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GDS Holdings Limited** (the “**Company**”) is controlled through weighted voting rights. Shareholders and prospective investors should be aware of the potential risks of investing in a company with a weighted voting right, or WVR, structure. Particularly, the WVR beneficiary, whose interests may not necessarily be aligned with those of our shareholders as a whole, will be in a position to exert significant influence over the outcome of shareholders’ resolutions, irrespective of how other shareholders vote. Our American depositary shares, each representing eight of our Class A ordinary shares, are listed on the Nasdaq Global Market in the United States under the symbol GDS.



GDS Holdings Limited

萬國數據控股有限公司*

(A company controlled through weighted voting rights and incorporated in the Cayman Islands with limited liability under the name GDS Holdings Limited and carrying on business in Hong Kong as GDS WanGuo Holdings Limited)

(Stock Code: 9698)

OVERSEAS REGULATORY ANNOUNCEMENT

We are making this announcement pursuant to Rule 13.10B of the Hong Kong Listing Rules.

We filed an annual report on Form 20-F for the fiscal year ended December 31, 2022 (the “**Form 20-F**”) with the Securities and Exchange Commission of the United States. The Form 20-F is attached and is available for viewing on our website at <http://www.gds-services.com>.

By order of the Board
GDS Holdings Limited **
Mr. William Wei Huang
Chairman and Chief Executive Officer

Hong Kong, April 4, 2023

As at the date of this announcement, the board of directors of the Company comprises Mr. William Wei Huang as the chairman, Mr. Sio Tat Hiang as the vice-chairman, Mr. Satoshi Okada, Mr. Bruno Lopez, Mr. Lee Choong Kwong, and Mr. Gary J. Wojtaszek as directors, and Mr. Lim Ah Doo, Ms. Bin Yu, Mr. Zulkifli Baharudin, Mr. Chang Sun and Ms. Judy Qing Ye as independent directors.

* *For identification purposes only*

** *Incorporated in the Cayman Islands with limited liability under the name GDS Holdings Limited and carrying on business in Hong Kong as GDS WanGuo Holdings Limited*

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

FORM 20-F

(Mark One)

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

OR

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

For the fiscal year ended December 31, 2022.

OR

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

OR

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

For the transition period from _____ to _____

Commission file number 001-37925

GDS Holdings Limited

(Exact name of Registrant as specified in its charter)

Cayman Islands

(Jurisdiction of incorporation or organization)

**F4/F5, Building C, Sunland International
No. 999 Zhouhai Road
Pudong, Shanghai 200137
People's Republic of China**
(Address of principal executive offices)

**Contact Person: Mr. Daniel Newman
Chief Financial Officer
+86-21-2029 2200**

**F4/F5, Building C, Sunland International
No. 999 Zhouhai Road
Pudong, Shanghai 200137
People's Republic of China**

* (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(s)	Name of each exchange on which registered
Class A ordinary shares, par value \$0.00005 per share*	9698	The Stock Exchange of Hong Kong Limited
American Depositary Shares, each representing eight Class A ordinary shares	GDS	Nasdaq Global Market

* Not for trading, but only in connection with the registration of American Depositary Shares representing such Class A ordinary shares pursuant to the requirements of the Securities and Exchange Commission.

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

None

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

None

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.

<u>Title of class</u>	<u>Number of shares outstanding</u>
Class A ordinary shares were outstanding as of December 31, 2022	1,456,842,655
Class B ordinary shares were outstanding as of December 31, 2022	67,590,336

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

Yes No

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 No

Note — Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

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 No

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 No

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 the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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.

[†] 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 whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

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 Item 18

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 No

(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 Section 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 No

GDS HOLDINGS LIMITED
FORM 20-F ANNUAL REPORT

FISCAL YEAR ENDED DECEMBER 31, 2022

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Conventions That Apply to This Annual Report on Form 20-F

Unless we indicate otherwise, references in this annual report on Form 20-F to:

- “2019 PRC Foreign Investment Law” are to the PRC Foreign Investment Law promulgated by the National People’s Congress in March 2019, which became effective on January 1, 2020;
- “ADSs” are to our American depository shares, each of which represents eight Class A ordinary shares, and “ADRs” are to the American depository receipts that evidence our ADSs;
- “area committed” are to that part of our area in service which is committed to customers pursuant to customer agreements remaining in effect;
- “area held for future development” are to the estimated net floor area that we have secured for potential future development by different means, which are not actively under construction;
- “area in service” are to the entire net floor area of data centers (or phases of data centers) which are ready for service;
- “area pre-committed” are to that part of our area under construction which is pre-committed to customers pursuant to customer agreements remaining in effect;
- “area under construction” are to the entire net floor area of data centers (or phases of data centers) which are actively under construction and have not yet reached the stage of being ready for service;
- “area utilized” are to that part of our area in service that is committed to customers and revenue generating pursuant to the terms of customer agreements remaining in effect;
- “Articles” or “Articles of Association” are to our Articles of Association (as amended from time to time), adopted on June 29, 2021 and effective on June 29, 2021;
- “build-operate-transfer data centers” or “B-O-T data centers” are to data centers that we undertake to build and operate for specific customers for their exclusive use, and transfer to such customers at the end of the contract period;
- “carrier-neutral” or “cloud-neutral” are to data centers that are not owned, operated, or tied to any one network or cloud service provider, respectively;
- “CBIRC” are to the China Banking and Insurance Regulatory Commission, the predecessor of the State Administration for Financial Regulation of the PRC;
- “CCASS” are to the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited, a wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited;
- “China” and the “PRC” are to the People’s Republic of China, excluding, for the purposes of this annual report only, Taiwan, and the special administrative regions of Hong Kong and Macau;
- “Circular 82” are to the Notice Regarding the Determination of Chinese-controlled Offshore-Incorporated Enterprises as PRC Tax Resident Enterprises on the basis of de facto management bodies, issued on April 22, 2009 and further amended on December 29, 2017;
- “Class A ordinary shares” are to Class A ordinary shares in the share capital of our company with a par value of US\$0.00005 each, conferring a holder of a Class A ordinary share to one vote per share on any resolution tabled at our general meeting;

- “Class B ordinary shares” are to Class B ordinary shares in the share capital of our company with a par value of US\$0.00005 each, conferring weighted voting rights in our company such that a holder of a Class B ordinary share is entitled to 20 votes per share on resolutions tabled at our general meeting for (i) the election or removal of a simple majority, or six, of our directors; and (ii) any change to our Articles of Association that would adversely affect the rights of Class B shareholders, and which are convertible into Class A ordinary shares, and will automatically convert into Class A ordinary shares under certain circumstances;
- “commitment rate” are to the ratio of area committed to area in service;
- “Companies (WUMP) Ordinance” are to the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Chapter 32 of the Laws of Hong Kong), as amended or supplemented from time to time;
- “Controlling Shareholders” are to Mr. Huang and STT GDC, unless the context otherwise requires; such term has the meaning ascribed to it under the Hong Kong Listing Rules;
- “CSRC” are to the China Securities Regulatory Commission;
- “Data Center Operation Management Platform” are to the platform we developed and operate which provides real-time information on many aspects of data center operating performance;
- “DTC” are to The Depository Trust Company, the central book-entry clearing and settlement system for equity securities in the United States and the clearance system for our ADSs;
- “Entity List” are to the list maintained by the United States or U.S. Department of Commerce identifying foreign entities believed to be involved, or pose a significant risk of being or becoming involved, in activities contrary to the national security or foreign policy interests of the United States and which are prohibited from acquiring some or all items subject to the U.S. Export Administration Regulations, or EAR;
- “ESG report” or “Environmental, Social and Governance Report” are to all ESG reports that we have issued, namely, our 2020 ESG report, which is accessible via hyperlink in our press release, Exhibit 99.1 to our Form 6-K (File No. 001-37925), furnished to the SEC on November 30, 2021, and our 2021 ESG report, which is accessible via hyperlink in our press release, Exhibit 99.1 to our Form 6-K (File No. 001-37925), furnished to the SEC on December 1, 2022;
- “foreign private issuer” are to such term as defined in Rule 3b-4 under the U.S. Exchange Act;
- “GDS Beijing” are to Beijing Wanguo Chang’an Science and Technology Co., Ltd., a limited liability company established in the PRC on May 30, 2006 and a wholly-owned subsidiary of Management HoldCo;
- “GDS Holdings,” “company,” “our company,” “we,” “our” or “us” are to GDS Holdings Limited, a company incorporated in the Cayman Islands with limited liability on December 1, 2006 and, where the context requires, its consolidated subsidiaries and the consolidated affiliated entities, including the variable interest entities and their subsidiaries, from time to time;
- “GDS International”, are to DigitalLand Holdings Limited, a company incorporated in the Cayman Islands with limited liability on May 18, 2022, which is the holding company of its consolidated subsidiaries and the consolidated affiliated entities conducting international business and operation outside mainland China;
- “GDS Investment Company” are to GDS (Shanghai) Investment Co., Ltd. (formerly known as Shanghai Free Trade Zone GDS Management Co., Ltd.), a limited liability company established in the PRC on December 30, 2015 and our wholly-owned indirect subsidiary;
- “GDS Shanghai” are to Shanghai Shu’an Data Services Co., Ltd., a limited liability company established in the PRC on May 4, 2011 and a wholly-owned subsidiary of Management HoldCo;

- “GDS Suzhou” are to Global Data Solutions Co., Ltd., a limited liability company established in the PRC on September 30, 2000 and a wholly-owned subsidiary of GDS Beijing;
- “GIC” are to GIC Private Limited, Singapore’s sovereign wealth fund;
- “gross floor area” are either to the total internal area of buildings which we own, or to the total area under lease with respect to buildings which we lease;
- “Group,” “our Group” or “the Group” are to GDS Holdings Limited and its subsidiaries (including the variable interest entities) from time to time;
- “HK\$,” “Hong Kong dollars” or “HK dollars” are to Hong Kong dollars, the lawful currency of Hong Kong;
- “Hong Kong,” “HK” or “Hong Kong S.A.R.” are to the Hong Kong Special Administrative Region of the PRC;
- “Hong Kong Listing Rules” are to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended or supplemented from time to time;
- “Hong Kong Share Registrar” are to Computershare Hong Kong Investor Services Limited;
- “Hong Kong Stock Exchange” are to The Stock Exchange of Hong Kong Limited;
- “IDC(s)” are to internet data center(s);
- “M&A Rules” are to the Rules on the Merger and Acquisition of Domestic Enterprises by Foreign Investors jointly issued by MOFCOM, SASAC, STA, CSRC, SAIC and SAFE on August 8, 2006, effective on September 8, 2006 and further amended on June 22, 2009 by MOFCOM;
- “Macau” or “Macau S.A.R.” are to the Macau Special Administrative Region of the PRC;
- “Management HoldCo” are to Shanghai Xinwan Enterprise Management Co., Ltd., a limited liability company established in the PRC on October 16, 2019; as of February 28, 2023, the shareholders of Management HoldCo were Yilin Chen (senior vice president, product and service and Southeast Asia business), Yan Liang (senior vice president, design, operation and delivery), Kejing Zhang (senior vice president, sales), Andy Wenfeng Li (general counsel, compliance officer, and company secretary) and Qi Wang (senior vice president, cloud and network business); such shareholders were designated by the board of directors of our company;
- “Memorandum” or “Memorandum of Association” are to our memorandum of association (as amended from time to time);
- “MIIT” are to the Ministry of Industry and Information Technology;
- “MOFCOM” are to the Ministry of Commerce of the PRC;
- “move-in period” are to the period commencing when part of the area committed under a particular customer agreement becomes area utilized and ending when all of the area committed under such customer agreement becomes area utilized in accordance with the terms of such customer agreement remaining in effect;
- “Mr. Huang” are to Mr. William Wei Huang, the founder, chairman of the board, and chief executive officer of our company and a Controlling Shareholder;
- “Nasdaq” are to the Nasdaq Global Market;

- “NDRC” are to the National Development and Reform Commission;
- “Negative List (2021)” are to the Special Administrative Measures (Negative List) for Foreign Investment Access, most recently jointly promulgated by the MOFCOM and the NDRC on December 27, 2021 and which became effective on January 1, 2022, as amended, supplemented or otherwise modified from time to time;
- “net floor area” are to the total internal area of the computer rooms within each data center where customers can house, power and cool their computer systems and networking equipment;
- “ordinary shares” are to, collectively, our Class A ordinary shares and Class B ordinary shares, par value US\$0.00005 per share;
- “PBOC” are to the People’s Bank of China;
- “PCAOB” are to the Public Company Accounting Oversight Board;
- “PRC government” or “State” are to the central government of the PRC, including all political subdivisions (including provincial, municipal and other regional or local government entities) and its organs or, as the context requires, any of them;
- “pre-commitment rate” are to the ratio of area pre-committed to area under construction;
- “Principal Share Registrar” are to Conyers Trust Company (Cayman) Limited;
- “PUE” are to power usage effectiveness;
- “PUE ratio” are to power usage effectiveness ratio, a metric used to determine the energy efficiency of a data center; it is determined by dividing the total amount of power consumed by the data center by the total amount of power consumed directly by customers to operate their IT systems housed in the data center;
- “ready for service” are to data centers (or phases of data centers) which have passed commissioning and testing, obtained government approvals for operation, are fully supplied with power, and contain one or more computer rooms fully equipped and fitted out ready for utilization by customers;
- “RMB” or “Renminbi” are to Renminbi, the lawful currency of the PRC;
- “SAFE” are to the State Administration of Foreign Exchange of the PRC, the PRC governmental agency responsible for matters relating to foreign exchange administration, including local branches, when applicable;
- “SAFE Circular 37” are to the Circular on Relevant Issues Concerning Foreign Exchange Control on Domestic Residents’ Offshore Investment and Financing and Roundtrip Investment through Special Purpose Vehicles promulgated by SAFE with effect from July 4, 2014;
- “SAIC” or “SAMR” are to the State Administration for Industry and Commerce of the PRC, currently known as the PRC State Administration for Market Regulation;
- “SASAC” are to the State-owned Assets Supervision and Administration Commission of the State Council;
- “SCNPC” are to the Standing Committee of the National People’s Congress of the PRC;
- “SEC” are to the United States Securities and Exchange Commission;

- “self-developed data centers” are to data centers operated by us that we either purpose-build from the ground up, develop from building shells purpose-built for us, convert from existing buildings, acquire, or build, operate, and transfer pursuant to contacts with specific customers;
- “SFO” are to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended or supplemented from time to time;
- “shareholder(s)” are to holder(s) of ordinary shares and, where the context requires, ADSs;
- “sqm” are to square meters;
- “STA” are to the State Taxation Administration of the PRC;
- “State Council” are to the PRC State Council;
- “STT GDC” are to STT GDC Pte. Ltd., a private limited liability company incorporated in Singapore on November 21, 2012, and a wholly owned subsidiary of STT Communications Ltd., which is in turn a wholly owned subsidiary of Singapore Technologies Telemedia Pte. Ltd., or ST Telemedia;
- “Takeovers Codes” are to the Codes on Takeovers and Mergers and Share Buy-backs issued by the Securities and Futures Commission of Hong Kong;
- “third-party data centers” are to data center net floor area operated by us that we lease on a wholesale basis from other data center providers and use to provide data center services to our customers;
- “Tier 1 markets” are to the areas in and around the cities of Shanghai, Beijing, Shenzhen, Guangzhou, Hong Kong, Chengdu and Chongqing;
- “total area committed” are to the sum of area committed and area pre-committed;
- “UK” or “United Kingdom” are to the United Kingdom of Great Britain and Northern Ireland;
- “U.S.” or “United States” are to the United States of America, its territories, its possessions and all areas subject to its jurisdiction;
- “U.S. Exchange Act” are to the United States Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder;
- “U.S. GAAP” are to accounting principles generally accepted in the United States;
- “U.S. Securities Act” are to the United States Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder;
- “US\$” or “U.S. dollars” are to the legal currency of the United States;
- “utilization rate” are to the ratio of area utilized to area in service;
- “variable interest entities,” “VIE” or “VIEs” are to the variable interest entities that are 100% owned by PRC citizens or by PRC entities owned by PRC citizens, where applicable, that hold the VATS licenses, or other business operation licenses or approvals, in which foreign investment is restricted or prohibited, and are consolidated into our consolidated financial statements in accordance with U.S. GAAP as if they were our wholly-owned subsidiaries;

- “VAT” are to value-added tax; all amounts are exclusive of VAT in this annual report except where indicated otherwise;
- “VATS” are to value-added telecommunications services;
- “VIE structure” or “Contractual Arrangements with Affiliated Consolidated Entities” or “contractual arrangements with the consolidated VIEs” are to the variable interest entity structure; and
- “WFOE(s)” are to wholly foreign owned enterprise(s) incorporated in the PRC which is/are directly or indirectly wholly owned by our company.

Unless specifically indicated otherwise or unless the context otherwise requires, all references to our ordinary shares exclude Class A ordinary shares issuable upon (i) conversion of our convertible senior notes and (ii) conversion of our convertible preferred shares.

This annual report contains translations between Renminbi and U.S. dollars solely for the convenience of the reader. The translations from Renminbi to U.S. dollars and from U.S. dollars to Renminbi in this annual report were made at a rate of RMB6.8972 to US\$1.00, the exchange rate set forth in the H.10 statistical release of the Federal Reserve Board on December 30, 2022. We make no representation that the Renminbi or U.S. dollar amounts referred to in this annual report could have been or could be converted into U.S. dollars or Renminbi, as the case may be, at any particular rate or at all.

This annual report includes our audited consolidated financial statements for the years ended December 31, 2020, 2021 and 2022.

Our ADSs are listed on the Nasdaq under the ticker symbol “GDS.” Our ordinary shares are listed on the Hong Kong Stock Exchange under the stock code “9698.”

Special Note Regarding Forward-Looking Statements

This annual report contains forward-looking statements that involve risks and uncertainties, including statements based on our current expectations, assumptions, estimates and projections about us and our industry. These forward-looking statements are made under the “safe harbor” provision under Section 21E of the U.S. Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. In some cases, these forward-looking statements can be identified by words or phrases such as “may”, “will”, “expect”, “anticipate”, “aim”, “estimate”, “intend”, “plan”, “believe”, “potential”, “continue”, “is/are likely to” or other similar expressions. The forward-looking statements included in this annual report relate to, among others:

- our goals and strategies;
- 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 maintaining and strengthening our relationships with customers;
- the completion of any proposed acquisition transactions, including the regulatory approvals and other conditions that must be satisfied or waived in order to complete the acquisition transactions;
- international trade policies, protectionist policies and other policies that could place restrictions on economic and commercial activity;

- general economic and business conditions in the regions where we operate; and
- assumptions underlying or related to any of the foregoing.

In addition, any projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Item 3. Key Information—D. Risk Factors” and elsewhere in this annual report. You should not place undue reliance on these forward-looking statements.

The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements to reflect events or circumstances after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report and the documents that we have referred to in this annual report and have filed as exhibits hereto completely and with the understanding that our actual future results may be materially different from what we expect.

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.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not required.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not required.

ITEM 3. KEY INFORMATION

Our Corporate Structure and Contractual Arrangements with the Consolidated Affiliated Entities

GDS Holdings Limited is not an operating company in China, but instead is a Cayman Islands holding company. PRC laws and regulations impose certain restrictions or prohibitions on foreign ownership of companies that engage in telecommunications-related businesses, including the provision of VATS. Our internet data center businesses are classified as VATS by the PRC government. Accordingly, we operate substantially all of these business operations in China through the consolidated VIEs and their subsidiaries, as well as through our subsidiaries, and rely on contractual arrangements, described below, to control the business operations of the consolidated VIEs. GDS Holdings Limited has no equity ownership in the consolidated VIEs. Revenues contributed by the VIEs and their subsidiaries accounted for 95.0%, 96.1% and 96.1% of our total revenues for the years of 2020, 2021 and 2022, respectively. As used in this annual report, “we,” “us,” “our company,” “the Company” or “our” refers to a company incorporated in the Cayman Islands and, where the context requires, its consolidated subsidiaries and the consolidated affiliated entities, including the variable interest entities and their subsidiaries, from time to time. Investors in our ADSs are not purchasing an equity interest in the consolidated VIEs and their subsidiaries in China, but instead are purchasing an equity interest in a Cayman Islands holding company and its subsidiaries (excluding the VIEs and their subsidiaries).

Our wholly-owned PRC subsidiaries, the consolidated VIEs and their shareholders have entered into a series of contractual arrangements, including equity interest pledge agreements, shareholder voting rights proxy agreements, exclusive technology license and service agreements, intellectual property rights license agreements, exclusive call option agreements and loan agreements. The terms in each set of contractual arrangements with the consolidated VIEs and their shareholders are substantially similar. For more details of these contractual arrangements, see “Item 4. Information on the Company—C. Organizational Structure—Contractual Arrangements with Affiliated Consolidated Entities.” We rely on these contractual arrangements to control the business operations of the consolidated VIEs. As a result of these contractual arrangements, we are the primary beneficiary of Management HoldCo, GDS Shanghai, GDS Beijing and their respective subsidiaries, and, therefore, have consolidated their financial results in our consolidated financial statements in accordance with U.S. GAAP.

However, these contractual arrangements may not be as effective as direct ownership in providing us with control over the consolidated VIEs and we may have to incur substantial costs and expend significant resources to enforce such arrangements in reliance on legal remedies under PRC law. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—We rely on contractual arrangements with the consolidated VIEs and their shareholders for our China operations, which may not be as effective as direct ownership in providing operational control and otherwise have a material adverse effect as to our business” and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—The individual management shareholders of our Management HoldCo may have potential conflicts of interest with us, which may materially and adversely affect our business and financial condition.”

There are also substantial uncertainties regarding the interpretation and application of current and future PRC laws, regulations and rules regarding the status of the rights of our Cayman Islands holding company with respect to the contractual arrangements. It is uncertain whether our corporate structure will be seen as violating the foreign investment rules as we are currently leveraging the contractual arrangements to operate businesses which are classified as VATS by the PRC government and are prohibited or restricted to foreign investment. Furthermore, if future legislation mandates 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. If we fail to take appropriate and timely measures to comply with any of these or similar regulatory compliance requirements, our current corporate structure, corporate governance, and business operations could be materially and adversely affected. Further, if our corporate structure or contractual arrangements were found to be in violation of any existing or future PRC laws or regulations, we could be subject to severe penalties, and the relevant regulatory authorities would have broad discretion in dealing with such violations. As a result, we would be unable to direct the activities of the consolidated VIEs and their subsidiaries, receive their economic benefits and/or claim our contractual control rights over the assets of the VIEs and their subsidiaries that conduct substantially all of our operations in China, we would no longer be able to consolidate such VIEs and their subsidiaries in our consolidated financial statements in accordance with U.S. GAAP, which would likely materially and adversely affect our financial condition and results of operations, and cause the value of our securities to significantly decline or become worthless. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the PRC government deems that the contractual arrangements in relation to the consolidated VIEs do not comply with PRC regulatory restrictions on foreign investment in the relevant industries, 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 the operations of the consolidated VIEs and their subsidiaries.” and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure -Substantial uncertainties exist with respect to the interpretation and implementation of the 2019 PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.”

In addition, we face various risks and uncertainties related to doing business in China. Our business operations are primarily conducted in China, and we are subject to complex and evolving PRC laws and regulations. For example, we face risks associated with regulatory approvals on offshore offerings, anti-monopoly regulatory actions, and oversight on cybersecurity and data security and protection, which may impact our ability to conduct certain businesses, accept foreign investments or financing, or list on a United States, Hong Kong or other foreign exchange. These risks could result in a material adverse change in our operations and the value of our ADSs, significantly limit or completely hinder our ability to offer or continue to offer securities to investors, or cause the value of our securities to significantly decline or become worthless. For more details of the risks we face related to doing business in China, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in People’s Republic of China.”

The PRC government’s significant authority in regulating our operations, as well as its oversight and control over offerings conducted overseas by, and foreign investment in, China-based issuers, could significantly limit or completely hinder our ability to offer or continue to offer securities to investors. Implementation of industry-wide regulations of this nature may cause the value of our securities to significantly decline or become worthless. For more details, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in People’s Republic of China—Our business operations are extensively impacted by the policies and regulations of the PRC government. Any policy or regulatory change may cause us to incur significant compliance costs.” and “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in People’s Republic of China—We face various legal and operational risks and uncertainties as a company based in and primarily operating in China.”

Risks and uncertainties arising from the legal system in China, including risks and uncertainties regarding the enforcement of laws and quickly evolving rules and regulations in China, could result in a material adverse change in our operations and the value of our ADSs. For more details, see “Item 3. Key Information—D. Risk Factors—There are uncertainties with respect to the PRC legal system, including uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations, and sudden or unexpected changes in policies, laws, rules and regulations in the PRC that could adversely affect us.”

Cash Flows through our Organization

GDS Holdings Limited is a holding company with no material operations of its own. As a result, although other means are available for us to obtain financing at the holding company level, our company’s ability to pay dividends to the shareholders and to service any debt it may incur may depend upon dividends paid by our subsidiaries. We conduct our operations primarily through our subsidiaries and consolidated VIEs and their subsidiaries. GDS Holdings Limited provides continuing financial support to our subsidiaries for business expansion, while our subsidiaries also obtain financings through borrowings from various financial institutions. Meanwhile, for compliance purpose, the VIEs and their subsidiaries are the contracting party for our IDC service agreements, and our subsidiaries, as the owners of most of the self-developed data center assets, provide outsourcing and other services to the VIEs. Once the VIEs and their subsidiaries receive service fee from the customers, they can settle the corresponding outsourcing and service fees to our subsidiaries accordingly. For more details, see “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources.”

