beijing) Co., Ltd.	PRC
Beijing 21Vianet Broad Band Data Center Co., Ltd.	PRC
Beijing Yilong Xinda Technology Co., Ltd.	PRC
Langfang Xunchi Computer Data Processing Co., Ltd.	PRC
Shanghai Blue Cloud Technology Co., Ltd.	PRC
21Vianet (Xi'an) Information Outsourcing Industry Park Services Co., Ltd	PRC
Beijing Yichengtaihe Investment Co., Ltd.	PRC
Guangzhou Lianyun Big Data Co., Ltd.	PRC
Beijing Xianghu Yunlian technology Co., Ltd.	PRC
Shanghai Hujiang Songlian Technology Co., Ltd.	PRC
Beijing Shuhai Hulian technology Co., Ltd.	PRC
Nantong Chenghong Cloud Computing Co., Ltd.	PRC

* Other entities of 21Vianet Group, Inc. have been omitted from this list since, considered in the aggregate as a single entity, they would not constitute a significant subsidiary.

Exhibit 12.1

Certification by the Principal Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Shiqi Wang, certify that:

1. I have reviewed this annual report on Form 20-F of 21Vianet Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 2, 2020

By: /s/ Shiqi Wang
Name: Shiqi Wang
Title: Chief Executive Officer

Exhibit 12.2

Certification by the Principal Financial Officer

Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Sharon Xiao Liu, certify that:

1. I have reviewed this annual report on Form 20-F of 21Vianet Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 2, 2020

By: /s/ Sharon Xiao Liu
Name: Sharon Xiao Liu
Title: Chief Financial Officer

Exhibit 13.1

Certification by the Principal Executive Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of 21Vianet Group, Inc. (the "Company") on Form 20-F for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Shiqi Wang, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 2, 2020

By: /s/ Shiqi Wang
Name: Shiqi Wang
Title: Chief Executive Officer

Exhibit 13.2

Certification by the Principal Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of 21Vianet Group, Inc. (the "Company") on Form 20-F for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Sharon Xiao Liu, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 2, 2020

By: /s/ Sharon Xiao Liu
Name: Sharon Xiao Liu
Title: Chief Financial Officer

Exhibit 15.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements of 21Vianet Group, Inc.:

i) Form S-8 No. 333-177273, pertaining to the 2010 Share Incentive Plan;

ii) Form S-8 No. 333-187695, pertaining to the 2010 Share Incentive Plan, as amended;

iii) Form S-8 No. 333-197495, pertaining to the 2014 Share Incentive Plan;

iv) Form S-8 No. 333-208121, pertaining to the 2014 Share Incentive Plan, as amended; and

v) Form S-8 No. 333-222521, pertaining to the 2014 Share Incentive Plan, as amended,

of our reports dated April 2, 2020, with respect to the consolidated financial statements of 21Vianet Group, Inc. and the effectiveness of internal control over financial reporting of 21Vianet Group, Inc., included in this Annual Report (Form 20-F) for the year ended December 31, 2019.

/s/ Ernst & Young Hua Ming LLP

Shanghai, People's Republic of China

April 2, 2020

Exhibit 15.2

Consent of Han Kun Law Offices

To: 21Vianet Group, Inc.

Guanjie Building Southeast 1st Floor, 10# Jiuxianqiao East Road
Chaoyang District, Beijing 100016
the People's Republic of China

Date: April 2, 2020

Dear Sirs,

We consent to the reference to our firm under the headings "Item 3.D—Risk Factors," "Item 4.B—Business Overview—Regulation," "Item 4.C— Organizational Structure—Contractual Arrangements with Our Variable Interest Entities and Their Shareholders" and "Item 5.A—Operating Results" in 21Vianet Group, Inc.'s Annual Report on Form 20-F for the year ended December 31, 2019, which will be filed with the Securities and Exchange Commission (the "SEC"), and further consent to the incorporation by reference of the summaries of our opinions under these captions into the registration statement on Form S-8 (File No. 333-177273) pertaining to 21Vianet Group, Inc.'s 2010 Share Incentive Plan, the registration statement on Form S-8 (File No. 333-187695) pertaining to 21Vianet Group, Inc.'s 2010 Share Incentive Plan, as amended, the registration statement on Form S-8 (File No. 333-197495) pertaining to 21Vianet Group, Inc.'s 2014 Share Incentive Plan, the registration statement on Form S-8 (File No. 333-208121) pertaining to 21Vianet Group, Inc.'s 2014 Share Incentive Plan, as amended and the registration statement on Form S-8 (File No. 333-222521) pertaining to 21Vianet Group, Inc.'s 2014 Share Incentive Plan. We also consent to the filing with the SEC of this consent letter as an exhibit to the Annual Report on Form 20-F for the year ended December 31, 2019.

Yours faithfully,

/s/ Han Kun Law Offices
Han Kun Law Offices