Under PRC laws and regulations, our subsidiaries and the VIEs and their subsidiaries incorporated in China are subject to certain restrictions with respect to paying dividends or otherwise transferring any of their net assets to us. Remittance of dividends by a wholly foreign-owned enterprise out of China is also subject to examination by the banks designated by SAFE. As of December 31, 2022, the restricted net assets were RMB24,955.7 million (US\$3,618.2 million), including those of the VIEs and their subsidiaries of RMB284.6 million (US\$41.3 million) and our subsidiaries of RMB24,671.1 million (US\$3,577.0 million), which mainly consisted of paid-in registered capital. For risks relating to the fund flows of our operations in China, see “Item 3. Key Information—Risk Factors—Risks Related to Our Corporate Structure —We rely to a significant extent on dividends and other distributions on equity paid by our principal operating subsidiaries to fund offshore cash and financing requirements.”

Under PRC laws, GDS Holdings Limited may provide funding to our PRC subsidiaries only through capital contributions or intercompany loans, and to our VIEs and their subsidiaries only through intercompany loans, subject to satisfaction of applicable government registration and approval requirements.

In the years ended December 31, 2020, 2021 and 2022, GDS Holdings Limited, through the intermediate holding companies, made capital contribution or provided intercompany loans to the non-VIE subsidiaries of RMB4,940.0 million, RMB9,935.4 million and RMB6,312.5 million (US\$915.2 million), respectively.

In the years ended December 31, 2020, 2021 and 2022, GDS Holdings Limited and our subsidiaries did not provide any additional intercompany loans to the VIEs or their subsidiaries and the VIEs and their subsidiaries did not repay any existing intercompany loans to GDS Holdings Limited and our subsidiaries.

The Holding Foreign Companies Accountable Act

The Holding Foreign Companies Accountable Act, or the HFCA Act, was signed into law on December 18, 2020 and amended pursuant to the Consolidated Appropriations Act, 2023 on December 29, 2022. Under the HFCA Act and the rules issued by the SEC and the PCAOB thereunder, if we have retained a registered public accounting firm to issue an audit report where the registered public accounting firm has a branch or office that is located in a foreign jurisdiction and the PCAOB has determined that it is unable to inspect or investigate completely because of a position taken by an authority in the foreign jurisdiction, the SEC will identify us as a “covered issuer”, or SEC-identified issuer, shortly after we file with the SEC a report required under the Securities Exchange Act of 1934, or the Exchange Act (such as our annual report on Form 20-F) that includes an audit report issued by such accounting firm; and if we were to be identified as an SEC-identified issuer for two consecutive years, the SEC would prohibit our securities (including our shares or ADSs) from being traded on a national securities exchange or in the over-the-counter trading market in the United States.

In December 2021, the PCAOB made its determinations, or the 2021 determinations, pursuant to the HFCA Act that it was unable to inspect or investigate completely registered public accounting firms headquartered in mainland China or Hong Kong including our auditor, KPMG Huazhen LLP. After we filed our annual report on Form 20-F for the fiscal year ended December 31, 2021 that included an audit report issued by KPMG Huazhen LLP on April 28, 2022, the SEC conclusively identified us as an SEC-identified issuer on May 26, 2022. As such, we are required to satisfy additional disclosure requirement for SEC-identified issuers that are also foreign issuers in this annual report. See “Item 16I. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.”

Following the Statement of Protocol signed between the PCAOB and the CSRC and the Ministry of Finance of the PRC, or MOF, in August 2022 and the on-site inspections and investigations conducted by the PCAOB staff in Hong Kong from September to November 2022, the PCAOB Board voted in December 2022 to vacate the previous 2021 determinations, and as a result, our auditor, KPMG Huazhen LLP, is no longer a registered public accounting firm that the PCAOB is unable to inspect or investigate completely as of the date of this annual report or at the time of issuance of the audit report included herein. As such, we do not expect to be identified as an SEC-identified issuer again in 2023. However, the PCAOB may change its determinations under the HFCA Act at any point in the future. In particular, if the PCAOB finds its ability to completely inspect and investigate registered public accounting firms headquartered in mainland China or Hong Kong is obstructed by the PRC authorities in any way in the future, the PCAOB may act immediately to consider the need to issue new determinations consistent with the HFCA Act. We cannot assure you that the PCAOB will always have complete access to inspect and investigate our auditor, or that we will not be identified as an SEC-identified issuer again in the future.

If we are identified as an SEC-identified issuer again in the future, we cannot assure you that we will be able to change our auditor or take other remedial measures in a timely manner, and if we were to be identified as an SEC-identified issuer for two consecutive years, we would be delisted from the Nasdaq and our securities (including our shares and ADSs) will not be permitted for trading “over-the-counter” either. If our securities are prohibited from trading in the United States, or threatened with such a prohibition, the risk and uncertainty associated with delisting would have a negative impact on the price of our ADSs and ordinary shares. Also, such a prohibition or any threat thereof would significantly affect our ability to raise capital on terms acceptable to us, or at all, which would have a material adverse impact on our business, financial condition, and prospects. Moreover, the implementation of the HFCA Act and other efforts to increase the U.S. regulatory access to audit information could cause investor uncertainty as to China-based issuers’ ability to maintain their listings on the U.S. national securities exchanges and the market price of the securities of China-based issuers, including us, could be adversely affected.

Permissions Required from the PRC Authorities for Our Operations

We conduct our business primarily through our subsidiaries, the consolidated VIEs and their subsidiaries in China. Our operations in China are governed by PRC laws and regulations. As of the date of this annual report, our PRC subsidiaries, the consolidated VIEs and their subsidiaries have obtained the requisite licenses and permits from the PRC government authorities that are material for the business operations of our subsidiaries, the consolidated VIEs and their subsidiaries in China, including, among others, the VATS licenses, fixed-asset investment project filings and energy conservation review opinions. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practice by relevant government authorities, we may be required to obtain additional licenses, permits, filings or approvals for our business in the future. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Relating to Our Business and Industry—We may fail to obtain, maintain and update licenses or permits necessary to conduct our operations in the PRC, and our business may be materially and adversely affected as a result of any changes in the laws and regulations governing the VATS industry in the PRC.”

Furthermore, in connection with our previous issuance of securities to foreign investors, under current PRC laws, regulations and regulatory rules, as of the date of this annual report, we, our PRC subsidiaries, the consolidated VIEs and their subsidiaries, (i) are not required to obtain permissions from the CSRC, (ii) are not required to go through cybersecurity review by the Cyberspace Administration of China, or the CAC, and (iii) have not been asked to obtain such permissions by any PRC authority.

However, the PRC government has indicated an intent to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in the People’s Republic of China—The approval of, or filing with the CSRC or other PRC government authorities may be required in connection with acquisitions conducted by foreign investors or future offshore offerings under PRC law, and, if required, we cannot predict whether or for how long it will take to obtain such approval or complete such filing.”

A. [Reserved]

B. Capitalization and Indebtedness

Not required.

C. Reasons for the Offer and Use of Proceeds

Not required.

D. Risk Factors

Summary of Risk Factors

An investment in our ADSs and/or ordinary shares involves significant risks. Below is a summary of material risks we face, organized under relevant headings. These risks are discussed more fully in Item 3. Key Information—D. Risk Factors.

Risks Relating to Our Business and Industry

- A slowdown in the demand for data center capacity or managed services could have a material adverse effect on us;
- Any inability to manage the growth of our operations could disrupt our business and reduce our profitability;
- If we are not successful in expanding our service offerings, we may not achieve our financial goals and our results of operations may be adversely affected;
- Our business requires us to make significant capital expenditures and resource commitments prior to recognizing revenue for those services;
- The data center business is capital-intensive, and we expect our capacity to generate capital in the short term will be insufficient to meet our anticipated capital requirements;
- Our net revenue is highly dependent on a limited number of customers, and the loss of, or any significant decrease in business from, any one or more of our major customers could adversely affect our financial condition and results of operations;
- We are expanding our operations to new markets outside of mainland China and Hong Kong, which subject us to additional regulatory, economic and political risks, and we may not be able to effectively implement our international expansion plans; and

- As we further expand in Southeast Asia, specifically in Singapore, Malaysia and Indonesia, adverse developments in the economic, political, or regulatory environment of these countries may materially adversely affect our business and operating results.

Risks Related to Our Corporate Structure

- If the PRC government deems that the contractual arrangements in relation to the consolidated VIEs do not comply with PRC regulatory restrictions on foreign investment in the relevant industries, 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 the operations of the consolidated VIEs and their subsidiaries;
- Our contractual arrangements with the consolidated VIEs may result in adverse tax consequences to us; and
- We rely on contractual arrangements with the consolidated VIEs and their shareholders for our China operations, which may not be as effective as direct ownership in providing operational control and otherwise have a material adverse effect as to our business.

Risks Related to Doing Business in the People's Republic of China

- Changes in the political and economic policies of the PRC government may materially and adversely affect our business, financial condition and results of operations and may result in our inability to sustain our growth and expansion strategies; and
- We face various legal and operational risks and uncertainties as a company based in and primarily operating in China.

Risks Related to Our ADSs and Class A Ordinary Shares

- The trading prices of our ADSs and ordinary shares may be volatile, which could result in substantial losses to you;
- If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, the market price for our ADSs and/or ordinary shares and trading volume could decline;
- Techniques employed by short sellers may drive down the market price of our ADSs and/or ordinary shares;
- Because we do not expect to pay dividends in the foreseeable future, you must rely on price appreciation of our ADSs and/or ordinary shares for return on your investment; and
- The different characteristics of the capital markets in Hong Kong and the U.S. may negatively affect the trading prices of our ADSs and/or ordinary shares.

Risks Relating to Our Business and Industry

A slowdown in the demand for data center capacity or managed services could have a material adverse effect on us.

Adverse developments in the data center market, in the industries in which our customers operate, or in demand for cloud computing could lead to a decrease in the demand for data center capacity or managed services, which could have a material adverse effect on us. We face risks including:

- a decline in the technology industry, such as a decrease in the use of mobile or web-based commerce, business layoffs or downsizing, relocation of businesses, increased costs of complying with existing or new government regulations and other factors;

- a reduction in cloud adoption or a slowdown in the growth of the internet generally as a medium for commerce and communication and the use of cloud-based platforms and services in particular;
- a downturn in the market for data center capacity generally, which could be caused by an oversupply of or reduced demand for space, and a downturn in cloud-based data center demand in particular; and
- the rapid development of new technologies or the adoption of new industry standards that render our or our customers' current products and services obsolete or unmarketable and, in the case of our customers, that contribute to a downturn in their businesses, increasing the likelihood of a default under their service agreements or that they become insolvent.
- a downturn in the overall economic environment, which causes material challenges to our customers in their own business, as a result of which they may move-in more slowly to our data centers, reduce the area utilized by them, pay only the minimum billable amount stated in customer agreements, or seek to renegotiate, terminate early, or not renew such agreements at expiry.

To the extent that any of these or other adverse conditions occur, they are likely to impact market demand and pricing for our services.

Any inability to manage the growth of our operations could disrupt our business and reduce our profitability.

We have experienced significant growth in recent years. Our net revenue grew from RMB5,739.0 million in 2020 to RMB7,818.7 million in 2021, representing an increase of 36.2%, and further increased to RMB9,325.6 million (US\$1,352.1 million) in 2022, representing an increase of 19.3%. We derive net revenue primarily from colocation services and, to a lesser extent, managed services. In addition, we also sell IT equipment either on a stand-alone basis or bundled in a managed service agreement and provide consulting services. Our net revenues from colocation services were RMB4,710.9 million, RMB6,514.3 million and RMB7,943.3 million (US\$1,151.7 million) in 2020, 2021 and 2022, representing 82.1%, 83.3% and 85.2% of total net revenue over the same periods, respectively. Our net revenues from managed services and other services were RMB1,006.0 million, RMB1,300.1 million and RMB1,374.6 million (US\$199.3 million) in 2020, 2021 and 2022, representing 17.5%, 16.6% and 14.7% of total net revenue over the same periods, respectively. Our net revenue from IT equipment sales were RMB22.1 million, RMB4.3 million and RMB7.7 million (US\$1.1 million) in 2020, 2021 and 2022, representing 0.4%, 0.1% and 0.1% of total net revenue over the same periods, respectively.

Our operations have also expanded in recent years through increases in the number and size of the data center facilities we operate, which we expect will continue to grow. Our rapid growth has placed, and will continue to place, significant demands on our management and our administrative, operational and financial systems. Continued expansion increases the challenges we face in:

- obtaining suitable sites or land to build new data centers;
- establishing new operations at additional data centers and maintaining efficient use of the data center facilities we operate;
- managing a large and growing customer base with increasingly diverse requirements;
- expanding our service portfolio to cover a wider range of services, including managed cloud services;
- creating and capitalizing on economies of scale;
- being exposed to protectionist or national security policies that restrict our ability to invest in or acquire companies or develop, import or export certain technologies;
- obtaining additional capital to meet our future capital needs;
- recruiting, training and retaining a sufficient number of skilled technical, sales and management personnel;

- maintaining effective oversight over personnel and multiple data center locations;
- coordinating work among sites and project teams; and
- developing and improving our internal systems, particularly for managing our continually expanding business operations.

In addition, we have grown our business through acquisitions in the past and intend to continue selectively pursuing strategic partnerships and acquisitions to expand our business. From time to time, we may have a number of pending investments and acquisitions that are subject to closing conditions. There can be no assurance that we will be able to identify, acquire and successfully integrate other businesses and, if necessary, to obtain satisfactory debt or equity financing to fund those acquisitions. See “-We have expanded in the past and expect to continue to expand in the future through acquisitions of other companies, each of which may divert our management’s attention, result in additional dilution to shareholders or use resources that are necessary to operate our business.”

If we fail to manage the growth of our operations effectively, our businesses and prospects may be materially and adversely affected.

If we are not successful in expanding our service offerings, we may not achieve our financial goals and our results of operations may be adversely affected.

We have been expanding, and plan to continue to expand, the nature and scope of our service offerings, particularly into the area of managed cloud services, including direct private connection to major cloud platforms, an innovative service platform for managing hybrid clouds. The success of our expanded service offerings depends, in part, upon demand for such services by new and existing customers and our ability to meet their demand in a cost-effective manner. We may face a number of challenges in expanding our service offerings, including:

- acquiring or developing the necessary expertise in IT;
- maintaining high-quality control and process execution standards;
- maintaining productivity levels and implementing necessary process improvements;
- controlling costs; and
- successfully attracting existing and new customers for new services we develop.

A failure by us to effectively manage the growth of our service portfolio could damage our reputation, cause us to lose business and adversely affect our results of operations. In addition, because managed cloud services may require significant upfront investment, we expect that continued expansion into these services will reduce our profit margins. In the event that we are unable to successfully grow our service portfolio, we could lose our competitive edge in providing our existing colocation and managed services, since significant time and resources that are devoted to such growth could have been utilized instead to improve and expand our existing colocation and managed services.

Our business requires us to make significant capital expenditures and resource commitments prior to recognizing revenue for those services.

We have a long selling cycle for our services, which typically requires significant investment of capital, human resources and time by both our customers and us. Constructing, developing and operating our data centers require significant capital expenditures. A customer's decision to utilize our colocation services, our managed solutions or our other services typically involves time-consuming contract negotiations regarding the service level commitments and other terms, and substantial due diligence on the part of the customer regarding the adequacy of our infrastructure and attractiveness of our resources and services. Furthermore, we may expend significant time and resources in pursuing a particular sale or customer, and we do not recognize revenue for our services until such time as the services are provided under the terms of the applicable agreement. Our efforts in pursuing a particular sale or customer may not be successful, and we may not always have sufficient capital on hand to satisfy our working capital needs between the date on which we sign an agreement with a new customer and when we first receive revenue for services delivered to the customer. If our efforts in pursuing sales and customers are unsuccessful, or our cash on hand is insufficient to cover our working capital needs over the course of our long selling cycle, our financial condition could be negatively affected.

The data center business is capital-intensive, and we expect our capacity to generate capital in the short term will be insufficient to meet our anticipated capital requirements.

The costs of constructing, developing and operating data centers are substantial. Further, we may encounter development delays, excess development costs, or delays in developing space for our customers to utilize. We also may not be able to secure suitable land or buildings for new data centers or at a cost on terms acceptable to us. We are required to fund the costs of constructing, developing and operating our data centers with cash retained from operations, as well as from financings from bank and other borrowings. Moreover, the costs of constructing, developing and operating data centers have increased in recent years, and may further increase in the future, which may make it more difficult for us to expand our business and to operate our data centers profitably. Based on our current expansion plans, we do not expect that our net revenue in the short term will be sufficient to offset increases in these costs, or that our business operations in the short term will generate capital sufficient to meet our anticipated capital requirements. If we cannot generate sufficient capital to meet our anticipated capital requirements, our financial condition, business expansion and future prospects could be materially and adversely affected.

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 prevent us from meeting our obligations under our indebtedness.

We have substantial indebtedness. As of December 31, 2022, we had total consolidated indebtedness of RMB42,891.0 million (US\$6,218.6 million), including borrowings, finance lease and other financing obligations and convertible bonds. Based on our current expansion plans, we expect to continue to finance our operations 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 the 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 financial condition could be adversely affected. Increases in the target range for China's loan prime rate (LPR) and the federal funds rate adopted by the Federal Open Market Committee of the U.S. Federal Reserve System could significantly increase our borrowing costs, reduce our available cash flow and adversely affect our financial condition.

The terms of any future indebtedness we may incur could include more restrictive covenants. A breach of any of these covenants could result in a default with respect to the related indebtedness. If a default occurs, the relevant lenders could elect to declare the indebtedness, together with accrued interest and other fees, to be due and payable immediately. This, in turn, could cause our other debt, to become due and payable as a result of cross-default or acceleration provisions contained in the agreements governing such other debt. In the event that some or all of our debt is accelerated and becomes immediately due and payable, we may not have the funds to repay, or the ability to refinance, such debt.

Loans under certain of our data center financing arrangements are subject to a heightened risk of repayment being required on an immediate or accelerated basis, which could reduce our available cash flow and adversely affect our financial condition.

We have financing arrangements in place with various lenders to support specific data center construction projects. Certain of these financing arrangements are secured by share pledge over equity interests of our subsidiaries, our accounts receivable, property and equipment and land use rights. The terms of these financing arrangements may impose covenants and obligations on the part of our borrowing subsidiaries and/or GDS Beijing and its subsidiaries, and our company as guarantor. For example, some of these agreements contain requirements to maintain a specified minimum cash balance at all times or require that the borrowing subsidiary maintain a certain debt-to-equity ratio. We cannot provide any assurances that we will always be able to meet any covenant tests under our financing arrangements. Other loan facility agreements of ours require that STT GDC, one of our major shareholders, maintain (i) an ownership percentage in our company of at least 25%, or (ii) have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control the casting of, at least 25% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of our company, or (iii) its status as the single largest shareholder of our company. If any of the abovementioned conditions were not maintained, pursuant to the terms of relevant facility agreements we could be obligated to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule. In addition, the majority of our loan facility agreements require that the IDC license of GDS Beijing or the borrowing subsidiaries, other affiliated entities or the authorization by GDS Beijing to one such subsidiary to operate the data center business and provide IDC services under the auspices of the IDC license held by GDS Beijing, be maintained and renewed on or before the expiry date of the IDC license or authorization thereunder, as applicable. However, we have learned that the MIIT will not allow subsidiaries authorized to provide IDC services by an IDC license holder to renew its current authorization in the future; instead, the MIIT will require subsidiaries of IDC license holders to apply for their own IDC licenses. See “—Risks Related to Doing Business in the People's Republic of China—We may be regarded as being non-compliant with the regulations on VATS due to the lack of IDC licenses for which penalties may be assessed that may materially and adversely affect our business, financial condition, growth strategies and prospects.” If the subsidiaries of GDS Beijing cannot renew their authorizations to provide IDC services under the auspices of GDS Beijing's IDC license timely, and such subsidiaries cannot apply for and obtain their own IDC licenses, we also could be obligated to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule.

In May 2019, one of GDS Beijing's subsidiaries, GDS Suzhou, obtained its own IDC license. In September and November 2019, the other two of GDS Beijing's subsidiaries, Beijing Wan Chang Yun Science & Technology Co., Ltd., or Beijing Wan Chang Yun, and Shenzhen Yaode Data Services Co., Ltd., or Shenzhen Yaode obtained their own IDC license, respectively. Two other subsidiaries of the VIEs plan to apply for and obtain their own IDC licenses prior to the expiry of the existing authorizations under which they provide IDC services. While we do not foresee any legal impediment based on our experience with IDC license applications, there can be no assurance that these subsidiaries will be able to obtain approvals from the MIIT for their own IDC licenses in a timely manner or at all, or obtain such approvals for an expansion of authorization by GDS Beijing to allow the other subsidiaries of the VIEs to provide IDC services under the auspices of GDS Beijing's IDC license. There also can be no assurance that we will be able to renew such authorizations and expansions in due course.

In mid-August 2019, the PBOC decided to reform the formation mechanism of the Loan Prime Rate, or LPR, and authorized the National Interbank Funding Center to release LPR monthly, which may impact the interest rate on our variable rate debt. Uncertainty on future LPR reforms and rate changes may impact our indebtedness. In addition, the interest rates of our offshore credit facilities are based on a spread over Secured Overnight Financing Rate, or SOFR, Hong Kong Interbank Offer Rate, or HIBOR, and Kuala Lumpur InterBank Offered Rate, or KLIBOR. As a result, the interest expenses associated with such indebtedness will be subject to the potential impact of any fluctuation in SOFR, HIBOR and KLIBOR. Uncertainty on future SOFR, HIBOR and KLIBOR reforms and rate changes may impact our indebtedness.

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

To grow our operations, 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. In the near term, we will likely be unable to fund our expansion plans solely through our operating cash flows. Accordingly, we have raised and will likely need to continue to raise additional funds through equity, equity-linked, debt, offshore fund financings and disposal of assets in the future in order to meet our operating and capital needs. In this regard, at our annual general meeting, or AGM, held on June 30, 2022, our shareholders passed ordinary resolutions authorizing our board of directors to approve the allotment or issuance, in the 12-month period from the date of the AGM, of ordinary shares or other equity or equity-linked securities of our company up to an aggregate thirty percent (30%) of our existing issued share capital at the date of the AGM, whether in a single transaction or a series of transactions (other than any allotment or issues of shares on the exercise of any options that have been granted by our company). Additional debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. The Russia-Ukraine conflict, the deterioration of the U.S.-China relationship, and increased regulatory scrutiny have limited, and may continue to limit, our ability to raise, and our flexibility in raising, additional funds. Our inability to obtain additional debt and/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.

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 the holders of our ordinary shares. In addition, any debt financing that we may obtain in the future could have restrictive covenants relating to 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.

If Mr. Huang's beneficial ownership in our company falls below 5%, our dual-class share structure will terminate and a change of control would be triggered under certain of our material commercial and loan agreements, and our business development, financial condition and future prospects may be materially and adversely affected.

Subject to the provisions of our Articles of Association, our Class B ordinary shares will automatically convert into Class A ordinary shares upon the occurrence of an automatic conversion event, which events include, among others, Mr. Huang having beneficial ownership in less than 5% of our issued share capital on an as converted basis. As of March 15, 2023, Mr. Huang beneficially owned (whether in the form of ordinary shares or ADSs) 84,047,840 ordinary shares, representing 5.39% of our total issued share capital.

Mr. Huang has in the past entered into, and may in the future enter into, certain transactions from time to time, including derivative transactions, that have and could have the effect of reducing Mr. Huang's beneficial ownership in our company. Mr. Huang informed our company that certain variable pre-paid forward sale contract transactions in respect of 42,457,504 ordinary shares beneficially owned by him, which transactions he originally entered into between May 2020 and June 2022, would expire between March 2023 and December 2023. If Mr. Huang chooses to settle these transactions by transferring ownership of the 42,457,504 ordinary shares to the counterparties, his beneficial ownership interest in our total issued share capital may decrease to below 5%, which would trigger an automatic conversion event, unless the 5% threshold contained in our Articles of Association is reduced or he otherwise acquires beneficial ownership of additional shares to keep his beneficial ownership at or above 5% or such other threshold if so reduced.

Should this happen, all Class B ordinary shares would automatically convert into Class A ordinary shares, and the dual-class share structure would thereby be terminated. This would constitute a change of control for the purposes of certain of our, or our subsidiaries' and the consolidated entities', sales agreements and domestic loan facility agreements, and if such provisions under the domestic loan agreements are triggered, which could give the lenders the right to demand early repayment under these domestic loan agreements. Such change of control may result in actual, potential or alleged breaches or early termination of other contracts or agreements. The change of control potentially may also have implications for the purposes of China's national security review regime and anti-monopoly merger filing requirements, if applicable. The occurrence of any of the foregoing may have a material and adverse effect on our business development, financial condition and future prospects.

On March 30, 2023, Mr. Huang acquired beneficial ownership of an additional 3,888,000 of our ordinary shares, representing 0.25% of our total issued share capital through the accelerated vesting of certain restricted share units previously granted to him under our 2016 share incentive plan. The Compensation Committee and our board of directors approved this accelerated vesting as a temporary measure to provide Mr. Huang with the flexibility of settling part of the aforementioned variable pre-paid forward sale contract transactions with other of his shareholdings without triggering an automatic conversion event that would otherwise result in the termination of the dual-class shareholding structure and the occurrence of the change of control implications described above. The ordinary shares Mr. Huang received upon the accelerated vesting of the foregoing restricted share units are subject to a lock-up (including a prohibition on pledges or derivative transactions) as well as a claw-back arrangement with us, pending a longer-term solution to the issues surrounding the potential change in control trigger. In addition, the automatic conversion event could be triggered if Mr. Huang is further diluted due to our financing activities in which we issue additional equity or equity-linked securities. If we issue additional equity or equity-linked securities in any further financings, Mr. Huang's shareholdings could fall below the 5% which would trigger an automatic conversion event in our dual-class structure, and this could happen even if he cash settles the variable pre-paid forward contracts described above.

Our board of directors continues to explore additional possible measures to maintain the stability of its corporate governance structure and dual-class shareholding structure in the best interests of the Company, with due consideration given to the possible negative ramifications of a potential automatic conversion event on the operations and prospects of our group.

The ongoing COVID-19 pandemic could materially and adversely affect our business, results of operations and financial condition.

Beginning in early 2020, there was an outbreak of a novel strain of coronavirus, later named COVID-19. In March 2020, the World Health Organization declared COVID-19 to be a pandemic. As part of its efforts to contain the spread of COVID-19, from time to time governments in the PRC and Southeast Asia have taken and may continue to take a number of actions, including quarantining and otherwise treating individuals who are infected with COVID-19, asking residents to remain at home and to avoid public gatherings, among other actions. COVID-19 has resulted in temporary closures of many corporate offices, retail stores, and manufacturing facilities and factories. Most of our revenues are generated in and our workforce are located in China. Consequently, our business could be materially and adversely impacted by the effects of COVID-19 or other pandemics or epidemics.

The construction of new data centers or the expansion of existing data centers might be significantly delayed because of temporary closures of our construction sites and shortages of workers due to travel restrictions that have been or may be imposed in China or Southeast Asia. The completion of pending acquisitions of data centers might also be delayed or suffer other adverse impacts due to the impact of COVID-19. If the construction of new data centers, the expansion of existing data centers, or the completion of our pending acquisitions of data centers cannot be completed or delivered on time, we may be unable to meet our customer demand as expected, which may adversely and materially affect our business, results of operations and financial condition. Business disruptions caused by the COVID-19 pandemic may also adversely and materially affect the business operations and financial condition of many of our customers. Any prolonged disruption of our businesses or those of our customers or business partners could negatively impact our results of operations and financial condition. We have experienced slower cash collection as a result of the COVID-19 pandemic, for administrative reasons unrelated to our customers' ability to pay, which has resulted in an increase in our accounts receivable. An increase in our accounts receivable and any decrease in our recovery rate on accounts receivable could impact our cash flow, increase our need to fund operations from other sources of capital and impact our operations and business. Our customers may encounter cash flow or operating difficulties, which may reduce their demand for our services, further delay their payments to us thereby increasing our accounts receivable turnover days, or even increase the risk that they may default on their payment obligations. Any of these events would negatively affect our operating results. In response to the pandemic, we temporarily suspended our offline customer acquisition activities and business travel to ensure the safety and health of our employees. Certain of our employees have been required to work from home on business days, in accordance with lockdown policies implemented by municipal health authorities. The measures we took or are taking may reduce our business operation capacity and are likely to negatively affect our operating results.

In addition, our results of operations could be adversely affected to the extent that this pandemic harms the Chinese economy or global economy in general. The costs of constructing, developing and operating data centers are substantial. See “—The data center business is capital-intensive, and we expect our capacity to generate capital in the short term will be insufficient to meet our anticipated capital requirements.” Expanding our data center capacity and growing our business requires substantial amounts of capital. If our existing cash resources are insufficient to meet our needs to expand our data center capacity and grow our business, we may seek to raise capital by selling equity or equity-linked securities, debt securities, disposing of our assets or by arranging financing and incurring indebtedness through borrowing from banks. Any economic slowdown in China, Southeast Asia or worldwide due to COVID-19 may result in a shortage of available credit and insufficient funds for our future expansion or growth, and we may not be able to raise additional capital, obtain additional financing from banks or other financial institutions, or draw down our existing loans and financing facilities. We cannot assure you that financing will be available in the amounts we need or on terms acceptable to us, if at all. If we were unable to obtain additional equity or debt financing as required, our business, operations and prospects and our ability to maintain our desired level of revenue growth may suffer materially. This in turn could limit our capital expenditures and cause our revenues to decrease, and our business, results of operations and financial condition may be materially and adversely affected as a result.

While many of the restrictions on movements have been relaxed, there is great uncertainty around the future of the COVID-19 outbreak and how it will impact our operations in mainland China, Hong Kong and Southeast Asia. In particular, we cannot accurately forecast the potential impact of additional outbreaks as government restrictions are relaxed, further shelter-in-place or other government restrictions implemented in response to such outbreaks, or the impact on the ability of our customers to remain in business as a result of the ongoing pandemic or such additional outbreaks. With the uncertainties surrounding the COVID-19 outbreak, including the availability of effective vaccines or cure, the threat to our business disruption and the related financial impact remains.

If we fail to manage effectively or collect our accounts receivable, our results of operations, financial condition and liquidity may be adversely affected.

As of December 31, 2020, 2021 and 2022, our accounts receivable, net, amounted to RMB1,480.3 million, RMB1,732.7 million and RMB2,406.0 million (US\$348.8 million). Our accounts receivable turnover days, which are the average accounts receivable balances as of the beginning and the end of the period divided by total net revenues during the period and multiplied by the number of days during the period, remained stable at 75.3 days in 2020 and 75.0 days in 2021, and increased to 81.0 days in 2022, as a higher proportion of our contracts were billed quarterly in arrears as opposed to monthly in arrears. In addition, we experienced slower accounts receivable collection for administrative reasons as a result of the COVID-19 pandemic and lockdowns in several cities where our customers are located.

The amount and turnover days of our accounts receivable may increase in the future, which will make it more challenging for us to manage our working capital effectively and our results of operations, financial conditions and liquidity may be adversely affected.

Increasingly stringent regulatory requirements or restrictions on data center development may adversely affect our results of operations.

The development and operation of data centers in China are subject to stringent regulatory requirements and various governmental authorizations are required to be obtained for the construction and operation of data centers, among which the fixed-asset investment project filings and energy conservation review opinions are the primary governmental authorizations for the construction and operation of data centers. For more details, see “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Filing and Energy Conservation of Fixed-Asset Investment.”

In addition to national laws and regulations, various provincial and municipal governments also issued in the past few years local regulations to impose additional regulatory requirements and tighten enforcement of such regulatory requirements on the construction and operation of data centers in order to conserve energy and reduce carbon emission. As the regulatory regime for the construction and operation of data centers has a relatively short history and has been constantly evolving, relevant government authorities have broad discretion in the interpretation and enforcement of relevant regulatory requirements and the regulatory practice may vary significantly in terms of time and place.

Local requirements and regulatory practice have been further tightened following the announcement of the PRC government’s carbon neutrality policy initiative in 2021. For example, the Energy Bureau of Guangdong Province published the *Notice on the Investigation and Punishment of Illegal Energy Use*, the *Notice on the Rectification of Data Center Projects Violating Laws and Regulations in Guangdong Province* and the *Letter on Cooperation in Taking Control Measures for Power Consumption of Projects Violating Laws and Regulation* in June 2021, October 2021 and July 2022 respectively to strengthen the supervision of power consumption of data centers, required that data centers without energy conservation review opinion be ordered to shut down if rectification cannot be completed within the prescribed period and conditioned the approval of power supply and its installation applications on the receipt of the energy conservation review opinion. For more details and examples, see “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Filing and Energy Conservation of Fixed-Asset Investment.”

The increasingly stringent regulatory requirements or restrictions may have a material adverse effect and affect our results of operations. While we have been making every effort to comply with the relevant regulatory requirements, we cannot assure you that we have obtained, and will be able to obtain the required governmental authorizations (including the fixed-asset investment project filings and energy conservation review opinions) for all our data centers in a timely manner or at all due to the constantly evolving regulatory requirements and practices. Furthermore, we cannot assure you that we will be able to complete required rectification in a timely manner or at all, due to the lack of the required approvals, filings and licenses (including the fixed-asset investment project filings and energy conservation review opinions) if we are ordered to do so by the relevant government authorities, which may result in fines and suspension or shutdown of the operations of the relevant data centers.

Limited availability of power resources may adversely affect our results of operations.

We are a large consumer of power, which for the purpose of these risk factors discussion refers to electrical power supplied through the electrical grid, rather than through our own on-site solar or diesel generators. We use electricity to house, power and cool the computer systems and networking equipment that support our customers’ mission-critical IT infrastructure. Therefore, we need an increasing supply of electricity to grow our business and we are subject to risks associated with obtaining access to enough power.

In China, the government sets annual “Dual-Control” targets to limit the increase in electricity consumption in each province both in absolute terms and relative to GDP in order to conserve energy and reduce carbon emission. China’s central and local governments began implementing “Dual-Control” targets during the thirteenth Five-Year Plan, from 2016-2020. In September 2021, the NDRC issued the “Program for Improving the Dual-Control of Energy Consumption Intensity and Total Volume”, or the Program, which seeks to improve the original policy through promoting the achievement of the carbon peak and carbon neutrality. According to the Program, connection should be made between the issuance of energy conservation review opinion and the “Dual-Control” targets, and the energy consumption review of newly established heavy power-consuming projects shall be strictly controlled and coordinated with local “Dual-Control” targets. Local authorities in the Tier 1 markets have also imposed various stringent requirements as to the energy conservation review in connection with the “Dual-Control” targets. For more details, see “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Filing and Energy Conservation of Fixed-Asset Investment.” These stringent regulatory requirements imposed by local authorities in the Tier 1 markets may also limit our ability to obtain the regulatory approvals for the development and operation of data centers, which are essential for us to obtain power supply and expand our business. If demand for power in a particular area exceeds the government consumption targets, we may not be able to access the increased power supply which we need to grow our business. Furthermore, local governments may take actions, such as suspending power supply, to reduce consumption to targeted levels. This may force us to rely on backup generators at higher cost, which may harm our financial condition and results of operations.

Mission-critical data centers such as ours, require high levels of redundancy, particularly in respect of power infrastructure. For more information about our data centers’ technical features, see “Item 4. Information on the Company—B. Business Overview—Our Data Centers—Self Developed Data Centers—High Performance Features.” We are subject to risks associated with obtaining access to power supply and power infrastructure from local utilities. In China, we rely on two utility suppliers, State Grid and Southern Grid, each of which has a monopoly over electricity transmission in its areas of operation. We must coordinate extensively with them and finance the construction of necessary power infrastructure, including infrastructure assets located off-site. If local utilities are unable to meet our requirements, we may not be able to grow our business and provide service to our customers on time or at all.

China’s regulatory regime regarding energy conservation has continued to evolve to achieve national targets for peak carbon consumption and carbon neutrality. The government has established platforms for trading of certified carbon emissions reductions, renewable power, and renewable energy certificates. According to the *Circular of Further Effectively Conducting the Work Concerning Non-inclusion of Newly Added Renewable Energy Consumption in the Total Energy Consumption Control*, or the Circular 1258, promulgated by the NDRC, the National Bureau of Statistics and the National Energy Administration on August 15, 2022, the statistical accounting of data on cross-provincial and provincial transaction, consumption and settlement of renewable energy shall be strengthened, and renewable energy certificates, as certificates for the consumption of power generated from renewable energy, may be traded on the renewable energy certificates trading platform, the establishment of which is vigorously promoted. Further, our customers increasingly request that we provide them with renewable energy solutions. We describe our approach to increasing renewable energy usage in our 2021 ESG report, which is accessible via hyperlink in our press release, Exhibit 99.1 to our Form 6-K (File No. 001-37925), furnished to the SEC on December 1, 2022.

Renewable energy supply is very limited in Tier 1 markets, as these markets are generally located in Chinese eastern regions and further from China’s renewable sources. We may not be able to obtain sufficient supply or find alternative solutions to enable us to meet our targets or satisfy our customer requirements. Furthermore, renewable energy may come at a cost premium. If we incur this premium, we may not be able to pass the cost to our customers, even though we expect that they will also be seeking to reduce their carbon footprint, which will negatively affect our future operating results and financial condition.

Our customers’ requirements and overall demand for power may increase as they adopt new technologies, for example, for virtualization of hardware resources and for specialized processing of artificial intelligence. As a result, the average amount of power utilized per server is increasing, which in turn increases power consumption required to cool the data center facilities. Pursuant to our colocation service agreements, we provide our customers with a committed level of power supply availability. Although we aim to improve the energy efficiency of the data center facilities that we operate, there can be no assurance such data center facilities will be able to provide sufficient power to meet the growing needs of our customers. Our customers’ demand for power may exceed the power capacity in our older data centers, which may limit our ability to fully utilize the net floor area of these data centers. We may lose customers, or our customers may reduce the services purchased from us due to increased power costs and limited availability of power resources, or we may incur costs for data center capacity which we cannot utilize, which would reduce our net revenue and have a material and adverse effect on our cost of revenue and results of operations.

We attempt to manage our power resources and limit exposure to system downtime due to power outages from the electric grid by having redundant power feeds from the grid and by using backup generators and battery power. However, these protections may not limit our exposure to power shortages or outages entirely. Any system downtime resulting from insufficient power resources or power outages could damage our reputation and lead us to lose current and potential customers, which may materially and adversely affect our business, financial condition and results of operations.

China's power market is regulated and undergoing reform which may affect our ability to optimize power usage and costs.

Costs of power account for a significant portion of our cost of revenue. Power costs may be included in the costs for our services, or we may charge our customers separately for actual power consumed.

The NDRC is introducing gradual market-oriented reform to the power markets. See “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Feed-in Electricity Price for Coal-Fired Power Generation.” As a result, we are starting to enter into direct power purchase agreements with power generators, while continuing to purchase through State Grid and Southern Grid. At this early stage of reform, we see power costs increasing. While we believe ongoing reform may enable us to purchase power at normalized or even lower costs by purchasing through a competitive market in the long-term, power costs may remain elevated in the short to medium term, which may adversely affect our results of operations.

As part of the reform, in October 2021, the NDRC expanded the price range of coal-fired power generation, by expanding the range of transaction prices. The government raised the ceiling from 10% to 20% above the floor, which has allowed electricity tariffs to rise above historic levels. Additionally, the NDRC provided that the market transaction price of high energy-consuming enterprises is not subject to such 20% ceiling. Although the NDRC did not provide a clear definition for “high energy-consuming enterprises”, data centers were mentioned alongside traditional high energy consuming industries, such as steel, electrolytic aluminum, cement and calcium carbide, by the NDRC when it came to the goal of “Dual-Control” under the *Opinions on Enforcing Energy Efficiency Constraints to Promote Energy Conservation and Carbon Reduction in Key Fields* published on October 18, 2021. Some local authorities have also considered data centers as a high energy consuming industry under certain documents related to energy conservation and the power markets. For example, the Beijing Development and Reform Commission, or the Beijing DRC, and other departments explicitly classified data centers as a high energy consuming industry in the *Implementation Plan for Further Strengthening Energy Conservation in Beijing* published on December 6, 2022. The Zhejiang Provincial Development and Reform Commission made similar classification under the *Implementation Opinions of Zhejiang Province on Establishing and Improving Ladder Electricity Tariffs for High Energy Consuming Industries and Penalty Electricity Tariffs for Unit Product Exceeding Energy Consumption Limits (Draft for Comments)* published on October 3, 2021. With respect to specific enterprises who are subject to rules and regulations related to high energy consumption, the NDRC further required local authorities to publish a list of high energy-consuming enterprises based on the national energy efficiency benchmark in key areas of high energy consuming industries in connection with the power market system under the *Notice on Signing and Performing Medium and Long Term Electric Power Contracts in 2023* published on December 2, 2022. While as of the date of this annual report, we have not been asked to pay electricity tariff above the 20% ceiling. There is a trend to designate data centers as a key industry in terms of high energy consumption and therefore we cannot assure you that we will not be considered as high energy consuming enterprises in the future, which will lead to the potential increase in power cost and may affect our capacity to recover such increased power cost from our customers. For more information about risks arising from fixed price agreements with our customers, see “—We enter into fixed price agreements with many customers, and our failure to accurately estimate the resources and time required for the fulfillment of our obligations under these agreements could negatively affect our results of operations.”

Implementation of China’s “East Data and West Computation” policy subjects us to regulatory and economic uncertainty.

In December 2020, the NDRC, CAC, MIIT and National Energy Administration jointly released the *Guiding Opinions on Accelerating the Construction of a National Integrated Large Data Center Collaborative Innovation System*, or the guiding opinions. The guiding opinions proposed the construction of a nationwide integrated data center system. The above four agencies have since issued a series of related policy documents, including the *Implementation Plan for Computing Power Hubs of the National Integrated Large Data Center Collaborative Innovation System*, or the Implementation Plan, in May 2021, which introduced the policy of “East Data and West Computation.” By moving data that does not require intensive computation from eastern regions to the resource-rich western regions, the “East Data and West Computation” policy aims to optimize the use of the national resources, correct the imbalance in supply and demand of computing capacity and promote the overall development of data centers in both western and eastern regions.

The Implementation Plan and other policy documents identify eight computing hubs in eastern and western China, and designate ten data center clusters in specific locations within these hubs to complete the overall layout of the national integrated big data center system. We have started to develop and operate hyperscale data centers in some of the hubs designated by the “East Data and West Computation” policy to meet customer demand prior to the introduction of such policy and will continue to do so to meet increased customer demand. Most of our existing data center capacity, including area in service, area under construction and area held for future development is located within the four computing hubs in eastern China and a portion of it is in the ten designated data center clusters. We therefore believe our long-term strategy is aligned with the policy aims. Nevertheless, there are uncertainties on how the policy will be implemented in practice and how this policy will affect the customer demand. For example, through the policy, government authorities may allocate more energy quota to certain areas within the ten designated data center clusters where we have not yet secured resources and remove favorable land and tax policies in areas outside such data center clusters where we have already secured resources, which may have adverse effects on our business.

In addition, more stringent regulatory requirements in terms of key aspects such as PUE and utilization rate have been imposed in the designated data center clusters following the introduction of “East Data and West Computation” policy. For example, the NDRC, CAC, MIIT and National Energy Administration jointly published the *Reply on Agreeing the Construction of National Integrated Computing Hubs in Chengdu-Chongqing Region* on February 7, 2022 to provide that the average utilization rate of data centers in Tianfu and Chongqing data center clusters shall be no less than 65% and the PUE of these data center clusters shall be at or below 1.25. The Shanghai Commission of Economy and Informatization, or the Shanghai CEI, and the Shanghai Development and Reform Commission, or the Shanghai DRC, jointly issued the *Implementation Plan for Carbon Peak in Shanghai’s New Infrastructure Field* on November 29, 2022 to provide that the PUE of data centers which are located in the Yangtze River Delta hub shall be at or below 1.25 during the Fourteenth Five-year plan period. In addition, the NDRC, CAC, MIIT and National Energy Administration jointly published the *Reply on Agreeing the Construction of National Integrated Computing Hubs in Guangdong-Hong Kong-Macao Greater Bay Area* on February 7, 2022, and the Guangdong Development and Reform Commission, or the Guangdong DRC, and the Department of Industry and Information Technology of Guangdong Province, or the Guangdong IIT, jointly issued the *Opinions on Strengthening the Layout and Construction of Data Centers* on December 2, 2022, according to which, 1) the average PUE of data centers which are newly constructed and located in data center clusters of national hubs shall be at or below 1.25 while the average PUE of other data centers in Guangdong province shall be at or below 1.3; and 2) the average utilization rate of data centers in Shaoguan data center cluster shall be no less than 65% while the average utilization rate of other data centers in Guangdong province should aim to be no less than 80%. While we have been making every effort to develop and operate our data centers in some of the hubs designated by the “East Data and West Computation” policy in compliance with the relevant regulatory requirements, we cannot assure you that we have complied, and will be able to comply with the required regulatory requirements for all our data centers in a timely manner or at all due to the constantly evolving regulatory requirements and practices.

Implementation of the “East Data and West Computation” policy may result in unfavorable business conditions in any region we operate currently or expect to operate, and could have a material and adverse effect on our results of operations.

We have a history of net losses and negative cash flows from operating activities and may continue to incur losses and experience negative cash flows from operating activities in the future.

We incurred net losses of RMB669.2 million, RMB1,191.2 million and RMB1,266.1 million (US\$183.6 million) in 2020, 2021 and 2022, respectively, and we may incur losses in the future. We expect our costs and expenses to increase as we expand our operations, primarily including costs and expenses associated with owning and leasing data center capacity, increasing our headcount and utility expenses. Our ability to achieve and maintain profitability depends on the continued growth and maintenance of our customer base, our ability to control our costs and expenses, the expansion of our service offerings and our ability to provide our services at the level needed to satisfy the stringent demands of our customers. In addition, our ability to achieve profitability is affected by many factors which are beyond our control, such as the overall demand for data center services in China, Southeast Asia and elsewhere, as well as general economic conditions. If we cannot efficiently manage the data center facilities we operate, our financial condition and results of operations could be materially and adversely affected. We may continue to incur losses in the future due to our continued investments in data center capacity, increased headcount and increased utility expenses.

The data center business is capital-intensive. Constructing, developing and operating our data centers require significant capital expenditures. We need to fund these costs with various forms of financing, in addition to cash retained from operations. We have historically funded data center development through additional equity or debt financing. We expect to continue to fund future developments through debt financing or through the issuance of additional equity securities if necessary and when market conditions permit. If we are unable to secure such additional financing, it will have a material adverse effect on our business and we may have to limit operations in a manner inconsistent with our development plans. If additional funds are raised through the issuance of equity securities or convertible debt securities, it will be dilutive to our shareholders and could result in a decrease in our stock price. In addition, if there are other factors that negatively impact our cash flow, such as the credit risk associated with accounts receivable or the ability to recover VAT on a timely basis, our cash flow and ability to fund our operations and capital expenditures would be negatively affected. If we are unable to obtain requisite financing needed to fund our planned operations and expansion, it would have a material adverse effect on our business.

Any significant or prolonged failure in the data center facilities we operate or services we provide would lead to significant costs and disruptions and would reduce our net revenue, harm our business reputation, and have a material adverse effect on our results of operation.

The data center facilities we operate are subject to failure. Any significant or prolonged failure in any data center facility we operate or services that we provide, including a breakdown in critical plant, equipment or services, such as the cooling equipment, generators, backup batteries, routers, switches, or other equipment, power supplies, or network connectivity, whether or not within our control, could result in service interruptions and data losses for our customers as well as equipment damage, which could significantly disrupt the normal business operations of our customers and harm our reputation and reduce our net revenue. Any failure or downtime in one of the data center facilities that we operate could affect many of our customers. The destruction or severe impairment of any of the data center facilities we operate could result in significant downtime of our services and catastrophic 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 and cause us to incur financial penalties. The services we provide are subject to failures resulting from numerous factors, including:

- power loss;
- equipment failure;
- human error or accidents;
- theft, sabotage and vandalism;
- failure by us or our suppliers to provide adequate service or maintenance to our equipment;
- network connectivity downtime and fiber cuts;
- security breaches to our infrastructure;
- improper building maintenance by us or by the landlords of the data center buildings which we lease;

- physical, electronic and cyber security breaches;
- fires and fire hazards, earthquake, hurricane, tornado, flood and other natural disasters;
- extreme temperatures;
- water damage;
- public health emergencies; and
- terrorism.

Furthermore, we generate significant revenue from data centers located in only a few locations and a significant disruption to any single location could materially and adversely affect our operations. As of February 28, 2023, most of our data centers (self-developed and third-party) were located in our Tier 1 markets. Several of our data centers are located on campuses or clusters in close proximity to each other in specific districts within our Tier 1 markets. The occurrence of a catastrophic event, or a prolonged disruption in any of these regions, could materially and adversely affect our operations.

We have in the past experienced, and may in the future experience, interruptions in service due to power outages or other technical failures or for reasons outside of our control, including a service interruption that caused system downtime to certain banking and financial institution customers and other customers. These interruptions in service, regardless of whether they result in breaches of the service level agreements we have with customers, may negatively affect our relationships with customers, including resulting in customers terminating their agreements with us or seeking damages from us or other compensatory actions. Interruptions in service may also have consequences for customers, such as banking and financial institutions, that are under the oversight of industry regulators, including the State Administration for Financial Regulation, or SAFR, and other PRC regulatory agencies. In response to such interruptions in service, industry regulators have taken, and may in the future take, various regulatory actions, including notifications or citations to our customers, over which they have oversight. Such regulatory actions with respect to our customers, including banking and financial institutions, could negatively impact our relationships with such customers, lead to audits of our services, inspections of our facilities, place restrictions or prohibitions upon the ability of such institutions to use our services, and thereby negatively affect our business operations and results of operations. We have taken and continue to take steps to improve our infrastructure to prevent service interruptions, including upgrading our electrical and mechanical infrastructure and sourcing, designing the best facilities possible and implementing rigorous operational procedures to maintain programs to manage risk. However, we cannot assure you that such interruptions in service will not occur again in the future, or that such incidents will not result in the loss of customers and revenue, our paying compensation to customers, reputational damage to us, penalties or fines against us, and would not have a material and adverse effect on our business and results of operations. See “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Information Technology Outsourcing Services Provided to Banking Financial Institutions.” Service interruptions continue to be a significant risk for us and could affect our reputation, damage our relationships with customers and materially and adversely affect our business.

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 and the continued growth of our business, we need to expand existing data centers, lease buildings for conversion into new data center 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 and 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 or contractor 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.

In addition, we need to work closely with the local power suppliers, and sometimes local governments, where our proposed data centers are located. Delays in actions that require the assistance of such third parties, or delays in receiving required permits and approvals from such parties, may also affect the speed with which we complete data center projects or result in their not being completed at all. We have experienced such delays in receiving approvals and permits or in actions to be taken by third parties in the past and may experience them again in the future.

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, among others, result in liability for penalties and loss of customers, and cause material and negative effect to our revenue growth, profitability and results of operations.

The occurrence of a catastrophic event or a prolonged disruption may exceed our insurance coverage by significant amounts.

Our operations are subject to hazards and risks normally associated with the daily operations of our data center facilities. Currently, we maintain insurance policies in the following categories: construction and installation, work interruption expense due to public health event, business interruption for lost profits, property and casualty, public liability, cyber security liability, directors and officers liability, employer liability and commercial employee insurance. Our business interruption insurance for lost profits includes coverage for business interruptions, our property and casualty insurance includes coverage for equipment breakdowns and our commercial employee insurance includes employee group insurance and senior management medical insurance. We believe our insurance coverage adequately covers the risks of our daily business operations. However, our current insurance policies may be insufficient in the event of a prolonged or catastrophic event. The occurrence of any such event that is not entirely covered by our insurance policies may result in interruption of our operations and subject us to significant losses or liabilities and damage our reputation as a provider of business continuity services. In addition, any losses or liabilities that are not covered by our current insurance policies may have a material adverse effect on our business, financial condition and results of operations.

We may be vulnerable to cyber security failures, data security breaches and operational risks which could disrupt or have a material adverse effect on our operations, our financial condition and results of operations.

A party who is able to compromise cyber security, data security and/or other measures protecting the data center facilities we operate, any of the data stored in such data center facilities, or their IT systems, could misappropriate our or our customers' proprietary information or cause interruptions or malfunctions in our operations. As we provide assurances to our customers that we provide the highest level of security, such a compromise could be particularly harmful to our brand and reputation. We face the ongoing risk of threats to, attacks on and incidents involving cyber security, data security, and the IT systems of ours. For example, a non-critical customer support IT system of ours was recently a target of cyber-attacks and hacking activities. We may be required to expend significant capital and resources to protect against such threats or to alleviate problems caused by failures or breaches in cyber security or data security. In addition, as we continue expanding our service offerings in managed cloud services, including direct private connection to major cloud platforms and the provision of cloud infrastructure, we will face greater risks from potential threats, attacks and incidents because the provision of cloud-related services will increase the flow of internet user data through the data center facilities we operate and create broader public access to our system. As techniques used to breach security change frequently and are often not recognized until launched against a target, we may not be able to implement new security measures in a timely manner or, if and when implemented, we may not be certain whether these measures could be circumvented. Any cyber security failures or data security breaches that may occur could expose us to increased risk of lawsuits, regulatory investigations and penalties, negative publicity, loss of existing or potential customers, harm to our reputation and increases in our security costs, which could have a material adverse effect on our operations, financial condition and results of operations.

Risks and deficiencies in cyber security and/or data security may also be identified in the course of government inspections, which could subject us to fines and other sanctions. During construction of certain of our facilities, government inspectors have cited security risks at our construction sites and subjected us and our legal representative to fines for such risks. We cannot assure you that similar fines and sanctions will not occur in the future, or that such fines and sanctions will not result in damage to our business and reputation, which could have a material and adverse effect on our results of operations.

In addition, any assertions of alleged breaches in cyber security or data security or IT systems failures made against us, whether true or not, could harm our reputation, cause us to incur substantial legal fees and have a material adverse effect on our business, reputation, financial condition and results of operations.

Our ability to provide data center services depends on the major telecommunications carriers in China providing sufficient network services to our customers in the data center facilities that we operate on commercially acceptable terms.

Our ability to provide data center services depends on the major telecommunications carriers in China, namely China Telecom, China Unicom and China Mobile, providing sufficient network connectivity and capacity to enable our customers to transfer data to and from equipment that they locate in the data center facilities that we operate. Furthermore, given the limited competition among basic service providers in the telecommunications market in China, we depend on the dominant carrier in each location to provide such services to our customers on commercially acceptable terms. Although we believe we have maintained good relationships with China Telecom, China Unicom and China Mobile in the past, there can be no assurance that they will continue to provide the network services that our customers require on commercially acceptable terms at each of the data centers where we operate, if at all. In addition, if China Telecom, China Unicom or China Mobile increases the price of their network services, it would have a negative impact on the overall cost-effectiveness of data center services in China, which could cause our customers' demand for our services to decline and would materially and adversely affect our business and results of operations.

Our leases for self-developed data centers or our agreements for third-party data centers could be terminated early and we may not be able to renew our existing leases and agreements on commercially acceptable terms or our rent or payment under the agreements could increase substantially in the future, which could materially and adversely affect our operations.

Most of our self-developed data centers are located in properties that we hold under long-term leases. Such leases generally have 15 to 20-year terms from inception. In some instances, we may negotiate an option to purchase the leased premises and facilities or a right of first refusal for the renewal of the existing leases according to the terms and conditions under the relevant lease agreements. However, upon the expiration of such leases, we may not be able to renew these leases on commercially reasonable terms, if at all. Under certain lease agreements, the lessor may terminate the agreement by giving prior notice and paying default penalties to us. However, such default penalties may not be sufficient to cover our losses. Even though the lessors for most of our data centers generally do not have the right of unilateral early termination unless they provide the required notice, the lease may nonetheless be terminated early if we are in material breach of the lease agreements. We may assert claims for compensation against the landlords if they elect to terminate a lease agreement early and without due cause. If the leases for our data centers were terminated early prior to their expiration date, notwithstanding any compensation we may receive for early termination of such leases, or if we are not able to renew such leases, we may have to incur significant cost related to relocation. In addition, we have entered into six agreements in respect of data centers in operation with parties who have not produced evidence of proper legal title of the premises, and although we may seek damages from such parties, such leases may be void and we may be forced to relocate. The six agreements are in relation to nine leased data centers which collectively accounted for approximately 7.6%, 8.5% and 7.6% of our revenues in the years ended December 31, 2020, 2021 and 2022, respectively, and approximately 10.5%, 9.2% and 8.3% of total area committed as of December 31, 2020, 2021 and 2022 respectively. We are also in the process of entering into the leases for two data centers in operation with parties who have not produced evidence of proper legal title of the premises. Thirteen of our data centers are located in properties that were already mortgaged to third parties before the commencement of the lease. If such third parties claim their rights on the mortgaged properties in case of default or breach under the principal debt by the lessors or other relevant parties, we may not be able to protect our leasehold interest and may be ordered to vacate the affected premises. Any relocation could also affect our ability to provide continuous uninterrupted services to our customers and harm our reputation. As a result, our business and results of operations could be materially and adversely affected.

Furthermore, certain portions of our data center operations are located in third-party data centers that we lease from wholesale data center providers. Our agreements with third parties are typically five years but may also be up to ten years. Under some of such agreements, we have the right of first refusal to renew the agreements subject to mutual agreement with the third parties. Some of such agreements allow the third parties to terminate the agreements early, subject to a notification period requirement and the payment of a pre-determined termination fee, which in some cases may not be sufficient to cover any direct and indirect losses we might incur as a result. Although historically we have successfully renewed all agreements we wanted to renew, and we do not believe that any of our agreements will be terminated early in the future, there can be no assurance that the counterparties will not terminate any of our agreements prior to its expiration date. We plan to renew our existing agreements with third parties upon expiration or migrate our operations to the data centers leased or owned by our company. However, we may not be able to renew these agreements on commercially acceptable terms, if at all, or the space in data centers that we lease or own may not be adequate for us to relocate such operations, and we may experience an increase in our payments under such agreements. Any adverse change to our ability to exert operational control over any of the data center facilities we operate could have a material adverse effect on our ability to operate these data center facilities at the standards required for us to meet our service level commitments to our customers.

Our net revenue is highly dependent on a limited number of customers, and the loss of, or any significant decrease in business from, any one or more of our major customers could adversely affect our financial condition and results of operations.

We consider our customers to be the end users of our services. We may enter into agreements directly with our customers or provide services to our customers through agreements with intermediate contracting parties. See “Item 4. Information on the Company—B. Business Overview—Our Customers.”

We have in the past derived, and believe that we will continue to derive, a significant portion of our net revenue from a limited number of customers. We had two customers that generated 26.3% and 20.5% of our total net revenue, respectively, in 2020, two customers that generated 23.7% and 22.2% of our total net revenue, respectively, in 2021, and two customers that generated 25.1% and 19.9% of our total net revenue, respectively, in 2022. No other customer accounted for 10% or more of our total net revenue during those periods. We expect our net revenue will continue to be highly dependent on a limited number of customers who account for a large percentage of our total area committed. As of December 31, 2022, we had two customers who accounted for 37.7% and 14.6%, respectively, of our total area committed. No other customer accounted for 10% or more of our total area committed. Moreover, for several of our data centers, a limited number of customers accounted for or are expected to account for a substantial majority of area committed or area utilized, including some cases where a single customer accounted for all area committed or area utilized.

Delay in customer move-in results in less area utilized by the customer which is already committed. If the customer’s move-in rate is slower than the typical move-in period of 12 to 24 months, the customer may either pay the minimum billable amount or we may renegotiate with the customer on a case by case basis. If there are contract terminations in relation to these customers, then our net revenue and results of operations would be materially and adversely affected. In 2022, we were notified by one of our major customers that they were going to move out of several of our data centers in Beijing, which we believe is a major churn event. We expect this churn will occur in 2023. There are a number of factors that could cause us to lose major customers. Because many of our agreements involve services that are mission-critical to our customers, any failure by us to meet a customer’s expectations could result in cancellation or non-renewal of the agreement. Our service agreements usually allow our customers to terminate their agreements with us before the end of the contract period under certain specified circumstances, including our failure to deliver services as required under such agreements, and in some cases without cause as long as sufficient notice is given. In addition, our customers may decide to reduce spending on our services due to a challenging economic environment or other factors, both internal and external, relating to their business such as corporate restructuring or changing their outsourcing strategy by moving more facilities in-house or outsourcing to other service providers. Furthermore, our customers, some of whom have experienced rapid changes in their business, substantial price competition and pressures on their profitability, may demand price reductions or reduce the scope of services to be provided by us, any of which could reduce our profitability. In addition, our reliance on any individual customer for a significant portion of our net revenue may give that customer a degree of pricing leverage against us when negotiating agreements and terms of services with us.

The loss of any of our major customers, or a significant decrease in the extent of the services that they outsource to us or the price at which we sell our services to them, could materially and adversely affect our financial condition and results of operations.

If we are unable to meet our service level commitments, our reputation and results of operation could suffer.

Most of our customer agreements provide that we maintain certain service level commitments to our customers. If we fail to meet our service level commitments, we may be contractually obligated to pay the affected customer a financial penalty, which varies by agreement, and the customer may in some cases be able to terminate its agreement. Although we have not had to pay any material financial penalties for failing to meet our service level commitments in the past, there is no assurance that we will be able to meet all of our service level commitments in the future and that no material financial penalties may be imposed. In addition, if such a failure were to occur, there can be no assurance that our customers will not seek other legal remedies that may be available to them, including:

- requiring us to provide free services;
- seeking damages for losses incurred; and
- cancelling or electing not to renew their agreements.

Any of these events could materially increase our expenses or reduce our net revenue, which would have a material adverse effect on our reputation and results of operations. Our failure to meet our commitments could also result in substantial customer dissatisfaction or loss. As a result of such customer loss and other potential liabilities, our net revenue and results of operations could be materially and adversely affected.

Our customer base may decline if our customers or potential customers develop their own data centers or expand their own existing data centers.

Some of our customers may develop their own data center facilities. Other customers with their own existing data centers may choose to expand their data center operations in the future. In the event that any of our key customers were to develop or expand their data centers, we may lose business or face pressure as to the pricing of our services. Although we believe that the trend is for companies in China and Southeast Asia to outsource more of their data center facilities and operations to colocation data center service providers, there can be no assurance that this trend will continue. In addition, if we fail to offer services that are cost-competitive and operationally advantageous as compared with services provided in-house by our customers, we may lose customers or fail to attract new customers. If we lose a customer, there is no assurance that we would be able to replace that customer at the same or a higher rate, or at all, and our business and results of operations would suffer.

We may be unable to achieve high agreement renewal rates.

We seek to renew customer agreements when those agreements are due for renewal. We endeavor to provide high levels of customer service, support, and satisfaction to maintain long-term customer relationships and to secure high rates of agreement renewals for our services. Nevertheless, we cannot assure you that we will be able to renew service agreements with our existing customers or re-commit space relating to expired service agreements to new customers if our current customers do not renew their agreements. In the event of a customer's termination or non-renewal of expired agreements, or a renewal of an expired agreement for fewer services or less area than it had previously utilized, our ability to enter into services agreements so that new or other existing customers utilize the expired existing space in a timely manner will impact our results of operations. If such expired existing space is not utilized by new or other existing customers in a timely manner, our service revenue and results of operations may be negatively impacted. Our quarterly churn rate, which we define as the ratio of quarterly service revenue from agreements which terminated or expired without renewal during the quarter to the total quarterly service revenue for the preceding quarter, averaged 0.8%, 0.4% and 0.5% in 2020, 2021 and 2022, respectively. During 2023, data center service agreements with our customers with respect to 10.2% of our total area committed as of December 31, 2022 will become due for renewal.

If we do not succeed in attracting new customers for our services and/or growing revenue from existing customers, we may not achieve our revenue growth goals.

We have been expanding our customer base to cover a range of industry verticals, particularly cloud service providers and other internet-based businesses. Our ability to attract new customers, as well as our ability to grow revenue from our existing customers, depends on a number of factors, including our ability to offer high-quality services at competitive prices, the strength of our competitors and the capabilities of our marketing and sales teams to attract new customers. If we fail to attract new customers, we may not be able to grow our net revenue as quickly as we anticipate or at all.

As our customer base grows and diversifies into other industries, we may be unable to provide customers with services that meet the specific demand of such customers or their industries, or with quality customer support, which could result in customer dissatisfaction, decreased overall demand for our services and loss of expected revenue. In addition, our 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.

Customers who rely on us for the colocation of their servers, the infrastructure of their cloud systems, and management of their IT and cloud operations could potentially sue us for their lost profits or damages if there are disruptions in our services, which could impair our financial condition.

As our services are critical to many of our customers' business operations, any significant disruption in our services could result in lost profits or other indirect or consequential damages to our customers. Although our customer agreements typically contain provisions attempting to limit our liability for breach of the agreement, including failing to meet our service level commitments, there can be no assurance that a court would enforce any contractual limitations on our liability in the event that one of our customers brings a lawsuit against us as the result of a service interruption that they may ascribe to us. The outcome of any such lawsuit would depend on the specific facts of the case and any legal and policy considerations that we may not be able to mitigate. In such cases, we could be liable for substantial damage awards. Since we do not carry liability insurance coverage, such damage awards could seriously impair our financial condition.

Our major customers operate in a limited number of industries, particularly in the cloud services and internet sector. Factors that adversely affect these industries or information technology spending in these industries may adversely affect our business.

Our major customers operate in a limited number of industries, particularly in the cloud services and internet sector. As of December 31, 2022, customers from the cloud services and internet sector accounted for 63.1% and 24.8% of our total area committed, respectively. Our business and growth depend on continued demand for our services from our current and potential customers in the cloud services and internet sector. Demand for our services, and technology services in general, in any particular industry could be affected by multiple factors outside of our control, including a decrease in growth or growth prospects of the industry, a slowdown or reversal of the trend to outsource information technology operations, or consolidation in the industry. In addition, serving a major customer within a particular industry may effectively preclude us from seeking or obtaining engagements with direct competitors of that customer if there is a perceived conflict of interest. Any significant decrease in demand for our services by customers in these industries, or other industries from which we derive significant net revenue in the future, may reduce the demand for our services.

We enter into fixed price agreements with many customers, and our failure to accurately estimate the resources and time required for the fulfillment of our obligations under these agreements could negatively affect our results of operations.

Our data center services are generally provided on a fixed price basis that requires us to undertake significant projections and planning related to resource utilization and costs. Although our past project experience helps to reduce the risks associated with estimating, planning and performing fixed price agreements, we bear the risk of failing to accurately estimate our projected costs, including power costs as we may not accurately predict our customer's ultimate power usage once the agreement is implemented, and failing to efficiently utilize our resources to deliver our services, and there can be no assurance that we will be able to reduce the risk of estimating, planning and performing our agreements. In light of the NDRC's market-oriented reforms for coal-fired power, electricity prices may fluctuate while the reforms are being implemented at various levels of government. See "Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People's Republic of China Regulations—Regulations Related to Feed-in Electricity Price for Coal-Fired Power Generation." For fixed priced agreements, we may absorb higher power costs which may result in higher cost of revenue. Any failure to accurately estimate the resources and time required for a project, or any other factors that may impact our costs, could adversely affect our profitability and results of operations.

Our customer agreement commitments are subject to reduction and potential cancellation.

Many of our customer agreements allow for early termination, subject to payment of specified costs and penalties, which are usually less than the revenues we would expect to receive under such agreements. Our customer agreement commitments could significantly decrease if any of the customer agreements is terminated either pursuant to, or in violation of, the terms of such agreement. In addition, our customer agreement commitments during a particular future period may be reduced for reasons outside of our customers' control, such as general prevailing economic conditions. It is difficult to predict how market forces, or PRC or U.S. government policies, in particular, the severe and continued deterioration of bilateral relations between the PRC and the U.S., may continue to impact the PRC economy as well as related demand for our colocation and managed services going forward. See "—Geopolitical tensions have led to a heightened trend towards trade, technology and even finance "de-coupling" between China and the United States and this adverse trend may continue to deteriorate, which could negatively affect our business operations and results of operations." If our customer agreement commitments are significantly reduced, our results of operations could be materially and adversely affected.

Even if our current and future customers have entered into a binding agreement with us, they may choose to terminate such agreement prior to the expiration of its terms. Any penalty for early termination may not adequately compensate us for the time and resources we have expended in connection with such agreement, or at all, which could have a material adverse effect on our results of operations and cash flows.

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

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer. Policies promoted by the PRC government concerning the concept of “new infrastructure” may encourage and result in a new wave of investment in, among other things, largescale data centers, artificial intelligence and industrial internet at all levels of the economy. Accordingly, there may be an increase in the number of companies engaging in the data center services business due to the numerous opportunities presented by such policies, which may result in increased competition in our industry.

We face competition from the state-owned telecommunications carriers, namely China Telecom, China Unicom and China Mobile,) domestic and international carrier-neutral data center service providers and other global telecommunications carriers. Our current and future competitors may vary by size and service offerings and geographic presence. See “Item 4. Information on the Company—B. Business Overview—Competition.”

Competition is primarily centered on reputation and track record, quality and availability of data center capacity, quality of service, technical expertise, security, reliability, functionality, breadth and depth of services offered, geographic coverage, financial strength and price. Some of our current and future competitors may have greater brand recognition, marketing, technical and financial resources than we do. As a result, some of our competitors may be able to:

- bundle colocation services with other services or equipment they provide at reduced prices;
- develop superior products or services, gain greater market acceptance, and expand their service offerings more efficiently or rapidly;
- adapt to new or emerging technologies and changes in customer requirements more quickly;
- take advantage of acquisition and other opportunities more readily; and
- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing and sales of their services.

We operate in a competitive market, and we face pricing pressure for our services. Prices for our services are affected by a variety of factors, including supply and demand conditions and pricing pressures from our competitors. Although we offer a broad range of data center services, our competitors that specialize in only one of our service offerings may have competitive advantages in that offering. With respect to all of our colocation services, our competitors may offer such services at rates below current market rates or below the rates we currently charge our customers. With respect to both our colocation and managed services offerings, our competitors may offer services in a greater variety that are more sophisticated or that are more competitively priced than the services we offer. We may be required to lower our prices to remain competitive, which may decrease our margins and adversely affect our business prospects, financial condition and results of operations.

An oversupply of data center capacity could have a material adverse effect on us.

A buildup of new data centers or reduced demand for data center services could result in an oversupply of data center capacity in large commercial centers in China and Southeast Asia. Excess data center capacity could lower the value of data center services and limit the number of economically attractive markets that are available to us for expansion, which could negatively impact our business and results of operations.

Export control and economic or trade sanctions could subject us to regulatory investigations or other actions, and may limit our ability to sell to certain customers, which could materially and adversely affect our competitiveness and business operations.

Our operations expose us to risks related to export controls and economic and trade sanctions. In recent years, the U.S. government and other governments have threatened and/or imposed export controls, economic sanctions, or other trade restrictions on a number of China-based technology companies, including ZTE Corporation, Huawei Technologies Co., Ltd., or Huawei, and certain of their respective affiliates and other China-based technology companies, as well as taken other actions against Huawei and related persons. This has raised further concerns as to whether, in the future, China-based companies, including us, may be subject to additional regulatory challenges or enhanced restrictions in a wide range of areas such as data security, telecommunications, artificial intelligence, semiconductor manufacturing, technologies deployed for surveillance purposes, import/export of technology or other business activities. We may also face restrictions on transactions with certain customers, business partners and other persons.

For example, the U.S. government has added hundreds of Chinese companies and institutions, including Huawei, to the Entity List under the U.S. Export Administration Regulation, or EAR, and imposed targeted export controls and trade restrictions on them that could effectively bar their access to U.S.-origin goods and technologies, as well as goods and technologies that contain a significant portion of U.S.-origin content. The Entity List identifies foreign parties that are prohibited from obtaining—whether by export, re-export, or transfer in-country—some or all items subject to the EAR, unless the exporter secures a license. Licenses and exceptions to the license requirement are rarely granted or available to exporters. Exporting, re-exporting or transferring items in violation of the EAR could result in criminal and/or civil penalties. The U.S. Department of Commerce has indicated that engaging in activities contrary to U.S. national security and/or foreign policy interests would be grounds for inclusion on the Entity List. The Company provided colocation services to three PRC companies (two of which belong to the same group) on the Entity List during the years ended December 31, 2020, 2021 and 2022.

Furthermore, on November 12, 2020, former U.S. President Trump issued Executive Order 13959 on Addressing the Threat from Securities Investments that Finance Communist Chinese Military Companies which prohibits any transaction in publicly traded securities, or any securities that are derivative of, or are designed to provide investment exposure to such securities, of any identified company. On June 3, 2021, U.S. President Biden issued Executive Order 14032 amending Executive Order 13959. As amended, Executive Order 13959 continues to prohibit certain transactions involving the purchase or sale of publicly traded securities of designated companies. Restrictions are applicable to certain entities designated as Chinese Military-Industrial Complex Companies, or CMICs, who have been placed on the CMIC List. While the CMIC List is not a blocking sanctions list, it is possible that in the future more severe sanctions may be imposed by the U.S. government on CMICs. Additional companies, including China-based technology companies, have been added to the CMIC List for their alleged involvement in supporting surveillance of ethnic and religious minorities in Xinjiang, China and for their alleged involvement in efforts to develop and use biotechnology and other technologies for military application and human rights abuses. Additionally, the United States has ended trade preferences for Hong Kong as well as imposed sanctions on certain officials of Hong Kong and the PRC government.

Export control and economic sanctions laws and regulations are complex and likely subject to frequent changes, and the interpretation and enforcement of the relevant regulations involve substantial uncertainties, which may be driven by political and/or other factors that are out of our control or heightened by national security concerns. Such potential restrictions, as well as any associated inquiries or investigations or any other government actions, may be difficult or costly to comply with and may, among other things, delay or impede the development of our technology, products and solutions, hinder the stability of our supply chain, and may result in negative publicity, require significant management time and attention and subject us to fines, penalties or orders that we cease or modify our existing business practices, any of which may have a material and adverse effect on our business, financial condition and results of operations.

These restrictions, and similar or more expansive restrictions or sanctions may be imposed by the U.S. or other governments in the future that may adversely affect our ability to work with certain existing and future customers and business partners. This, in turn, could possibly lead to the modification or cancellation of our existing customer contracts, all of which would harm our business. Furthermore, our association with customers or business partners that are or become subject to U.S. regulatory scrutiny or export restrictions could subject us to actual or perceived reputational harm among current or prospective investors, suppliers or customers, customers of our customers, other parties doing business with us, or the general public. Any such reputational harm could result in the loss of investors, suppliers or customers, which could harm our business, financial conditions or prospects.

Additionally, given the important role played by China-based companies in our business, these developments may materially and adversely affect certain of our suppliers' and customers' abilities to acquire technologies, systems, devices or components that may be critical to their technology infrastructure, service offerings and business operations, and further cause a turmoil to their industries including telecommunications, information technology infrastructure and consumer electronics, which may, in turn, materially and adversely affect their demand for our services and affect our business, financial condition and results of operations. These restrictions or sanctions, even those targeting specific entities unrelated to us, could nevertheless also negatively affect our and our technology partners' abilities to recruit research and development talent or conduct technological collaboration with scientists and research institutes in the U.S., Europe or other countries, which could significantly harm our competitiveness. There can be no assurance that we will not be affected by current or future export controls or economic and trade sanctions regulations.

Geopolitical tensions have led to a heightened trend towards trade, technology and even finance “de-coupling” between China and the United States and this adverse trend may continue to deteriorate, which could negatively affect our business operations and results of operations.

In recent years, there has been a deterioration in the relationship between China and the United States which has resulted in intense potential conflicts between the two countries in trade, technology and other areas, and this has led to greater uncertainties in the geopolitical situations in other parts of the world affecting China and Chinese companies. Political tensions between the United States and China have escalated in recent years due to, among other things, the ongoing trade war between the two countries, the COVID-19 outbreak, the PRC National People's Congress' passage of Hong Kong national security legislation and decision of the National People's Congress on improving the electoral system of the Hong Kong, the imposition of U.S. sanctions on certain Chinese officials from China's central government and the Hong Kong by the U.S. government, and the imposition of sanctions on certain individuals from the U.S. by the Chinese government. Export controls, economic and trade sanctions have been imposed and/or threatened by the U.S. government on a number of Chinese technology companies, some of which are existing or potential customers and/or suppliers to us. The United States has also threatened to impose further export controls, sanctions, trade embargoes, and other heightened regulatory requirements on China and Chinese companies. These have raised concerns that there may be increasing regulatory challenges or enhanced restrictions against China and other Chinese technology companies, including us, in a wide range of areas such as data security, emerging technologies, semiconductor manufacturing, artificial intelligence, “dual-use” commercial technologies and applications that could be deployed for surveillance or military purposes, import/export of technology or other business activities. For instance, in 2019 and 2020, the U.S. government announced several executive orders and regulations effectively barring American firms from selling, exporting, re-exporting, or transferring U.S.-origin technology, components and software, among other items, to Chinese technology companies and their respective affiliates. In May 2020, the U.S. Bureau of Industry and Security, or BIS, announced plans to restrict certain Chinese companies and their overseas-related affiliates' ability to use U.S. technology and software to design and manufacture their products. In August 2020, the U.S. State Department expanded their “Clean Network” program to cover, among others, availability of apps from Chinese companies and storage of data sensitive to U.S. citizens and businesses on cloud-based storage systems run by Chinese companies, including Alibaba. Various executive orders issued by former U.S. President Trump have also led to escalating political tensions between the U.S. and China, such as the one issued in August 2020 that prohibits certain transactions with ByteDance Ltd., Tencent Holdings Ltd. and the respective subsidiaries of such companies, the executive order issued in November 2020 that prohibits U.S. persons from transacting publicly traded securities of certain “Communist Chinese military companies” named in such executive order, as well as the executive order issued in January 2021 that prohibits such transactions as are identified by the U.S. Secretary of Commerce with certain “Chinese connected software applications,” including Alipay and WeChat Pay. When such measures become effective, any transaction that is related to such target companies by any such person, or with respect to any such property, subject to the jurisdiction of the United States, with such target companies shall be prohibited. In March 2021, the Federal Communications Commission, or the FCC, said it had identified five Chinese companies that posed a threat to U.S. national security. In November 2021, the U.S. enacted the Secure Equipment Act, which stops companies judged to be a security threat from receiving new telecoms equipment licenses, and directs the FCC not to review applications from such companies ruled a threat. The Secure Equipment Act signifies that equipment from Huawei, ZTE and three other Chinese companies cannot be used in U.S. telecoms networks. In August 2022, the U.S. enacted the Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (CHIPS Act). The CHIPS Act aims to strengthen U.S. domestic semiconductor manufacturing, design and research, fortify the economy and national security, and to help the U.S. compete economically against China. In October, 2022, BIS released broad changes in export control regulations, including new regulations restricting the export to China of advanced semiconductors, supercomputer technology, equipment for the manufacturing of advanced semiconductors, and components and technology for the manufacturing in China of certain semiconductor manufacturing equipment. These restrictions or regulations, and similar or more expansive restrictions or regulations that may be imposed by the U.S. or other jurisdictions in the future, may materially and adversely affect our ability and our customers' ability to acquire technologies, systems, devices or components that may be critical to our technology infrastructure, service offerings and business operations. There can be no assurance that the current and/or future restrictions or regulations implemented by the U.S. government, or authorities in other jurisdictions, and related developments, will not have a negative impact on our business operations or reputation.

In addition, if any additional existing or potential customers and/or suppliers of ours or any other parties that have collaborative relationships with us or our affiliates, or our company, were to become targeted under sanctions or export control restrictions, this may result in significant interruption in our business, regulatory investigations and reputational harm to us. Media reports on alleged violation of export control or economic and trade sanctions or data security and privacy laws, by us or by our customers, even on matters not involving us, could nevertheless damage our reputation and lead to regulatory investigations, fines and penalties against us. Such fines and penalties may be significant, and if we were publicly named or investigated by any regulator on the basis of suspected or alleged violations of export control or economic and trade sanctions or data security and privacy laws and rules, even in situations where the potential amount or fine involved may be relatively small, our businesses could be severely interrupted and our reputation could be significantly harmed.

Furthermore, rising trade and political tensions between the United States and China could place pressure on the economic growth in China as well as the rest of the world. Such rising tensions could also reduce levels of trade, investments, technological exchanges and other economic activities between the two major economies, which would have a material adverse effect on global economic conditions and the stability of global financial markets. The U.S. administration under former U.S. President Trump had advocated for and taken steps toward restricting trade in certain goods, particularly from China. While the two nations reached a “Phase One” trade agreement in January 2020, the progress of future trade talks between China and the United States are subject to uncertainties, and there can be no assurance as to whether the United States will maintain or reduce tariffs, or impose additional tariffs on Chinese products in the near future. Trade tension between China and the United States may intensify and the United States may adopt even more drastic measures in the future. China has retaliated and may further retaliate in response to new trade policies, treaties and tariffs implemented by the United States. For example, on January 9, 2021, MOFCOM promulgated the Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and Other Measures, which will apply to Chinese individuals or entities that are purportedly barred by a foreign country’s law from dealing with nationals or entities of a third country. The measures taken by the U.S. and Chinese governments may have the effect of restricting our ability to transact or otherwise do business with entities within or outside of China and may cause investors to lose confidence in Chinese companies and counterparties, including us. If we were unable to conduct our business as it is currently conducted as a result of such regulatory changes, our business, results of operations and financial condition would be materially and adversely affected.

Any further escalation in trade or other tensions between the United States and China or news and rumors of any escalation, could introduce uncertainties to China’s economy and the global economy which in turn could affect the Chinese economy generally, including the use of mobile, web-based commerce as well as our customers’ cloud-based platforms and services. Any such decline in the technology industry, reduction in cloud adoption or slowdown in the growth of the internet and the use of our customers’ platforms and services may lead to decreased demand for data center capacity or managed services, which could have a material and adverse effect on our business, results of operations and financial condition. Foreign policies of the United States tend to be followed by certain other countries, and those countries may adopt similar policies in their relationships with China and Chinese companies.

Changes in international trade or investment policies and barriers to trade or investment, and the ongoing trade conflict, may have an adverse effect on our business and expansion plans.

In recent years, international market conditions and the international regulatory environment have been increasingly affected by competition among countries and geopolitical frictions. Changes to national trade or investment policies, treaties and tariffs, fluctuations in exchange rates or the perception that these changes could occur, could adversely affect the financial and economic conditions in the jurisdictions in which we operate, as well as our international and cross-border operations, our financial condition and results of operations. For example, in 2018 the United States announced tariffs that applied to products imported from China, totaling approximately US\$250 billion, and in May 2019 the United States increased the rate of certain tariffs previously levied on Chinese products from 10% to 25%. In August 2019, the United States announced that it would apply an additional tariff of 10% on the remaining US\$300 billion of goods and products coming from China. After several rounds of trade talks between China and the United States, the United States temporarily delayed an increase in tariffs on US\$250 billion of products imported from China, and in September and October 2019, the United States announced several tariff exemptions for certain Chinese products. In August 2019, the U.S. Treasury labeled China a currency manipulator and withdrew such designation in January 2020. In addition, the United States is reported to be considering ways to limit U.S. investment portfolio flows into China, though no details in such regard have been officially announced.

China and other countries have retaliated and may further retaliate in response to new trade policies, treaties and tariffs implemented by the United States. For instance, in response to the tariffs announced by the United States in May 2018, China imposed retaliatory tariffs on U.S. goods of a similar value, and in response to the tariff announcements by the United States in August 2019, China announced it would stop buying U.S. agricultural products and would not rule out import tariffs on newly purchased U.S. agricultural products. In September 2019, China unveiled several tariff exemptions for U.S. products, including various agricultural products. Even though, in January 2020, the “Phase One” trade agreement was signed between the United States and China, the U.S.-China relationship has deteriorated further, and there can be no assurances that the U.S. or China will not increase tariffs or impose additional tariffs in the future. Any further actions to increase existing tariffs or impose additional tariffs could result in an escalation of the trade conflict, and may have tremendous negative impact on the economies of not merely the two countries concerned, but the global economy as a whole. If these measures and tariffs affect any of our customers and their business results and prospects, their demand for, or ability to pay for, our data center services may decrease, which would materially and adversely affect our results of operations. In addition, if China were to increase the tariff on any of the items imported by our suppliers and contract manufacturers from the U.S., they might not be able to find substitutes with the same quality and price in China or from other countries. As a result, our costs would increase and our business, financial condition and results of operations would be adversely affected.

Our failure to comply with regulations applicable to our leased data center buildings may materially and adversely affect our ability to use such data centers.

Among the data center buildings that we lease, including those under construction, a majority of the lease agreements have not been registered or filed with relevant authorities in accordance with the applicable PRC laws and regulations. The enforcement of this legal requirement varies depending on local practices. In case of failure to register or file a lease, the parties to the unregistered lease may be ordered to make rectifications (which would involve registering such leases with the relevant authority) before being subject to penalties. The penalty ranges from RMB1,000 to RMB10,000 for each unregistered lease, at the discretion of the relevant authority. The relevant PRC law is not clear as to which of the parties, the lessor or the lessee, is liable for the failure to register the lease, and the lease agreements of several of our data centers provide that the lessor is responsible for processing the registration and must compensate us for losses caused by any breach of the obligation. Although we have proactively requested that the applicable lessors complete or cooperate with us to complete the registration in a timely manner, we are unable to control whether and when such lessors will do so. In the event that a fine is imposed on both the lessor and lessee, and if we are unable to recover from the lessor any fine paid by us in accordance with the terms of the lease agreement, such fine will be borne by us. In the case of one data center in Beijing, a portion of the building has been constructed without obtaining the building ownership certificate, and the part of the lease in relation to such portion may be deemed invalid if the construction has not been duly approved by the government, in which event we would not be able to use that portion of property. If the owners fail to obtain the necessary consents and/or to comply with the applicable legal requirements for the change of usage of these premises, and the relevant authority or the court orders us to use the relevant leased buildings for the designated usage only, we may not be able to continue to use these buildings for data center purposes and we may need relocate our operation there to other suitable premises. We may also be subject to administrative penalties for lack of fire safety approvals for renovation of the leased premises, and we may be ordered to suspend operations at applicable premises if we fail to timely cure any such defect. Construction or renovation of certain other of our data centers was carried out without obtaining construction (including zoning) related permits, and certain leased premises were put into use without fulfillment of construction inspection and acceptance procedures, which may cause administrative penalties to be imposed on us in the case of renovation, and may cause the use of the leased premises to be deemed illegal, and we may be forced to suspend our operations as a result. See also “—Risks Related to Doing Business in the People’s Republic of China—Our business operations are extensively impacted by the policies and regulations of the PRC government. Any policy or regulatory change may cause us to incur significant compliance costs.”

We may be regarded as being non-compliant with the regulations on VATS due to the lack of IDC licenses for which penalties may be assessed that may materially and adversely affect our business, financial condition, growth strategies and prospects.

The laws and regulations regarding VATS licenses in the PRC are relatively new and are still evolving, and their interpretation and enforcement involve significant uncertainties. Investment activities in the PRC by foreign investors are principally governed by the Industry Catalog Relating to Foreign Investment, or the Catalog, which was promulgated and is amended from time to time by the MOFCOM and the NDRC. Industries not included in the Special Management Measures (Negative List) of the Catalog are permitted industries. Industries such as VATS, including internet data center services, are restricted to foreign investment. The Special Management Measures (Foreign Investment Permitted Negative List) of the Catalog has been superseded by the Special Management Measures (Negative List) (2018) and the Encouraged Foreign Investment Industry Catalog has been superseded by Encouraged Foreign Investment Industry Catalog (2019). On December 27, 2021, the MOFCOM and the NDRC promulgated the Special Management Measures (Negative List) for the Access of Foreign Investment, or the Negative List (2021), which became effective on January 1, 2022. Foreign investment in VATS (other than e-commerce, domestic multi-party communications, store-and-forward and call center), including internet data center services, still falls within the Negative List (2021). Specifically, the Administrative Regulations on Foreign-Invested Telecommunications Enterprises restrict the ultimate capital contribution percentage held by foreign investor(s) in a foreign-invested VATS enterprise to 50% or less. Under the Telecommunications Regulations, telecommunications service providers are required to procure operating licenses prior to their commencement of operations. The Administrative Measures for Telecommunications Business Operating License, which took effect on April 10, 2009 and was amended on September 1, 2017, set forth the types of licenses required to provide telecommunications services in China and the procedures and requirements for obtaining such licenses.

Before 2013, the definition of the IDC services was subject to interpretation as to whether our services would fall within its scope. In addition, authorities in different localities had different interpretations. According to the Classification Catalogue of Telecommunications Services, or the Telecom Catalogue, publicized in February 2003 by the Ministry of Information Industry, the predecessor of the MIIT, which took effect in April 2003, and our consultations with the MIIT, IDC services should be rendered through the connection with the internet or other public telecommunications networks.

On May 6, 2013, the “Q&A on the Application of IDC/ISP Business,” or the Q&A, was published on the website of China Academy of Telecom Research, an affiliate of the MIIT. The Q&A was issued together with the draft revised Telecom Catalogue of the 2013 version, which although not an official law or regulation, reflected the evolving attitude of the MIIT towards the legal requirements as to applications for IDC licenses. A national consulting body and certain telephone numbers, the Designated Numbers, are provided in the Q&A to answer any questions arising from the application of IDC licenses. Since then, even though the definition of IDC services under the Q&A is identical to that under the Telecom Catalogue, whether a business model should be deemed to be IDC services is subject to the unified clarifications under the Q&A and replies obtained from such Designated Numbers, rather than different replies which may be obtained from different officials from the MIIT or its local branches. The draft revised Telecom Catalogue did not come into effect until March 2016, when it was further revised to adapt to developments in the telecommunications industry. During such period, we closely followed legislative developments and conducted feasibility studies for restructuring our business. Based on the Q&A and our consultation with both the Designated Numbers and MIIT officials in 2014 and 2015, IDC services which did not utilize public telecommunications networks would also require an IDC license and that IDC services could only be provided by a holder of an IDC license, or a subsidiary of such holder, with the authorization of the holder.

GDS Beijing obtained a cross-regional IDC license in November 2013, the scope of which now includes Shanghai, Suzhou, Beijing, Shenzhen, Chengdu, Guangzhou, Zhangjiakou, Langfang, Tianjin, Huizhou, Wulanchabu, Wuhan, Nantong and Chongqing. In order to adapt to the new regulatory requirements and address pre-existing customer agreements, we converted GDS Suzhou into a domestic company wholly owned by GDS Beijing by acquiring all of the equity interests in GDS Suzhou from Further Success Limited, or FSL, a limited liability company established in the British Virgin Islands, in order to enable GDS Suzhou to provide IDC services with the authorization of GDS Beijing, and under the auspices of an IDC license held by GDS Beijing. The MIIT approved GDS Beijing's application to expand its IDC license coverage to include GDS Suzhou and Kunshan Wanyu Data Service Co., Ltd., or Kunshan Wanyu, so that they are now authorized to provide IDC services. As part of the VIE restructuring, we converted and changed the shareholding of Shanghai Waigaoqiao EDC Technology Co, Ltd., or EDC Shanghai Waigaoqiao, in the same way as GDS Suzhou, and the MIIT has approved GDS Beijing's application to expand its IDC license coverage to include EDC Shanghai Waigaoqiao so that EDC Shanghai Waigaoqiao is also authorized to provide IDC services, and the MIIT has approved GDS Beijing's application to expand its IDC license coverage to include Shenzhen Yaode. As the result of our acquisition of BJ10, BJ11 and BJ12, we have acquired all of the equity interests in Lanting (Beijing) Information Science and Technology Co., Ltd., or Lanting Information, which therefore has been converted into a foreign-invested company. The existing customer agreements of BJ10, BJ11 and BJ12 were entered into by Lanting Information as an IDC service provider before our acquisition. As part of the acquisition, Lanting Information canceled its IDC license prior to the closing and the relevant counterparties have completed the assignment of all of the rights and obligations of Lanting Information as the IDC service provider under these customer agreements to GDS Beijing as the IDC service provider. In addition, with regard to the other WFOEs that have not contributed substantial revenue, we are deliberating different measures to ensure that any business activity that may have to be conducted by IDC license holders will be conducted by our IDC license holders, which are the VIEs and their subsidiaries.

However, there can be no assurance that our agreements signed before the completion of the VIE restructuring with any of our WFOEs as the service provider will not be deemed as historical non-compliance. Also, we cannot assure you that the fact that Lanting Information is the signing party of such agreements during the interim period from the cancellation date of its own IDC license to the completion date of the assignment of such agreements will not be deemed as historical non-compliance. If the MIIT regards us as existing in a state of non-compliance, penalties could potentially be assessed against us. It is possible that the amount of any such penalties may be several times more than the net revenue generated from these services. Our business, financial condition, expected growth and prospects would be materially and adversely affected if such penalties were to be assessed upon us. It is also possible that the PRC government may prohibit a non-compliant entity from continuing to carry on its business, which would materially and adversely affect our results of operations, expected growth and prospects.

We have learned that the MIIT will not approve any expansion of authorization by an IDC license holder to its subsidiary, and that it will not allow any such subsidiary of an IDC license holder to renew its current authorization in the future. Instead, the MIIT will require subsidiaries of IDC license holders to apply for their own IDC licenses. Although, to our knowledge, such policy is not supported by any published laws or regulations, we have been making efforts to comply with this regulatory development. GDS Suzhou has already obtained its own IDC license in May 2019. Beijing Wan Chang Yun and Shenzhen Yaode have obtained their own IDC license respectively in September and November 2019. Two other subsidiaries of the VIEs plan to apply for and obtain their own IDC licenses prior to the expiry of the existing authorizations under which they provide IDC services going forward. However, we cannot assure you that we will be able to obtain approvals from the MIIT for their own IDC Licenses in a timely manner or at all, or obtain approvals from the MIIT for an expansion of authorization from GDS Beijing under its IDC license to allow IDC services to be provided by the other subsidiaries of the VIEs, who rely on such authorizations and expansions to provide IDC services, or that we will be able to renew such authorizations and expansions in due course. Based on our experience with IDC license applications, we do not foresee any legal impediment for such subsidiaries to obtain their IDC licenses. In the unlikely event that such subsidiaries fail to obtain their IDC licenses, we plan to have such subsidiaries assign relevant customer agreements to GDS Beijing so that GDS Beijing will provide the IDC services under such customer agreements, as GDS Beijing's IDC license covers the locations and scope of IDC services provided by such subsidiaries. However, we will need to obtain customers' consent to the foregoing assignment, and there can be no assurance that we will be able to obtain such consents from customers before the authorization expires. If any of these situations occur, our business, financial condition, expected growth and prospects would be materially and adversely affected.

Some of the consolidated VIEs may be regarded as being non-compliant with the regulations on VATS, due to operating beyond the permitted scope of their IDC licenses.

One of the consolidated VIEs, GDS Shanghai, obtained a regional IDC license for the Shanghai area in January 2012. Nevertheless, GDS Shanghai provided IDC services in cities outside of Shanghai, which were beyond the scope of its then-effective IDC license. GDS Shanghai upgraded its IDC license to a cross-regional license in April 2016, according to which GDS Shanghai is allowed to provide IDC services in Beijing, Shanghai, Suzhou, Shenzhen and Chengdu. A subsidiary of one of the consolidated VIEs, GDS Suzhou, was historically authorized to provide general IDC services under the auspices of an IDC license held by GDS Beijing but such authorization approved by MIIT did not include internet resources collaboration services. Nevertheless, GDS Suzhou signed agreements with clients to provide internet resources collaboration services. In 2018, we further expanded GDS Beijing's authorization to GDS Suzhou so that GDS Suzhou also was allowed to provide internet resources collaboration services. In addition, in 2016, 2017 and 2018, GDS Beijing and GDS Suzhou entered into IDC service agreements with relevant customers, according to which GDS Beijing and GDS Suzhou have been providing IDC services to their respective customers through third-party data centers in Tianjin. In 2017, GDS Beijing entered into an IDC services agreement with a certain customer, according to which GDS Beijing has been providing IDC services since 2018 in our three data centers located at Zhangjiakou, Hebei Province. However, GDS Beijing's IDC license and its authorization granted to GDS Suzhou have not included the Tianjin and Zhangjiakou areas until 2019, when GDS Beijing has upgraded its IDC license to cover the Zhangjiakou, Langfang and Tianjin areas, and GDS Suzhou has obtained its own IDC license whereby GDS Suzhou is also allowed to provide general IDC services in broad geographic scope including Tianjin and Zhangjiakou. However, although such approvals have been obtained, we cannot assure you that any agreements signed before GDS Beijing and GDS Suzhou obtained such approvals may not be deemed as historical non-compliance. If the MIIT regards GDS Shanghai, GDS Suzhou and GDS Beijing as being historically non-compliant, penalties which could be several times more than the net revenue generated from these services, could potentially be assessed against us, and as a result, our business, financial condition, expected growth and prospects would be materially and adversely affected. It is also possible that the PRC government may prohibit a historically non-compliant entity from continuing to carry on its business, which would materially and adversely affect our results of operations, expected growth and prospects.

We may fail to obtain, maintain and update licenses or permits necessary to conduct our operations in the PRC, and our business may be materially and adversely affected as a result of any changes in the laws and regulations governing the VATS industry in the PRC.

There can be no assurance that we will be able to maintain our existing licenses or permits necessary to provide our current IDC services in the PRC, renew any of them when their current term expires, or update existing licenses or obtain additional licenses necessary for our future business expansion. The failure to obtain, retain, renew or update any license or permit generally, and our IDC licenses in particular, could materially and adversely disrupt our business and future expansion plans.

For example, the revised Telecom Catalogue came into effect in March 2016 in which the definition of the IDC business also covers the internet resources collaboration services business to reflect the developments in the telecommunications industry in China and covers cloud-based services. Also, in January 2017, the MIIT issued The Circular of the Ministry of Industry and Information Technology on Clearing up and Regulating the Internet Access Service Market, or the 2017 MIIT Circular, according to which an enterprise that obtained its IDC license prior to the implementation of the revised Telecom Catalogue and has actually carried out internet resources collaboration services shall make a written commitment to its original license issuing authority before March 31, 2017 to meet the relevant requirements for business licensing and obtain the corresponding telecommunication business license by the end of 2017. The 2017 MIIT Circular also requires that companies providing IDC services shall not construct communication transmission facilities without permission. Although we have successfully expanded the scope of our IDC licenses to cover internet resources collaboration services, fixed network domestic data transmission services and domestic internet virtual private network services as required under the 2017 MIIT Circular, changes in the regulatory environment of this kind are potentially disruptive to our business as they may require us to modify the way we conduct our business in order to receive licenses or otherwise comply with such requirements. We may also be deemed in non-compliance for failure to update our operation licenses in a timely manner according to such new regulatory requirements. Any such changes could increase our compliance costs, divert management's attention or interfere with our ability to serve customers, any of which could harm our results of operations.

In addition, if future PRC laws or regulations governing the VATS industry require that we obtain additional licenses or permits or update existing licenses in order to continue to provide our IDC services, there can be no assurance that we would be able to obtain such licenses or permits or update existing licenses in a timely manner, or at all. If any of these situations occur, our business, financial condition and prospects would be materially and adversely affected.

Third-party data center providers from whom we lease data center capacity on a wholesale basis may fail to maintain licenses and permits necessary to conduct their operations in the PRC, and our business may be materially and adversely affected.

As of December 31, 2022, we operated an aggregate net floor area of 7,563 sqm that we lease on a wholesale basis from other data center providers, and which we refer to as our third-party data centers. There can be no assurance that the wholesale data center providers from whom we lease will be able to maintain their existing licenses or permits necessary to provide our current IDC services in the PRC or renew any of them when their current term expires. Their failure to obtain, retain or renew any license or permit generally, and their IDC licenses in particular, could materially and adversely disrupt our business.

In addition, if any future PRC laws or regulations governing the VATS industry require that the wholesale data center providers from whom we lease obtain additional licenses or permits in order to continue to provide their IDC services, there can be no assurance that they would be able to obtain such licenses or permits in a timely manner, or at all. If any of these situations occur, our business, financial condition and prospects could be materially and adversely affected.

We cannot assure you that we will be able to relocate such operations to suitable alternative premises, and any such relocation may result in disruption to our business operations and thereby result in loss of earnings. We may also need to incur additional costs for the relocation of our operation. There is also no assurance that we will be able to effectively mitigate the possible adverse effects that may be caused by such disruption, loss or costs. Any of such disruption, loss or costs could materially and adversely affect our financial condition and results of operations.

Our failure to maintain our relationships with various cloud service providers may adversely affect our business, operating results and financial condition.

We derive the majority of our revenue from cloud service providers. Since our agreements with key cloud service providers in China are non-exclusive, these companies may decide in the future to partner with more of our competitors, develop in-house data center capabilities or terminate their agreements with us, any of which could adversely and materially affect our business expansion plan and expected growth.

Our managed cloud services involve providing services to the customers of cloud service providers. If we do not maintain good relationships with cloud service providers, our business could be negatively affected. If these cloud service providers fail to perform as required under our agreements for any reason or suffer service level interruptions or other performance issues, or if our customers are less satisfied than expected with the services provided or results obtained, we may not realize the anticipated benefits of these relationships.

We may not be able to keep up with rapidly changing technology, including our ability to upgrade our power, cooling, security or connectivity systems cost-effectively or at all.

The markets for the data centers we own and operate, as well as certain of the industries in which our customers operate, are characterized by rapidly changing technology, evolving industry standards, frequent new service introductions, shifting distribution channels and changing customer demands. As a result, the infrastructure at our data centers may become obsolete or unmarketable due to demand for new processes and/or technologies, including, without limitation: (i) new processes to deliver power to, or eliminate heat from, computer systems; (ii) customer demand for additional redundancy capacity; (iii) new technology that permits higher levels of critical load and heat removal than our data centers are currently designed to provide; and (iv) an inability of the power supply to support new, updated or upgraded technology. In addition, the systems that connect our self-developed data centers, and in particular, our third-party data centers, to the internet and other external networks may become outdated, including with respect to latency, reliability and diversity of connectivity. When customers demand new processes or technologies, we may not be able to upgrade our data centers on a cost-effective basis, or at all, due to, among other things, increased expenses to us that cannot be passed on to customers or insufficient revenue to fund the necessary capital expenditures. The obsolescence of our power and cooling systems and/or our inability to upgrade our data centers, including associated connectivity, could reduce revenue at our data centers and could have a material adverse effect on us. Furthermore, potential future regulations that apply to industries we serve may require customers in those industries to seek specific requirements from their data centers that we are unable to provide. If such regulations were adopted, we could lose customers or be unable to attract new customers in certain industries, which could have a material adverse effect on us.

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, which could cause us to incur substantial costs. We may not be able to adapt to changing technologies in a timely and cost-effective manner, if at all, which would adversely impact our ability to sustain and grow our business.

In addition, new technologies have the potential to replace or provide lower cost alternatives to our services. The adoption of such new technologies 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 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 services to market, those new services may need to be made available at lower profit margins 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 operating results and financial condition. Our introduction of new alternative services that have lower price points than our current offerings may also result in our existing customers switching to the lower cost products, which could reduce our net revenue and have a material adverse effect on our results of operation.

We have limited ability to protect our intellectual property rights, and unauthorized parties may infringe upon or misappropriate our intellectual property.

Our success depends in part upon our proprietary intellectual property rights, including certain methodologies, practices, tools and technical expertise we utilize in designing, developing, implementing and maintaining applications and processes used in providing our services. We rely on a combination of copyright, trademark, trade secrets and other intellectual property laws, nondisclosure agreements with our employees, customers and other relevant persons and other measures to protect our intellectual property, including our brand identity. Nevertheless, it may be possible for third parties to obtain and use our intellectual property without authorization. The unauthorized use of intellectual property is common in China and enforcement of intellectual property rights by PRC regulatory agencies is inconsistent. As a result, litigation may be necessary to enforce our intellectual property rights. Litigation could result in substantial costs and diversion of our management's attention and resources, and could disrupt our business, as well as have a material adverse effect on our financial condition and results of operations. Given the relative unpredictability of China's legal system and potential difficulties in enforcing a court judgment in China, there is no guarantee that we would be able to halt any unauthorized use of our intellectual property in China through litigation.

We may be subject to third-party claims of intellectual property infringement.

We derive most our revenues in China and use , our figure trademarks, in a majority of our services. We have registered the figure trademark  in China and the trademark  in Hong Kong in several categories that cover our services areas and we plan to register the figure trademark  in China in certain additional categories. We have also registered the pure text of “GDS” as a trademark in several categories that cover our services areas, however, a third party has also registered the pure text of “GDS” as a trademark in certain IT-related services. As the services for which the third-party trademark is registered are also IT-related and could be construed as similar to ours in some respects, infringement claims may be asserted against us, and we cannot assure you that a government authority or a court will hold the view that such similarity will not cause confusion in the market. In this case, if we use the pure text of GDS (which we have not registered as a trademark with respect to all services we provide) as our trademark, we may be required to explore the possibility of acquiring this trademark or entering into an exclusive licensing agreement with the third party, which will cause us to incur additional costs. In addition, we may be unaware of intellectual property registrations or applications that purport to relate to our services, which could give rise to potential infringement claims against us. Parties making infringement claims may be able to obtain an injunction to prevent us from delivering our services or using trademark or technology containing the allegedly intellectual property. If we become liable to third parties for infringing upon their intellectual property rights, we could be required to pay a substantial damage award. We may also be subject to injunctions that require us to alter our processes or methodologies so as not to infringe upon a third party’s intellectual property, which may not be technically or commercially feasible and may cause us to expend significant resources. Any claims or litigation in this area, whether we ultimately win or lose, could be time-consuming and costly, could cause the diversion of management’s attention and resources away from the operations of our business and could damage our reputation.

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 arrangements, we could be exposed to protracted and costly legal proceedings and lose customers.

We and our employees are in some cases provided with access to our customers’ proprietary intellectual property and confidential information, including technology, software products, business policies and plans, trade secrets and personal data. Many of our customer agreements 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 nondisclosure 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 agreements 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.

Assertions of infringement of intellectual property or misappropriation of confidential information against us, if successful, could have a material adverse effect on our business, financial condition and results of operations. Protracted litigation could also result in existing or potential customers deferring or limiting their purchase or use of our services until resolution of such litigation. Even if such assertions against us are unsuccessful, they may cause us to lose existing and future business and incur reputational harm and substantial legal fees.

We rely on third-party suppliers for key elements of our facilities, equipment, network infrastructure and software.

We contract with third parties for the supply of facilities, equipment and hardware that we use in the provision of our services to our customers and that we sell to our customers in some cases. The loss of a significant supplier could delay expansion of the data center facilities that we operate, impact our ability to sell our services and hardware and increase our costs. If we are unable to purchase the hardware or obtain a license for the software that our services depend on, our business could be significantly and adversely affected. In addition, if our suppliers are unable to provide products that meet evolving industry standards or that are unable to effectively interoperate with other products or services that we use, then 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.

We engage third-party contractors to carry out various services relating to our data center facilities.

We engage third-party contractors to carry out various services relating to our data center facilities, including on-site security, cleaning and greening service, part of the 24/7 on duty operations and IT and customer service delivery. We endeavor to engage third-party companies with a strong reputation and proven track record, high-performance reliability and adequate financial resources. However, any such third-party contractor may still fail to provide satisfactory security services or quality outsourced labor, resulting in inappropriate access to our facilities or IT faults which, though non-critical, may cause poor service quality to customers.

We are expanding our operations to new markets outside of mainland China and Hong Kong, which subject us to additional regulatory, economic and political risks, and we may not be able to effectively implement our international expansion plans.

We are expanding our operations in new markets outside of mainland China and Hong Kong, such as Singapore, Malaysia and Indonesia. In addition, we began providing data center services in Singapore at third-party data centers. We are currently evaluating other expansion opportunities as well.

Our ability to effectively implement our international plans will depend on, among other things, our ability to source and develop additional data centers on an economically feasible basis, and our ability to secure commitments from customers. Our new markets may have different competitive conditions and may subject us to operating considerations that are different from those we have experienced in mainland China and Hong Kong, which, in turn, may adversely affect our ability to develop and operate data centers in these new markets.

International expansion involves operational risks related to zoning, regulatory approvals, and construction. Our lack of operating experience in new markets may adversely impact our ability to successfully develop new data centers. To successfully develop our data center facilities in these new markets, we must work closely with local government regulators, power suppliers and carriers, where our proposed data centers are located, and third-party technical personnel with whom we have limited experience. Should a significant vendor working on any such development project breach their contractual obligations during the construction process, we could experience significant delays, increased costs to complete the project and other issues that may negatively impact our business. See “Item 4. Information on the Company—B. Business Overview-Regulatory Matters-Singapore Regulations,” “—Malaysia Regulations” and “—Indonesia Regulations.”

We are subject to a variety of national, regional and local laws and regulations in the markets where we do business, notably mainland China, Hong Kong and Southeast Asia, some of which may conflict with each other and all of which are subject to change. These laws and regulations include telecommunication regulations, tax laws and regulations, environmental regulations, labor laws and other government requirements, approvals, permits and licenses. Any new regulations or policies pertaining to our business may result in significant additional expenses to us and customers, which could cause a significant reduction in demand for data center services. Changes in applicable laws or regulations, or in the interpretations of these laws and regulations, could result in increased compliance costs or the need for additional capital expenditures. If we fail to comply with these requirements, we could also be subject to civil or criminal liability and the imposition of fines.

Undertaking and managing international expansion may subject us to additional risks, including:

- protectionist laws and business practices favoring local competition;
- greater difficulty or delay in accounts receivable collection;

- difficulties in staffing and managing foreign operations, including negotiating with foreign labor unions or workers' councils;
- political and economic instability, as well as geopolitical tensions among the PRC, the U.S. and/or member states in the Association of Southeast Asian Nations, or ASEAN; see"—Geopolitical tensions have led to a heightened trend towards trade, technology and even finance “decoupling” between China and the United States and this adverse trend may continue to deteriorate, which could negatively affect our business operations and results of operations”;
- unexpected changes in regulatory, tax and political environments;
- fluctuations in exchange rates between the Renminbi and other currencies, including but not limited to the Hong Kong dollar, Macanese pataca, the U.S. dollar, the Singapore dollar, Malaysian ringgit and Indonesian rupiah;
- difficulties in repatriating funds from certain countries;
- difficulties in managing across cultures and in foreign languages;
- our ability to obtain, transfer or maintain licenses required by governmental entities with respect to our business;
- our ability to secure and maintain the necessary physical and telecommunications infrastructure;
- compliance with anti-bribery and corruption laws;
- compliance with evolving governmental regulation with which we have little experience; and
- compliance with evolving and varied regulations related to the ongoing COVID-19 pandemic.

As we further expand into overseas markets in Southeast Asia, we may face risks associated with a lack of market knowledge or understanding of the local economy and culture, forging new business relationships in the area and unfamiliarity with local government procedures. In addition, due diligence, transaction and structuring costs in Southeast Asia may be higher than those we may face in mainland China and Hong Kong. We may mitigate such risks through extensive diligence and research and associations with experienced local partners; however, we cannot assure you that all such risks will be eliminated.

As we further expand in Southeast Asia, specifically in Singapore, Malaysia and Indonesia, adverse developments in the economic, political, or regulatory environment of these countries may materially adversely affect our business and operating results.

We provide data center services in Singapore at third-party data centers and have data center capacity under construction or held for future development in Malaysia and Indonesia. Our expansion in these countries in Southeast Asia involves strategically locating projects in and around Singapore. Consequently, we may be exposed to adverse developments in the economic, political and regulatory environments in these markets, and particularly in Singapore.

Our expansion in Southeast Asia is contingent upon the increasing demand from our customers to expand into markets such as Singapore, Malaysia, and Indonesia. Any fluctuations in our customers' demand or pace of deployment in these markets could have a significant impact on our operations. Establishing data centers in and around Singapore requires providing sufficient network connectivity and capacity for our customers to transfer data to and from equipment that they locate in the data center facilities that we operate. Due to land and energy restrictions in Singapore, data centers supporting businesses that require accessing the data connectivity hubs in Singapore may be located in neighboring countries and data must be transferred across political borders.

We are therefore dependent on telecommunications carriers, including those with undersea cable options connecting our data centers to Singapore. Although we believe we are developing and will maintain good relationships with local and global telecommunications carriers, there can be no assurance that they will provide the network services that our customers require on commercially acceptable terms at each of the data centers where we operate, if at all. We cannot guarantee that we will be able to source sufficient and/or redundant connectivity from telecommunications carriers to Singapore to satisfy our customers' requirements for deployment of IT infrastructure in neighboring countries. In addition, if any telecommunications carrier increases the price of their network services, it would have a negative impact on the overall cost-effectiveness of data center services in the region, which could cause our customers' demand for our services to decline and would materially and adversely affect our business and results of operations.

If we are unable to establish and scale up data center funds, our business, results of operations and financial condition may be materially and adversely affected.

In March 2023, we signed a limited partnership agreement with a sovereign wealth fund to establish an investment fund that proposes to invest in China data centers. The establishment of this data center fund remains subject to the satisfaction of various conditions, including, among others, obtaining necessary regulatory approvals and the execution of ancillary agreements.

Establishing this and additional data center funds, both offshore and onshore, is an important part of our financing plans and strategy, over the near and long term, to monetize existing data center assets while financing investment in new data center projects and acquisitions. However, we face a number of challenges that may affect our ability to successfully establish and manage data center funds, including:

- highly complex structuring requirements, in order to comply with PRC regulations applicable to the data center sector business and industry in China;
- our ability to take to continue to take responsibility for colocation and managed services delivery and operations under relevant customer agreements for data centers in which the funds invest, given the highly demanding and complex nature of such agreements;
- the intensely competitive nature of the fund management business generally;
- challenges in attracting and retaining investors for the data center funds, since such funds are relatively new in China, there is not a well-established investor base for such funds, and alternative investment opportunities may be available on more favorable terms; and
- significant challenges in disposing investments from portfolios of the data center funds to achieve investment performance and realize rates of return that meet the expectations of investors, as there is not a well-established market for buying and selling data centers as an asset class.

Any of these factors may prevent us from being successful in establishing and managing data center funds. Even if we succeed in establishing one or more data center funds, the investment performance achieved and rates of return realized by such funds may fail to meet investor expectations. We therefore may be unable to establish and scale up data center funds in order to meet our financing objectives. If we are unable to establish and scale up data center funds, our business, results of operations and financial condition may be materially and adversely affected.

As data security and data privacy laws and regulations involve uncertainties, any non-compliance with such laws and regulations may subject us to fines and/or other sanctions which may have a material adverse effect on us.

The cross-border transfer of data raises data security concerns for the governments in which we operate and the companies who are our customers and suppliers. Our ability to develop profitable data centers is dependent on acceptance and implementation of a data management framework and cross border flows within ASEAN transferring data across borders. We are cooperating with government authorities to clarify our concerns regarding data protection, but there can be no assurance that a data management framework will be fully accepted by market participants such that cross-border transfer of data will no longer raise data privacy concern, which will affect our ability to develop data centers and attract customers to them. Furthermore, as existing laws and regulations regarding data security involve uncertainties, we cannot assure you that we will comply with such laws and regulations in all respects, and we may be ordered to rectify or terminate any actions that are deemed illegal by regulatory authorities. We may also become subject to fines and/or other sanctions which may have a material adverse effect on our business, operations and financial condition as well as price of our securities.

We have expanded in the past and expect to continue to expand in the future through acquisitions of other companies, each of which may divert our management's attention, result in additional dilution to shareholders or use resources that are necessary to operate our business.

In the past, we have grown our business through acquisitions and we expect to continue to evaluate and enter into discussions regarding potential strategic acquisition transactions and alliances to further expand our business, and, from time to time, we may have a number of pending investments and acquisitions that are subject to closing conditions. However, such pending acquisitions are subject to uncertainties and may not be completed due to failure to satisfy all closing conditions as a result of inaccuracy or breach of representations and warranties of, or non-compliance with covenants by, either party or other reasons. If we are presented with appropriate opportunities, we may acquire additional businesses, services, resources, or assets, including data centers, that are complementary to our core business. Our integration of the acquired entities or assets into our business may not be successful and may not enable us to generate the expected revenues or expand into new services, customer segments or operating locations as well as we expect. This would significantly affect the expected benefits of these acquisitions. Moreover, the integration of any acquired entities or assets into our operations could require significant attention from our management. The diversion of our management's attention and any difficulties encountered in any integration process could have an adverse effect on our ability to manage our business. In addition, we may face challenges trying to integrate new operations, services and personnel with our existing operations. Our possible future acquisitions may also expose us to other potential risks, including risks associated with unforeseen or hidden liabilities, litigation, corrupt practices of prior owners, problems with data center design or operation, or other issues not discovered in the due diligence process or addressed through acquisition agreements, the diversion of resources from our existing businesses and technologies, our inability to generate sufficient revenue to offset the costs, expenses of acquisitions and potential loss of, or harm to, relationships with employees and customers as a result of our integration of new businesses.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of these acquisitions or investments, cause us to incur unanticipated liabilities and harm our business generally. Future acquisitions could also result in the use of substantial amounts of our cash and cash equivalents, dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, amortization expenses or the write-off of goodwill, any of which could harm our financial condition. Also, the anticipated benefits of any acquisitions may not materialize, may be less beneficial, or may develop more slowly, than we expect. If we do not receive the benefits anticipated from these acquisitions and investments, or if the achievement of these benefits is delayed, our operating results may be adversely affected and our stock price could decline.

The anticipated benefits of our joint ventures and strategic partnerships or future joint ventures or strategic partnerships may not be fully realized, or take longer to realize than expected.

We have entered into onshore and offshore joint ventures with several third-party partners, including GIC. See "Item 4. Information on the Company—A. History and Development of the Company" for additional details about our relationship with GIC. We may continue to evaluate and establish potential joint ventures and strategic partnerships with other appropriate partners to further develop our business.

We may not realize the anticipated benefits from these joint ventures and strategic partnerships. The success of these joint ventures and strategic partnerships will depend, in part, on the successful partnership between the relevant partner and us. Such a partnership is subject to the risks outlined below, and more generally, to the same types of business risks as would impact our business operations when pursued on a cooperative basis:

- we may not have the right to exercise sole decision-making authority regarding the joint venture and strategic partnerships;
- our partner may become bankrupt or fail to pay the relevant consideration for the cooperation with us;
- our partner's interests may not be aligned with our interests, our partner may have economic, tax or other business interests or goals which are inconsistent with our business interests or goals, and may take actions contrary to our policies or objectives;
- our partner may take actions unrelated to our business agreement but which reflect adversely on us because of our joint venture;
- changes in the terms of the arrangements of our partnerships may materially and adversely affect our ability to complete or operate projects we are pursuing or contemplating through joint venture partnerships;
- disputes between us and our partner may result in litigation or arbitration that would increase our expenses and prevent our management from focusing their time and effort on our business; and
- we may in certain circumstances be liable for the actions of our partner or guarantee all or a portion of the joint venture's liabilities.

A failure to successfully partner, or a failure to realize our expectations for the joint ventures and strategic partnerships, could materially impact our business, financial condition and results of operations.

The uncertain economic environment may 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. We may also be required to make allowances for doubtful accounts and our results would be negatively impacted. Our sales cycle could also be lengthened if customers reduce spending on, or delay decision-making with respect to, our services, which could adversely affect our revenue growth and our ability to recognize net revenue. 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 equity and debt capital markets may be severely restricted at a time when we would like, or need, to do so, especially during times of increased volatility in global financial markets and stock markets, which could limit our ability to raise funds through additional equity sales. Any inability to raise funds from capital markets generally, and equity capital markets in particular, could adversely affect our liquidity as well as hinder our ability to pursue additional strategic expansion opportunities, execute our business plans and maintain our desired level of revenue growth in the future.

The failure of financial institutions or transactional counterparties could adversely affect our current and projected business operations and our financial condition and results of operations.

In March 2023, Silicon Valley Bank, or SVB, was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation, or FDIC, as receiver. In the same month, each of Signature Bank and Silvergate Capital Corp. were swept into receivership. A statement by the U.S. Department of the Treasury, the Federal Reserve and the FDIC stated that all depositors of SVB would have access to all of their money after one business day of closure, including funds held in uninsured deposit accounts. Although we do not have any funds deposited with SVB and Signature Bank as of the date of this annual report, we regularly maintain large cash balances with other financial institutions that are uninsured. Any failure of a financial or depository institution to return deposits to us could materially and adversely impact our cash and cash equivalents, operating liquidity and financial condition.

A downturn in the PRC or global economy could reduce the demand for our services, which could materially and adversely affect our business and financial condition.

There is considerable uncertainty over the global economy and 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 those of the United States and the PRC. There have been concerns about the economic effects of rising tensions between the PRC and the United States, as well as between the PRC and surrounding Asian countries. See "Geopolitical tensions have led to a heightened trend towards trade, technology and even finance "de-coupling" between China and the United States and this adverse trend may continue to deteriorate, which could negatively affect our business operations and results of operations." Economic conditions in the PRC are sensitive to global economic conditions. International conditions and any new or escalating trade war can lead to disruption in our supply chain and higher costs of capital expenditures.

The continuing conflict between Russia and Ukraine has significantly impacted global economic markets. Russia's military interventions in Ukraine have also led to, and may continue to lead to, additional economic or trade sanctions being imposed against Russia by the U.S., European Union and other countries. We cannot predict the progress or outcome of the situation in Russia and Ukraine, as the conflict and governmental reactions continue to evolve. Prolonged unrest, intensified military activities, and more extensive economic or trade sanctions impacting Russia and Ukraine could have a material adverse effect on the global economy, and such effect could in turn have a material adverse effect on our operations, financial condition, liquidity and business outlook. Any disruptions or continuing or worsening slowdown in the global economy or the PRC economy, whether as a result of the deterioration of the U.S.-China relationship, the Russia-Ukraine conflict, or other reasons, could significantly impact and reduce domestic commercial activities in China, which may lead to decreased demand for our colocation or managed services and have a negative impact on our business, financial condition and results of operations. A decrease in economic activity, whether actual or perceived, a further decrease in economic growth rates or an otherwise uncertain economic outlook in China could have a material adverse effect on our customers' expenditures and, as a result, may also adversely affect our business, financial condition and results of operations. Additionally, continued turbulence in the international markets may adversely affect our ability to access the capital markets to meet our liquidity needs. Any periods of continuing or worsening increased or heightened volatility in financial, equity and other markets, particularly due to investor concerns relating to the deterioration of the U.S.-China relationship, or the Russia-Ukraine conflict could limit our ability to raise funds, pursue further business expansion and maintain revenue growth. See "—The uncertain economic environment may have an adverse impact on our business and financial condition" above.

Our success depends to a substantial degree upon our senior management, including Mr. Huang, and key personnel, and our business operations may be negatively affected if we fail to attract and retain highly competent senior management.

We depend to a significant degree on the continuous service of Mr. Huang, our founder, chairman and chief executive officer, and our experienced senior management team and other key personnel such as project managers and other middle management. If one or more members of our senior management team or key personnel resigns, it could disrupt our business operations and create uncertainty as we search for and integrate a replacement. If any member of our senior management leaves us to join a competitor or to form a competing company, any resulting loss of existing or potential customers to any such competitor could have a material adverse effect on our business, financial condition and results of operations. Additionally, there could be unauthorized disclosure or use of our technical knowledge, practices or procedures by such personnel. We have entered into employment agreements with our senior management and key personnel. We have also entered into confidentiality agreements with our personnel which contain nondisclosure covenants that survive indefinitely as to our trade secrets. Additionally, pursuant to these confidentiality agreements, any inventions and creations of our employees relating to the company's business that are completed within twelve months after termination of employment shall be transferred to the company without payment of consideration, and the employees shall assist the company in applying for corresponding patents or other rights. However, these employment agreements do not ensure the continued service of these senior management and key personnel, and we may not be able to enforce the confidentiality agreements we have with our personnel. In addition, we do not maintain key man life insurance for any of the senior members of our management team or our key personnel.

Competition for employees is intense, and we may not be able to attract and retain the qualified and skilled employees needed to support our business.

We believe our success depends on the efforts and talent of our employees, including data center design, construction management, operations, engineering, IT, risk management, and sales and marketing personnel. Our future success depends on our continued ability to attract, develop, motivate and retain qualified and skilled employees. Competition for highly skilled personnel is extremely intense. We may not be able to hire and retain these personnel at compensation levels consistent with our existing compensation and salary structure. Some of the companies with which we compete for experienced employees have greater resources than we have and may be able to offer more attractive terms of employment.

In addition, we invest significant time and expenses in training our employees, which increases their value to competitors who may seek to recruit them. If we fail to retain our employees, we could incur significant expenses in hiring and training their replacements, and the quality of our services and our ability to serve our customers could diminish, resulting in a material adverse effect to our business.

Our operating results may fluctuate, which could make our future results difficult to predict, and may fall below investor or analyst expectations.

Our operating results may fluctuate due to a variety of factors, including many of the risks described in this section, which are outside of our control. You should not rely on our operating results for any prior periods as an indication of our future operating performance. Fluctuations in our net revenue can lead to even greater fluctuations in our operating results. Our budgeted expense levels depend in part on our expectations of long-term future net revenue. Given relatively large fixed cost of revenue for services, other than utility costs, any substantial adjustment to our costs to account for lower than expected levels of net revenue will be difficult. Consequently, if our net revenue does not meet projected levels, our operating performance will be negatively affected. If our net revenue or operating results do not meet or exceed the expectations of investors or securities analysts, the price of our ADSs and/or ordinary shares may decline.

Declining fixed asset valuations could result in impairment charges, the determination of which involves a significant amount of judgment on our part. Any impairment charge could have a material adverse effect on us.

We review our fixed assets for impairment on an annual basis and whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Indicators of impairment include, but are not limited to, a sustained significant decrease in the market price of or the cash flows expected to be derived from a property. A significant amount of judgment is involved in determining the presence of an indicator of impairment. If the total of the expected undiscounted future cash flows is less than the carrying amount of a property on our balance sheet, a loss is recognized for the difference between the fair value and carrying value of the asset. The evaluation of anticipated cash flows requires a significant amount of judgment regarding assumptions that could differ materially from actual results in future periods, including assumptions regarding future occupancy, contract rates and estimated costs to service the contracts. Any impairment charge could have a material adverse effect on us. We recorded an impairment loss of RMB12.8 million (US\$1.9 million) related to the property and equipment during the year ended December 31, 2022. No impairment loss was recorded in the years ended December 31, 2020 and 2021.

We may fail to acquire land use rights according to our investment and framework agreements and failure to commence or resume development of land that we have been granted right to use within the required timeframe or to fulfill the investment commitments under the land use right grant contracts and/or investment/framework agreements may cause us to lose such land use rights and subject us to liabilities under land use right grant contracts and investment/framework agreements.

We have entered into, and may enter into additional, binding investment and framework agreements to reserve or acquire land use rights. The reservation or acquisition of land use rights under such investment and framework agreements are usually subject to certain grant conditions and subsequently entering into a land use right grant contract through relevant tender, auction or listing-for-sale procedures, and we cannot assure you that all these grant conditions will be satisfied or that ultimately we will be able to enter into the land use right grant contract, or that we will indeed acquire the land use right under the relevant investment and framework agreement.

Contracts for the grant of land use rights and some of the investment/framework agreements that we have entered into with the local governments as well as PRC regulations provide for the timeframe within which we are obligated to carry out the construction projects on the land parcels under these contracts and/or agreements. According to the relevant PRC regulations, the PRC government may impose an “idle land fee” equal to 20% of the land fees on land use if the relevant construction land has been identified as “idle land.” The construction land may be identified as “idle land” under any of the following circumstances: (i) where development of and construction on the land fails to commence for more than one year from the construction commencement date prescribed in the land grant contract; or (ii) the development and construction on the land have commenced but have been suspended when the area of the developed land is less than one-third of the total area to be developed or the invested amount is less than 25% of the total amount of investment, and the suspension of development attains for one year. Furthermore, the PRC government has the authority to confiscate any land without compensation if the construction does not commence within two years after the construction commencement date specified in the land grant contract, unless the delay is caused by force majeure, governmental action or preliminary work necessary for the commencement of construction. In addition, these contracts and agreements usually provide for certain investment commitments (such as total investment amount and amount of revenues and taxes generated by the investment projects on the land parcels). We may lose the land use rights and be subject to other liabilities under the land use right grant contracts and the investment/framework agreements if we fail to commence or resume development of land that we have been granted right to use within the required timeframe or to fulfill the investment commitments under the land use right grant contracts and/or investment/framework agreements.

For example, we have two parcels of land, one in Chengdu and one in Kunshan, over which we have obtained land use rights, but which may be treated as “idle land” by the respective local government authorities. We suspended the development of one parcel of land in Chengdu after completion of the construction of the then existing buildings thereon in November 2010, and upon such suspension, the area of the developed land was less than one-third of the total land area. The development of one parcel of land in Kunshan was not timely commenced before the December 2012 deadline. We have received approvals from the local government authorities to commence construction on the rest of such land parcel in Chengdu and the parcel of land in Kunshan, respectively, and we commenced construction after receiving such approvals. As of December 31, 2022, we have obtained the property ownership certificate of the data centers on the parcel in Kunshan, and made progress in construction on the parcel in Chengdu. Our PRC legal counsel, based on their consultation with the local authorities, has advised us that it is unlikely the local authorities will order penalties against us or require us to forfeit the relevant land by invoking the laws and regulations in relation to “idle land” or for breach of relevant land use right grant contracts and/or the investment/framework agreements.

We have not been subject to any penalties or required to forfeit any land as a result of failing to commence or resume development or fulfill the relevant investment commitments we made pursuant to the relevant land grant contracts and/or the investment/framework agreements. However, we cannot assure you that we will not be subject to penalties as a result of any failure to commence development or fulfill our investment commitments in accordance with the relevant land grant contracts and/or the investment/framework agreements in the future. If this occurs, our financial condition and results of operations could be materially and adversely affected.

We may experience impairment of goodwill in connection with our acquisition of entities.

We review our goodwill for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable, such as a decline in stock price and market capitalization. We are required to perform an annual goodwill impairment test. As of December 31, 2022, we carried RMB7,076.5 million (US\$1,026.0 million) of goodwill on our balance sheet. However, goodwill can become impaired. We test goodwill for impairment annually or more frequently if events or changes in circumstances indicate possible impairment, but the fair value estimates involved require a significant amount of difficult judgment and assumptions. We may not achieve the anticipated benefits of the acquisitions, which may result in the need to recognize impairment of some or all of the goodwill we recorded.

We are subject to anti-corruption laws of mainland China, Hong Kong, Macau, Singapore, Malaysia and Indonesia as well as 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, financial condition and results of operations.

We operate our business in various countries and regions, including mainland China, Hong Kong, Macau, Singapore, Malaysia and Indonesia and are thus subject to the laws and regulations related to anti-corruption of mainland China, Hong Kong, Macau, Singapore, Malaysia and Indonesia, which prohibit bribery to government agencies, state or government owned or controlled enterprises or entities, to government officials or officials that work for state or government owned enterprises or entities, as well as bribery to non-government entities or individuals. We are also subject to the U.S. Foreign Corrupt Practices Act, or the FCPA, which generally prohibits companies and any individuals or entities 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. Our existing policies prohibit any such conduct and we have implemented and conducted additional policies and procedures designed, and providing training, to ensure that we, our employees, business partners and other third parties comply with PRC anti-corruption laws and regulations, 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. There is no assurance that our employees, business partners and other third parties would always obey our policies and procedures. Further, there is discretion and interpretation in connection with the implementation of PRC anti-corruption laws. We could be held liable for actions taken by our employees, business partners and other third parties 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 colocation 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 not to be in compliance with PRC anti-corruption laws, the FCPA and other applicable anti-corruption laws governing the conduct of business with government entities, officials or other business counterparties, we may be subject to criminal, administrative, 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., mainland China, Hong Kong, Macau, Singapore, Malaysia or Indonesia authorities or the authorities of any other foreign jurisdictions, could adversely impact our reputation, cause us to lose customer sales and access to colocation facilities and telecommunications resources, and lead to other adverse impacts on our business, financial condition and results of operations.

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

On May 12, 2008 and April 14, 2010, severe earthquakes hit part of Sichuan Province in southwestern China and part of Qinghai Province in western China, respectively, resulting in significant casualties and property damage. While we did not suffer any loss or experience any significant increase in cost resulting from these earthquakes, if a similar disaster were to occur in the future that affected our Tier 1 markets or another city where we have data centers or are in the process of developing data centers, our operations could be materially and adversely affected due to loss of personnel and damages to property. In addition, a similar 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 other natural disasters, such as snowstorms, typhoon, fires or floods, the outbreak of a widespread health epidemic or pandemic, such as swine flu, avian influenza, severe acute respiratory syndrome, or SARS, Ebola, Zika, COVID-19, or other events, such as wars, acts of terrorism, environmental accidents, power shortage or communication interruptions. If any of our employees is suspected of having contracted any contagious disease, we may under certain circumstances be required to quarantine such employees and the affected areas of our premises. Therefore, we may have to temporarily suspend part of or all of our operations. Furthermore, any future outbreak may restrict economic activities in affected regions, resulting in temporary closure of our offices or prevent us and our customers from traveling. Such closures could severely disrupt our business operations and adversely affect our results of operations.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the U.S. Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls over financial reporting. Commencing with our year ended December 31, 2017, we have been obligated to perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our Form 20-F filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. In addition, as of December 31, 2018, we ceased to be an “emerging growth company” as the term is defined in the Jumpstart Our Business Startups Act, or the JOBS Act, and our independent registered public accounting firm must attest to and report on the effectiveness of our internal control over financial reporting. Even if our management concludes that our internal control over financial reporting is effective, our independent registered public accounting firm, after conducting its own independent testing, may issue a report that is qualified if it is not satisfied with our internal controls or the level at which our controls are documented, designed, operated or reviewed, or if it interprets the relevant requirements differently from us. This has required and will continue to require us to incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. We continue to enhance our accounting personnel and other resources to address our internal controls and procedures. We also continuously enhance our accounting procedures and internal controls.

In addition, our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our ADSs and/or ordinary shares could decline and we could be subject to sanctions or investigations by the SEC, Nasdaq, or other regulatory authorities.

Fluctuations in exchange rates could result in foreign currency exchange losses and could materially reduce the value of your investment.

The value of the Renminbi against the U.S. dollar and other currencies may fluctuate and is affected by, among other things, changes in political and economic conditions and the foreign exchange policy adopted by the PRC government. It is difficult to predict how market forces or PRC or U.S. government policy, including any increases in the target range for the federal funds rate announced by the Federal Open Market Committee of the U.S. Federal Reserve System, may impact the exchange rate between the Renminbi and the U.S. dollar in the future. We cannot assure you that the 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 the Renminbi and the U.S. dollar in the future or what impact this will have on our results of operations.

Substantially all of our net revenue and costs are denominated in Renminbi. We are a holding company and we rely on dividends paid by our operating subsidiaries in China for our cash needs. Any significant revaluation of the Renminbi may materially reduce any dividends payable on, our ADSs and/or ordinary shares in U.S. dollars.

At the same time, we have also began investing in developing data centers internationally, particularly in Southeast Asian countries where currency swings may be volatile due to political or macro-economic factors. Any revaluation of each respective country's currency may materially impact our financials.

Risks Related to Our Corporate Structure

If the PRC government deems that the contractual arrangements in relation to the consolidated VIEs do not comply with PRC regulatory restrictions on foreign investment in the relevant industries, 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 the operations of the consolidated VIEs and their subsidiaries.

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, with certain exceptions relating to certain categories which do not apply to us.

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 or PRC joint ventures are foreign-invested enterprises, or their subsidiaries. See List of Subsidiaries of the Registrant, Exhibit 8.1 to this annual report, for a complete list of our wholly owned subsidiaries and joint ventures incorporated in the PRC. To comply with PRC laws and regulations, we conduct our business in China through contractual arrangements with the consolidated VIEs and their shareholders. These contractual arrangements provide us with effective control over the consolidated VIEs, and enable us to receive substantially all of the economic benefits of the consolidated VIEs and their subsidiaries 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 the consolidated VIEs when permissible under PRC laws. See List of Subsidiaries of the Registrant, Exhibit 8.1 to this annual report, for a complete list of the consolidated VIEs and their subsidiaries. For a description of the contractual arrangements among GDS Investment Company, Management HoldCo, GDS Beijing and GDS Shanghai, see "Item 4. Information on the Company—C. Organizational Structure—Contractual Arrangements with Affiliated Consolidated Entities."

We believe that our corporate structure and contractual arrangements comply with the current applicable PRC laws and regulations. Our PRC legal counsel, based on its understanding of the relevant laws and regulations, is of the opinion that each of the contracts among our wholly-owned PRC subsidiaries, the consolidated VIEs and their shareholders is valid, legally binding and enforceable in accordance with its terms. However, as there are substantial uncertainties regarding the interpretation and application of PRC laws and regulations, including the M&A Rules, the telecommunications circular described above and the Telecommunications Regulations of the People's Republic of China, or the Telecommunications Regulations, and the relevant regulatory measures concerning the telecommunications industry, there can be no assurance that the PRC government, such as the MIIT, or other authorities that regulate providers of data center service 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. In addition, such laws and regulations could change or be interpreted differently in the future.

If our corporate and contractual structure constituting part of the VIE structure is deemed by the MIIT, MOFCOM or other regulators having competent authority to be illegal, either in whole or in part, we could be forced to relinquish control of, and our interests in the operations of, the consolidated VIEs and their subsidiaries, and/or be forced to modify such structure to comply with regulatory requirements as interpreted by such authorities. However, there can be no assurance 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, we could be subject to severe penalties. 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 consolidated VIEs' business and operations; and
- taking other regulatory or enforcement actions that could be harmful to our business.

Furthermore, the enforceability of the agreements under the contractual arrangements has not been tested in a court of law, and new PRC laws, rules and regulations may be introduced to impose additional requirements that may be applicable to our corporate structure and contractual arrangements. In addition, relevant PRC regulatory authorities could disallow the VIE structure. See “— Substantial uncertainties exist with respect to the interpretation and implementation of the 2019 PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.” If any of the foregoing were to occur, and as a result we were unable to direct the activities of the consolidated VIEs, receive their economic benefits and/or claim our contractual control rights over the assets of the VIEs and their subsidiaries that conduct substantially all of our operations in China, we would no longer be able to consolidate such VIEs in our consolidated financial statements in accordance with U.S. GAAP, which would likely materially and adversely affect our financial condition and results of operations, and cause the value of our securities, including our ADSs and ordinary shares, to significantly decline or become worthless. For the years ended December 31, 2020, 2021 and 2022, the VIEs and their subsidiaries contributed 95.0%, 96.1% and 96.1%, respectively, of our total net revenue.

Our contractual arrangements with the consolidated VIEs 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 the consolidated VIEs were not made on an arm's length basis and 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) increasing the tax liabilities of the consolidated VIEs without reducing the tax liability of our subsidiaries, which could further result in late payment fees and other penalties to the consolidated VIEs for underpaid taxes; or (ii) limiting the ability of the consolidated VIEs to obtain or maintain preferential tax treatments and other financial incentives.

We rely on contractual arrangements with the consolidated VIEs and their shareholders for our China operations, which may not be as effective as direct ownership in providing operational control and otherwise have a material adverse effect as to our business.

We rely on contractual arrangements with the consolidated VIEs and their shareholders to operate our business in China. We enhanced the structure of the variable interest entities and certain other variable interest entities, or the VIE Enhancement, in order to further improve control over the variable interest entities, reduce key man risks associated with having certain individuals be the equity holders of the variable interest entities, and address the uncertainty resulting from any potential disputes between us and the individual equity holders of the variable interest entities that may arise. As part of the VIE Enhancement, the entire equity interests of GDS Beijing and GDS Shanghai were transferred to a holding company, Management HoldCo. The entire equity interest in Management HoldCo is held by a number of management personnel designated by our board of directors. In conjunction with the transfer of legal ownership, GDS Investment Company, one of our subsidiaries, entered into a series of contractual arrangements with Management HoldCo, its shareholders, GDS Beijing and GDS Shanghai to replace the previous contractual arrangements with GDS Beijing and GDS Shanghai on substantially the same terms under such previous contractual arrangements. We also replaced the sole director of GDS Shanghai and certain subsidiaries of GDS Beijing with a board of three directors. Mr. Huang acts as the chairman of the boards of directors of Management HoldCo, GDS Investment Company, GDS Beijing, and certain subsidiaries of GDS Beijing and GDS Shanghai. Other management members of us and board appointees serve as directors and officers of Management HoldCo, GDS Investment Company, GDS Beijing, and certain subsidiaries of GDS Beijing and GDS Shanghai.

For a description of the abovementioned contractual arrangements, see "Item 4. Information on the Company— C. Organizational Structure—Contractual Arrangements with Affiliated Consolidated Entities." In 2020, 2021 and 2022, 95.0%, 96.1% and 96.1% of our total net revenue, respectively, were attributed to the VIEs and their subsidiaries. See "Item 4. Information on the Company—C. Our Corporate Structure." These contractual arrangements may not be as effective as direct ownership in providing us with control over the consolidated VIEs. If the consolidated VIEs or their shareholders fail to perform their respective obligations under these contractual arrangements, our recourse to the assets held by the consolidated VIEs 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. 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 the consolidated VIEs, 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.

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 the consolidated VIEs, and our ability to conduct our business and our financial condition and results of operation may be materially and adversely affected. See "—Risks Related to Doing Business in the People's Republic of China—There are uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations."

The individual management shareholders of our Management HoldCo may have potential conflicts of interest with us, which may materially and adversely affect our business and financial condition.

In connection with our operations in China, we rely on the individual management shareholders of our Management HoldCo to abide by the obligations under such contractual arrangements. In particular, GDS Beijing and GDS Shanghai are wholly-owned by Management HoldCo, which, as of February 28, 2023, is in turn owned by five individual management shareholders designated by our board, each holding 20% equity interest in Management HoldCo, namely Yilin Chen (senior vice president, product and service and Southeast Asia business), Yan Liang (senior vice president, design, operation and delivery), Kejing Zhang (senior vice president, sales), Andy Wenfeng Li (general counsel, compliance officer, and company secretary) and Qi Wang (senior vice president, cloud and network business), together referred to as “Individual Management Shareholders.” The interests of such Individual Management Shareholders in their individual capacities as the shareholders of Management HoldCo may differ from the interests of our company as a whole, as what is in the best interests of Management HoldCo, including matters such as whether to distribute dividends or to make other distributions to fund our offshore requirement, may not be in the best interests of our company. There can be no assurance 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 the consolidated VIEs 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 Individual Management Shareholders may encounter; provided that we could, at all times, exercise our option under the exclusive call option agreements to cause them to transfer all of their equity ownership in Management HoldCo 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 Management HoldCo as provided under the shareholder voting rights proxy agreements, directly appoint new directors of Management HoldCo. We rely on the shareholders of the consolidated VIEs to comply with PRC laws and regulations, 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 and executive officers 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 the 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 the consolidated VIEs, 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.

In order to enhance corporate governance and facilitate administration of the VIEs and their subsidiaries, we have also replaced the sole director of GDS Shanghai and certain subsidiaries of GDS Beijing with a board of three directors. Mr. Huang acts as the chairman of the boards of directors of Management HoldCo, GDS Investment Company, GDS Beijing and certain subsidiaries of GDS Beijing and GDS Shanghai. Other management members of us and board appointees serve as directors and officers of Management HoldCo., GDS Investment Company, GDS Beijing, and certain subsidiaries of GDS Beijing and GDS Shanghai. These enhancements to the corporate governance and management of the VIEs and their subsidiaries may help to mitigate some of the conflict of interest and other risks detailed above; however, we cannot assure you that the enhancements will be effective in preventing or mitigating such risks.

Our corporate actions are substantially controlled by our principal shareholders, including our founder, chairman and chief executive officer, Mr. Huang, who have the ability to control or exert significant influence over important corporate matters that require approval of shareholders, which may deprive you of an opportunity to receive a premium for your ADSs and/or ordinary shares and materially reduce the value of your investment.

Our Articles of Association provide that Class B ordinary shares are entitled to 20 votes per ordinary share at general meetings of our shareholders with respect to the election or removal of a simple majority of our directors. Mr. Huang beneficially owns 100% of the Class B ordinary shares issued and outstanding, and any additional Class A ordinary shares which Mr. Huang directly or indirectly acquires may be converted into Class B ordinary shares. In addition, for so long as there are Class B ordinary shares outstanding, the Class B shareholders are entitled (i) to nominate five of our directors, and (ii) to have 20 votes per ordinary share with respect to the election and removal of a simple majority, or six, of our directors. In addition, our Articles of Association provide that STT GDC (a wholly owned subsidiary of STT Communications Ltd., or STTC, which is in turn a wholly owned subsidiary of Singapore Technologies Telemedia Pte Ltd, or ST Telemedia), has the right to appoint up to three directors to our board of directors for so long as they beneficially own certain percentages of our issued share capital. Such appointments will not be subject to a vote by our shareholders. See “Item 6. Directors, Senior Management and Employees—C. Board Practices—Appointment, Nomination and Terms of Directors.”

Furthermore, as of March 15, 2023, two of our principal shareholders—STT GDC and Mr. Huang, our founder, chairman and chief executive officer—beneficially owned approximately 36.7% of our outstanding Class A ordinary shares and 100% of our outstanding Class B ordinary shares, respectively. On matters where Class A and Class B ordinary shares vote on a 1:1 basis, STT GDC exercises 31.8% of the aggregate voting power. On matters where Class A and Class B ordinary shares vote on a 1:20 basis, Mr. Huang exercises 44.6% of the aggregate voting power. For more details, see “Item 6. Directors, Senior Management and Employees—E. Share Ownership.”

As a result of these appointment rights, nomination rights, dual-class ordinary share structure and ownership concentration, these shareholders have the ability to control or exert significant influence over important corporate matters, investors may be prevented from affecting important corporate matters involving our company that require approval of shareholders, including:

- the composition of our board of directors and, through it, any determinations with respect to our operations, business direction and policies, including the appointment and removal of officers;
- any determinations with respect to mergers or other business combinations;
- our disposition of substantially all of our assets; and
- any change in cont

These actions may be taken even if they are opposed by our other shareholders, including the holders of our ADSs and/or ordinary shares. We have granted special rights to STT GDC and certain of our other shareholders. The rights granted to STT GDC include an anti-dilution right, directors’ appointment rights, right to requisition an extraordinary general meeting, committee rights, registration rights and information rights, which enable STT GDC to maintain its significant shareholding in and influence over our Company. In particular, STT GDC’s anti-dilution right entitles it to subscribe for up to a 35% pro rata ordinary share of future issuances of equity or equity linked securities by our Company any time on or before June 25, 2023. We have also granted registration rights to certain other shareholders, including STT GDC and PA Goldilocks Limited, an affiliate of China Ping An Insurance Overseas (Holdings) Limited (a subsidiary of Ping An Insurance (Group) Company of China). If any shareholders exercise their registration rights, we will incur costs and be required to divert management attention and resources associated with facilitating the registration of their ordinary shares. We have also granted Ping An Overseas Holdings the right to designate an observer to join meetings of our board of directors, subject to maintaining its shareholders at or above a specified percentage threshold.

Furthermore, this concentration of ownership may also discourage, delay or prevent a change in control of our company, which could have the dual effect of depriving our shareholders of an opportunity to receive a premium for their ordinary shares as part of a sale of our company and reducing the price of the ADSs and/or ordinary shares. As a result of the foregoing, the value of your investment could be materially reduced.

If the custodians or authorized users of our controlling non-tangible assets, including chops and seals, fail to fulfill their responsibilities, or misappropriate or misuse these assets, our business and operations may be materially and adversely affected.

Under PRC law, legal documents for corporate transactions, including agreements and contracts such as the leases and sales contracts that our business relies on, are executed using the chop or seal of the signing entity or with the signature of a legal representative whose designation is registered and filed with the relevant local branch of the SAIC. We generally execute legal documents by affixing chops or seals, rather than having the designated legal representatives sign the documents.

We have three major types of chops—corporate chops, contract chops and finance chops. We use corporate chops generally for documents to be submitted to government agencies, such as applications for changing business scope, directors or company name, and for legal letters. We use contract chops for executing leases and commercial, contracts. We use finance chops generally for making and collecting payments, including, but not limited to issuing invoices. Use of corporate chops and contract chops must be approved by our legal department and use of finance chops must be approved by our finance department. The chops of our subsidiaries and consolidated VIEs are generally held by the relevant entities so that documents can be executed locally. Although we usually utilize chops to execute contracts, the registered legal representatives of our subsidiaries and consolidated VIEs have the apparent authority to enter into contracts on behalf of such entities without chops, unless such contracts set forth otherwise.

In order to maintain the physical security of our chops, we generally have them stored in secured locations accessible only to the designated key employees of our legal, business operation or finance departments. Our designated legal representatives generally do not have access to the chops. Although we have approval procedures in place and monitor our key employees, including the designated legal representatives of our subsidiaries and consolidated VIEs, the procedures may not be sufficient to prevent all instances of abuse or negligence. There is a risk that our key employees or designated legal representatives could abuse their authority, for example, by binding our subsidiaries and consolidated VIEs with contracts against our interests, as we would be obligated to honor these contracts if the other contracting party acts in good faith in reliance on the apparent authority of our chops or signatures of our legal representatives. If any designated legal representative obtains control of the chop in an effort to obtain control over the relevant entity, we would need to have a shareholder or board resolution to designate a new legal representative and to take legal action to seek the return of the chop, apply for a new chop with the relevant authorities, or otherwise seek legal remedies for the legal representative's misconduct. If any of the designated legal representatives obtains and misuses or misappropriates our chops and seals or other controlling intangible assets for whatever reason, we could experience disruption to our normal business operations. We may have to take corporate or legal action, which could involve significant time and resources to resolve while distracting management from our operations, and our business and operations may be materially and adversely affected.

Substantial uncertainties exist with respect to the interpretation and implementation of the 2019 PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.

On March 15, 2019, the National People's Congress adopted the 2019 PRC Foreign Investment Law, which became effective on January 1, 2020 and replaced three existing laws regulating foreign investment in China, namely, the Wholly Foreign-Invested Enterprise Law of the PRC, the Sino-Foreign Cooperative Joint Venture Enterprise Law of the PRC and the Sino-Foreign Equity Joint Venture Enterprise Law of the PRC, together with their implementation rules and ancillary regulations. On December 26, 2019, the State Council issued the Regulations on Implementing the 2019 PRC Foreign Investment Law, which came into effect on January 1, 2020, and replaced the Regulations on Implementing the Sino-Foreign Equity Joint Venture Enterprise Law of the PRC, Provisional Regulations on the Duration of Sino-Foreign Equity Joint Venture Enterprise Law, the Regulations on Implementing the Wholly Foreign-Invested Enterprise Law of the PRC, and the Regulations on Implementing the Sino-Foreign Cooperative Joint Venture Enterprise Law of the PRC. The 2019 PRC Foreign Investment Law embodies 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, uncertainties still exist in relation to its interpretation and implementation. For example, the 2019 PRC Foreign Investment Law adds a catch-all clause to the definition of "foreign investment" so that foreign investment, by its definition, includes "investments made by foreign investors in China through other means defined by other laws or administrative regulations or provisions promulgated by the State Council" without further elaboration on the meaning of "other means." It leaves leeway for future legislations to provide for contractual arrangements as a form of foreign investment. It is therefore uncertain whether our corporate structure will be seen as violating the foreign investment rules as we are currently leveraging the contractual arrangements to operate certain businesses in which foreign investors are prohibited from or restricted to investing. Furthermore, if future legislations 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. If we fail to take appropriate and timely measures to comply with any of these or similar regulatory compliance requirements, our current corporate structure, corporate governance and business operations could be materially and adversely affected.

Risks Related to Doing Business in the People's Republic of China

Changes in the political and economic policies of the PRC government may materially and adversely affect our business, financial condition and results of operations and may result in our inability to sustain our growth and expansion strategies.

Substantially all of our operations are conducted in the PRC and a substantial majority of our net revenue is sourced from the PRC. Accordingly, our financial condition and results of operations are affected to a significant extent by economic, political and legal developments in the PRC.

The PRC economy differs from the economies of most developed countries in many respects, including the extent of government involvement, level of development, growth rate, and control of foreign exchange and allocation of resources. Although the PRC government has implemented measures emphasizing the utilization of market forces for economic reform, the reduction of state ownership of productive assets, and the establishment of improved corporate governance in business enterprises, a substantial portion of productive assets in China is still owned by the government. In addition, the PRC government continues to play a significant role in regulating industry development by imposing industrial policies. The PRC government also exercises significant control over China's economic growth by allocating resources, controlling payment of foreign currency-denominated obligations, setting monetary policy, regulating financial services and institutions and providing preferential treatment to particular industries or companies.

While the PRC economy has experienced significant growth in the past three decades, such growth has been uneven, both geographically and among various sectors of the economy. The PRC government has implemented various measures to encourage economic growth and guide the allocation of resources. Some of these measures may benefit the overall PRC economy, but may also have a negative effect on us. Our financial condition and results of operation could be materially and adversely affected by government control over capital investments or changes in tax regulations that are applicable to us. See "—There are uncertainties with respect to the PRC legal system, including uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations, and sudden or unexpected changes in policies, laws, rules and regulations in the PRC that could adversely affect us." In addition, the PRC government has implemented in the past certain measures to control the pace of economic growth. These measures may cause decreased economic activity, which in turn could lead to a reduction in demand for our services and consequently have a material adverse effect on our businesses, financial condition and results of operations.

We face various legal and operational risks and uncertainties as a company based in and primarily operating in China.

We face various legal and operational risks and uncertainties as a company based in and primarily operating in China. The PRC government has significant authority to exert influence on the ability of a China-based company, like us, to conduct its business, accept foreign investments or list on a U.S. stock exchange. In particular, there have been recent statements by the PRC government indicating an intent to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers with substantial operations in China. For example, we face risks associated with regulatory approvals of offshore offerings, anti-monopoly regulatory actions, cybersecurity and data privacy, as well as any future inability of the U.S. PCAOB to inspect or investigate our auditors completely. In addition, the PRC government may also intervene with or influence our operations as the government deems appropriate to further regulatory, political and societal goals. The PRC government has published new policies that significantly affected certain industries such as the education and internet industries, and we cannot rule out the possibility that it will in the future release regulations or policies regarding our industry that could adversely affect our business, financial condition and results of operations. See “—There are uncertainties with respect to the PRC legal system, including uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations, and sudden or unexpected changes in policies, laws, rules and regulations in the PRC that could adversely affect us.” Any such regulatory oversight or control actions, once taken by the PRC government, could significantly limit or completely hinder our ability to offer or continue to offer securities to investors, and could cause the value of our securities, including our ADSs, to significantly decline or become worthless.

There are uncertainties with respect to the PRC legal system, including uncertainties regarding the interpretation and enforcement of PRC laws, rules and regulations, and sudden or unexpected changes in policies, laws, rules and regulations in the PRC that could adversely affect us.

Substantially all of our operations are conducted in the PRC, and are governed by PRC laws, rules and regulations. Our PRC subsidiaries, the VIEs and their subsidiaries are subject to laws, rules and regulations applicable to foreign investment in China. 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 have limited precedential value.

In 1979, the PRC government began to promulgate a comprehensive system of laws, rules and regulations governing economic matters in general. The overall effect of legislation over the past three decades has significantly enhanced the protections afforded to various forms of foreign investment in China. However, China has not developed a fully integrated legal system, and enacted laws, rules and regulations may not sufficiently cover all aspects of economic activities in China or may be subject to significant degrees of interpretation by PRC regulatory agencies. In particular, because these laws, rules and regulations are relatively new, and because of the limited number of published decisions and the nonbinding nature of such decisions, and because the laws, rules and regulations often give the relevant regulator significant discretion in how to enforce them, the interpretation and enforcement of these laws, rules and regulations involve uncertainties and can be inconsistent and unpredictable. In addition, the PRC legal system is based in part on government policies and internal rules, some of which are not published on a timely basis or at all, and which may change from time to time and have a retroactive effect. As a result, we may not be aware of our violation of these policies and rules until after the occurrence of the violation. For example, although under the PRC Anti-monopoly Law, companies conducting certain investments and acquisitions relating to businesses in China must file with the anti-monopoly enforcement agency, in advance of any transaction where the parties' revenues exceed certain thresholds and the buyer would obtain control of, or decisive influence over, the other party, it has been long debated in the past whether transactions involving companies with a VIE structure, including us, are subject to such prior filing requirements, namely filing of notification of concentration of undertaking. However, the enforcement of notification of concentration of undertaking filing requirement by companies with a VIE structure has been strengthening. In April 2020, the SAMR, which is the anti-monopoly enforcement agency, published a case of concentration of undertaking where a VIE structure was involved (such case was closed in July 2020 and unconditional approval was granted). In December 2020, the SAMR, for the first time, formally penalized three internet companies with a VIE structure for failure to make the filing. Since then, the SAMR has been reviewing historical cases of concentrations of undertaking of certain major internet companies with a VIE structure, and past failure to file prior notification of concentrations of undertaking may be investigated and penalized. Although we have not received any investigation or enquiry from the SAMR related to the filing of notification of concentration of undertaking, there can be no assurance that we will not be subject to such enquiries or any penalty in connection with any such enquiry in the future. Any failure or perceived failure to comply with the anti-monopoly laws and regulations, as well as the related government policies and guidance, by us or our top customers, may result in governmental investigations or enforcement actions, litigations or claims against us or our top customers and could have an adverse effect on our business, financial condition and results of operations.

Any administrative and court proceedings in China may be protracted, resulting in substantial costs and diversion of resources and management attention. 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 impede our ability to enforce the contracts we have entered into and could materially and adversely affect our business, financial condition and results of operations.

Our business operations are extensively impacted by the policies and regulations of the PRC government. Any policy or regulatory change may cause us to incur significant compliance costs.

We are subject to extensive national, provincial and local governmental regulations, policies and controls. Central governmental authorities and provincial and local authorities and agencies regulate many aspects of Chinese industries, including without limitation, among others and in addition to specific industry-related regulations, the following aspects:

- construction or development of new data centers or renovation, rebuilding or expansion of existing data centers;
- banking regulations, as a result of the colocation services we provide to banks and financial institutions, including regulations governing the use of subcontractors in the management and maintenance of facilities;
- environmental protection laws and regulations;
- security laws and regulations;
- establishment of or changes in shareholder of foreign investment enterprises;
- foreign exchange;
- taxes, duties and fees;
- customs;
- land planning and land use rights;
- energy conservation and emission reduction; and
- cyber security and information protection laws and regulations, including the *Cyber Security Law of the People's Republic of China*, or the Cyber Security Law, the *Data Security Law of the People's Republic of China*, or the Data Security Law, and the Administrative Measures for the Graded Protection of Information Security.

The liabilities, costs, obligations and requirements associated with these laws and regulations may be material, may delay the commencement of operations at our new data centers or cause interruptions to our operations. Failure to comply with the relevant laws and regulations in our operations may result in various penalties, including, among others the suspension of our operations and thus adversely and materially affect our business, prospects, financial condition and results of operations. While we have endeavored to comply with the relevant laws and regulations in the development and operation of our data centers, we may incur additional costs in order to fulfill such requirements, and we cannot assure you that we have complied with, or will comply with the requirements of all relevant laws and regulations (including obtaining of all relevant approvals required for the development and operation of data centers). Additionally, there can be no assurance that the relevant government agencies will not change such laws or regulations or impose additional or more stringent laws or regulations. For example, see “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Information Technology Outsourcing Services Provided to Banking Financial Institutions” for information regarding regulations of banking and financial institutions that outsource their data center services to us, and “—Regulations Related to Land Use Rights” for information regarding restrictions on the new construction or expansion of data centers within the boundaries of the Beijing municipality. We cannot assure you that we will comply with the requirements of all new laws and regulations. For example, the PRC Civil Code, which was passed on May 28, 2020 by the National People’s Congress and became effective in January 2021, replaces among other laws, the General Provisions of the PRC Civil Law, the PRC Marriage Law, the PRC Guarantee Law, the PRC Contract Law, the PRC Property Law and the PRC Tort Liability Law. It remains to be seen how the PRC Civil Code will be implemented and enforced in practice. In addition, in March 2021, the National People’s Congress published the Fourteenth Five-Year Plan for the National Economic and Social Development of the People’s Republic of China and the Outline of the Long-term Goals for 2035, according to which the PRC government aims to reach the goal of achieving net-zero carbon dioxide emissions by offsetting emissions of carbon dioxide by 2060, namely carbon neutrality, through various measures including afforestation, energy conservation and emission reduction. To achieve the carbon neutrality goal, the PRC government has promulgated certain regulations and may promulgate more laws and regulations in the future. For example, the Circular 1258 provides that with the consumption of the power generated from renewable energy sources in 2020 in all regions as the base, the consumption of the power generated from renewable energy sources (mainly includes wind energy, solar energy, hydropower, biomass power and geothermal energy) newly added each year compared with the previous year during the Fourteenth Five-Year Plan period shall be deducted at the time of assessment of total national and regional energy consumption, which is an important measure for the “Dual-Control” targets. These laws and regulations may compel us to source more renewable energy, and we may be unable to do on commercially acceptable terms. Compliance with such laws or regulations may require us to incur material capital expenditures or other obligations or liabilities.

The PRC Cyber Security Law and Data Security Law are relatively new, and subject to change and uncertain interpretation by regulators. These laws could result in claims, penalties, changes to our business practices, increased cost of operations, damages to our reputation and brand, or otherwise harm our business.

Additionally, the Cyber Security Law came into effect on June 1, 2017, which provides certain rules and requirements applicable to network service providers in China. The Cyber Security Law requires network operators to perform certain functions related to cyber security protection and the strengthening of network information management through taking technical and other necessary measures as required by laws and regulations to safeguard the operation of networks, responding to network security effectively, preventing illegal and criminal activities, and maintaining the integrity and confidentiality and usability of network data. However, the Cyber Security Law still leaves a series of gaps to be filled due to the complex and sensitive nature of this regulatory area. While the Cyber Security law sets out a broad set of principles, certain key terms and clauses are uncertain and ambiguous, which appear intended to be clarified through a series of laws, implementing regulations and guidelines to be issued by relevant authorities. Numerous regulations, guidelines and other measures have been and are expected to be adopted under the Cyber Security Law. For more details, see “Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People’s Republic of China Regulations—Regulations Related to Information Security and Confidentiality of User Information.” Currently, the Cyber Security Law and relevant regulations, guidelines and other measures have not directly impacted our operations, but in light of rapid advances in its implementation, we believe the implementation of the Cyber Security Law involves potential risks to our business because we may be deemed as the network operator of critical information infrastructure thereunder.

Furthermore, the PRC regulatory and enforcement regime with regard to data security and data protection has continued to evolve. There are uncertainties on how certain laws and regulations will be implemented in practice. PRC regulators have been increasingly focused on regulating data security and data protection. We expect that these areas will receive greater attention from regulators, as well as attract public scrutiny and attention going forward. This greater attention, scrutiny and enforcement, including more frequent inspections, could increase our compliance costs and subject us to heightened risks and challenges associated with data security and protection. As of the date of this annual report, we have not been designated as operator of critical information infrastructure by the PRC governmental authorities. While we do not have access to our customers' data stored on the servers collocated in our data centers, we cannot rule out the possibility that data related to our operations may be deemed important data/core data or we may be deemed to be a critical information infrastructure operator, which would subject us to additional supervisory requirements. Any non-compliance on such additional supervisory requirements may subject us to fines, order to rectify, suspension of users registration, revocation of business certificate and other penalties, which may have material adverse effect on our business, operations and financial condition as well as the price of our securities.

In addition, we could become subject to enhanced cybersecurity review or investigations launched by PRC regulators in the future. The Data Security Law provides that the state shall establish a data security review mechanism on data processing activities that do or may affect national security. Pursuant to the Cybersecurity Review Measures effective on February 15, 2022, critical information infrastructure operators that procure internet products and services must be subject to the cybersecurity review if their activities affect or may affect national security and network platform operators that hold personal information of over one million users shall apply with the Cybersecurity Review Office for a cybersecurity review before any public listing in a foreign country. Any failure or delay in the completion of the cybersecurity review procedures or any other non-compliance with the cybersecurity related laws and regulations may result in fines or other penalties, including suspension of business, website closure, and revocation of prerequisite licenses, as well as reputational damage or legal proceedings or actions against us, which may have material adverse effect on our business, financial condition or results of operations. Further, pursuant to the Cyber Data Security Regulations (Draft for Comments), or the Draft Regulations released by the CAC in November 2021, data processors shall apply for a cybersecurity review for certain activities. For more details, please see "Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People's Republic of China Regulations—Regulations Related to Information Security and Confidentiality of User Information." As of the date of this annual report, the Draft Regulations was released for public comment only, and their respective provisions and anticipated adoption or effective date may be subject to change with substantial uncertainty. We cannot predict the impact of the Draft Regulations, if any, at this stage, and we will closely monitor and assess any development in the rule-making process. If the Cybersecurity Review Measures and the enacted version of the Draft Regulations mandate clearance of cybersecurity review and other specific actions to be completed by China-based companies listed on a U.S. stock exchange and Hong Kong exchange, we will face uncertainties as to whether such clearance can be timely obtained, or at all. In addition, if a final version of the Draft Regulations is adopted, we may be subject to review when conducting data processing activities and annual data security assessment and may face challenges in addressing its requirements and make necessary changes to our internal policies and practices in data processing. As of the date of this annual report, we have not been informed by any PRC governmental authority of any requirement that we file for a cybersecurity review. We have not been involved in any investigations on cybersecurity review initiated by the CAC or other competent authorities, and we have not received any inquiry, notice, warning, or sanction in such respect. However, there remains significant uncertainty in the interpretation and enforcement of relevant PRC cybersecurity laws and regulations. We cannot assure you that our future offering will be subject to cybersecurity review by the CAC or other competent authorities, and if so, we may not be able to pass such review.

We believe that we are in compliance with the regulations and policies that have been issued by the CAC and other competent PRC regulatory authorities on cybersecurity in all material respects as of the date of this annual report. We have formulated a cyber security management policy and information security management guidelines to comply with the requirements under the Cyber Security Law. See "Item 4. Information on the Company—B. Business Overview—Environmental and Operational Sustainability Initiatives—Information security" for details on measures we have taken to manage information security risk. However, we cannot assure you that the measures we have taken or will take are adequate under the Cyber Security Law or other cybersecurity related laws and regulations, and we may be held liable in the event of any breach of the relevant requirements under the Cyber Security Law or other relevant laws and regulations. Furthermore, as uncertainties remain regarding the interpretation and implementation of applicable PRC laws and regulations, we cannot assure you that we will comply with such laws and regulations in all respects and we may be ordered to rectify or terminate any actions that are deemed illegal by regulatory authorities. We may also become subject to fines and/or other sanctions which may have material adverse effect on our business, operations and financial condition as well as price of our securities.

We may also be held liable in the event of any breach of general clauses on our compliance with such statutory requirements as well as some other specific requirements related to data protection under the relevant customer contracts. If further changes in our business practices are required under China's evolving regulatory framework for the protection of information in cyberspace, our business, financial condition and results of operations may be adversely affected.

The approval of, or filing with the CSRC or other PRC government authorities may be required in connection with acquisitions conducted by foreign investors or future offshore offerings under PRC law, and, if required, we cannot predict whether or for how long it will take to obtain such approval or complete such filing.

The M&A Rules include, among other things, provisions that purport to require that an offshore special purpose vehicle formed for the purpose of an overseas listing of securities in a PRC company obtain the approval of the CSRC prior to the listing and trading of such special purpose vehicle's securities on an overseas stock exchange. On September 21, 2006, the CSRC published on its official website procedures regarding its approval of overseas listings by special purpose vehicles. However, substantial uncertainty remains regarding the scope and applicability of the M&A Rules to offshore special purpose vehicles.

While the application of the M&A Rules remains unclear, we believe, based on the advice of our PRC counsel, King & Wood Mallesons, that the CSRC approval was not required in the context of our initial public offering or follow-on public offerings under the M&A Rules because we had not acquired any equity interests or assets of a PRC company owned by its Controlling Shareholders or beneficial owners who are PRC companies or individuals, as such terms are defined under the M&A Rules. There can be no assurance that the relevant PRC government agencies, including the CSRC, would reach the same conclusion as our PRC counsel. If the CSRC or another PRC regulatory body subsequently determines that its approval was needed for our initial public offering or follow-on public offerings or such approval is needed for any future offerings, we may face adverse actions or sanctions by the CSRC or other PRC regulatory agencies. In any such event, these regulatory agencies may impose fines and penalties on our operations in China, limit our operating privileges in China, delay or restrict the repatriation of the proceeds from our initial public offering or follow-on public offerings into the PRC or take other actions that could have a material adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of our ADSs and/or ordinary shares.

The regulations also established additional procedures and requirements that are expected to make merger and acquisition activities in China by foreign investors more time-consuming and complex, including requirements in some instances that MOFCOM be notified in advance of any change-of-control transaction in which a foreign investor takes control of a PRC domestic enterprise, or that the approval from MOFCOM be obtained in circumstances where overseas companies established or controlled by PRC enterprises or residents acquire affiliated domestic companies. We may grow our business in part by acquiring other companies operating in our industry. Complying with the requirements of the new regulations to complete such transactions could be time-consuming, and any required approval processes, including approval from MOFCOM, may delay or inhibit our ability to complete such transactions, which could affect our ability to expand our business or maintain our market share. See "Item 4. Information on the Company-B. Business Overview-Regulatory Matters-People's Republic of China Regulations-Regulations Related to M&A and Overseas Listings."

The PRC government authorities have indicated an intent to exert more oversight and control over securities offerings and other capital markets activities that are or have been conducted overseas and foreign investment in China-based companies like us. On February 17, 2023, the CSRC released several regulations regarding the filing requirements for overseas offerings and listings by domestic companies, including the Trial Administrative Measures of Overseas Securities Offering and Listing by Domestic Companies, or the Trial Measures, and five supporting guidelines, or together with the Trial Measures, the New Regulations on Filing. The New Regulations on Filing were formally implemented on March 31, 2023. The New Regulations on Filing provides, among others, that PRC domestic companies that seek to offer and list securities in overseas markets, either in direct or indirect means, are required to file the required documents with the CSRC within three working days after the application for overseas listing submitted. However, listed companies like us, which are called as "the stock enterprises", are not required to apply for the filing immediately until they involved in matters required filings, such as follow-on financing activities. For details about the Trial Measures, please refer to "Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People's Republic of China Regulations—Regulations Related to M&A and Overseas Listings."

If it is determined in the future that approval and filing from the CSRC or other regulatory authorities or other procedures, including the cybersecurity review under the Cybersecurity Review Measures, are required for our offshore offerings, it is uncertain whether we can or how long it will take us to obtain such approval or complete such filing procedures and any such approval or filing could be rejected. Any failure to obtain (including possible rescission of such approval) or delay in obtaining such approval or completing such filing procedures for our offshore offerings, or a rescission of any such approval or filing if obtained by us, would subject us to sanctions by the CSRC or other PRC regulatory authorities for failure to seek CSRC approval or filing or other government authorization for our offshore offerings. These regulatory authorities may impose fines and penalties on our operations in China, limit our ability to pay dividends outside of China, limit our operating privileges in China, delay or restrict the repatriation of the proceeds from our offshore offerings into China or take other actions that could materially and adversely affect our business, financial condition, results of operations, and prospects, as well as the trading price of our listed securities. The CSRC or other PRC regulatory authorities also may require us to halt our offshore offerings before settlement and delivery of the shares offered. Consequently, if investors engage in market trading or other activities in anticipation of and prior to settlement and delivery, they do so at the risk that settlement and delivery may not occur. In addition, if the CSRC or other regulatory authorities later promulgate new rules or explanations requiring that we obtain their approvals or accomplish the required filing or other regulatory procedures for our prior offshore offerings, we may be unable to obtain a waiver of such approval requirements, if and when procedures are established to obtain such a waiver. Any uncertainties or negative publicity regarding such approval requirement could materially and adversely affect our business, prospects, financial condition, reputation, and the trading price of our listed securities.

PRC regulations relating to investments in offshore companies by PRC residents may subject our PRC-resident beneficial owners or our PRC subsidiaries to liability or penalties, limit our ability to inject capital into our PRC subsidiaries or limit our PRC subsidiaries' ability to increase their registered capital or distribute profits.

SAFE Circular 37, which replaced the former circular commonly known as "SAFE Circular 75" promulgated by SAFE on October 21, 2005, requires PRC residents to register with local branches of SAFE in connection with their direct establishment or indirect control of an entity, for the purpose 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 SAFE Circular 37 as a "special purpose vehicle." SAFE Circular 37 further requires amendment to the registration in the event of 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. In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute additional capital into its PRC subsidiary. Moreover, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for evasion of foreign exchange controls. According to the Notice on Further Simplifying and Improving Policies for the Foreign Exchange Administration of Direct Investment released on February 13, 2015 by SAFE, local banks will examine and handle foreign exchange registration for overseas direct investment, including the initial foreign exchange registration and amendment registration, under SAFE Circular 37 from June 1, 2015.

Mr. Huang completed the initial SAFE registration pursuant to SAFE Circular 75 in 2012, and is in the process of applying for amendment of such registration. We have notified substantial beneficial owners of ordinary shares who we know are PRC residents of their filing obligation. Nevertheless, we may not be aware of the identities of all of our beneficial owners who are PRC residents. We do not have control over our beneficial owners and there can be no assurance that all of our PRC-resident beneficial owners will comply with SAFE Circular 37 and subsequent implementation rules, and there is no assurance that the registration under SAFE Circular 37 and any amendment will be completed in a timely manner or will be completed at all. The failure of our beneficial owners who are PRC residents to register or amend their foreign exchange registrations in a timely manner pursuant to SAFE Circular 37 and subsequent implementation rules, or the failure of future beneficial owners of our company who are PRC residents to comply with the registration procedures set forth in SAFE Circular 37 and subsequent implementation rules, may subject such beneficial owners or our PRC subsidiaries to fines and legal sanctions. Failure to register or comply with relevant requirements may also limit our ability to contribute additional capital to our PRC subsidiaries and limit our PRC subsidiaries' ability to distribute dividends to our company. These risks may have a material adverse effect on our business, financial condition and results of operations.

Any failure to comply with PRC regulations regarding our employee share incentive plans may subject the PRC plan participants or us to fines and other legal or administrative sanctions.

Pursuant to SAFE Circular 37, PRC residents who participate in share incentive plans in overseas non-publicly-listed companies due to their position as director, senior management or employees of the PRC subsidiaries of the overseas companies may submit applications to SAFE or its local branches for the foreign exchange registration with respect to offshore special purpose companies. Our directors, executive officers and other employees who are PRC residents and who were granted options may follow SAFE Circular 37 to apply for the foreign exchange registration before our company became an overseas listed company. Since our company became an overseas listed company upon completion of our initial public offering, we and directors, executive officers and other employees of our PRC subsidiaries, the VIEs and their subsidiaries and any individuals who have been granted options have been subject to the *Notice on Issues Concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plan of Overseas Publicly Listed Company*, issued by SAFE in February 2012, or SAFE Circular 7, according to which, among others, employees, directors, supervisors and other management members of PRC companies participating in any stock incentive plan of an overseas publicly listed company who are domestic individuals as defined therein are required to register and make regular periodic filings with SAFE through a domestic qualified agent, which could be a PRC subsidiary of such overseas listed company, and complete certain other procedures. One of our subsidiaries, as the domestic qualified agent, has completed the registration under SAFE Circular 7 for our share incentive plans and we are making efforts to comply with these requirements stipulated in SAFE Circular 7. Failure to complete the SAFE registrations or meet other requirements may subject relevant participants in our share incentive plans to fines and legal sanctions and may also limit the ability to make payment under our share incentive plans or receive dividends or sales proceeds related thereto, or our ability to contribute additional capital into our wholly-foreign owned enterprises in China and limit our wholly-foreign owned enterprises' ability to distribute dividends to us. We also face regulatory uncertainties that could restrict our ability to adopt additional share incentive plans for our directors and employees under PRC law.

It may be difficult for overseas regulators to conduct investigations or collect evidence within China.

There are significant legal and other obstacles in China to providing information needed for regulatory investigations or litigation initiated by regulators outside China. Although the authorities in China may establish a regulatory cooperation mechanism with the securities regulatory authorities of another country or region to implement cross-border supervision and administration, such cooperation with the securities regulatory authorities in the United States involves uncertainty. Furthermore, according to Article 177 of the PRC Securities Law, or Article 177, which became effective in March 2020, no overseas securities regulator is allowed to directly conduct investigation, evidence collection and other activities within the territory of the PRC. While detailed interpretation of or implementation rules under Article 177 have yet to be promulgated, the inability for an overseas securities regulator to directly conduct investigation or evidence collection activities within China may further increase difficulties faced by you in protecting your interests.

The enforcement of the Labor Contract Law of the People's Republic of China, or the PRC Labor Contract Law, and other labor-related regulations in the PRC may increase our labor costs, impose limitations on our labor practices and adversely affect our business and our results of operations.

On June 29, 2007, the SCNPC enacted the *PRC Labor Contract Law*, which became effective on January 1, 2008 and was amended on December 28, 2012. The PRC Labor Contract Law introduces specific provisions related to fixed-term employment contracts, part-time employment, probation, consultation with labor unions and employee assemblies, employment without a written contract, dismissal of employees, severance, and collective bargaining, which together represent enhanced enforcement of labor laws and regulations. According to the PRC Labor Contract Law, an employer is obliged to sign an unfixed-term labor contract with any employee who has worked for the employer for ten consecutive years. Further, if an employee requests or agrees to renew a fixed-term labor contract that has already been entered into twice consecutively, the resulting contract must have an unfixed term, with certain exceptions. The employer must pay economic compensation to an employee where a labor contract is terminated or expires in accordance with the PRC Labor Contract Law, except for certain situations which are specifically regulated. In addition, the government has issued various labor-related regulations to further protect the rights of employees. According to such laws and regulations, employees are entitled to annual leave ranging from five to fifteen days and are able to be compensated for any untaken annual leave days in the amount of three times their daily salary, subject to certain exceptions. In the event that we decide to change our employment or labor practices, the PRC Labor Contract Law and its implementation rules may also limit our ability to effect those changes in a manner that we believe to be cost-effective. In addition, as the interpretation and implementation of these new regulations are still evolving, our employment practices may not be at all times deemed in compliance with the new regulations. If we are subject to severe penalties or incur significant liabilities in connection with labor disputes or investigations, our business and financial conditions may be adversely affected.

We rely to a significant extent on dividends and other distributions on equity paid by our principal operating subsidiaries to fund offshore cash and financing requirements.

We are a holding company and rely to a significant extent on dividends and other distributions on equity paid by our principal operating subsidiaries and on remittances from the VIEs, for our offshore cash and financing requirements, including the funds necessary to pay dividends and other cash distributions to our shareholders, fund intercompany loans, service any debt we may incur outside of China and pay our expenses. When our principal operating subsidiaries or the VIEs incur additional debt, the instruments governing the debt may restrict their ability to pay dividends or make other distributions or remittances to us. Furthermore, the laws, rules and regulations applicable to our PRC subsidiaries and certain other subsidiaries permit payments of dividends only out of their retained earnings, if any, determined in accordance with applicable accounting standards and regulations.

Under PRC laws, rules and regulations, each of our subsidiaries incorporated in China is required to set aside at least 10% of its net income each year to fund certain statutory reserves until the cumulative amount of such reserves reaches 50% of its registered capital. These reserves, together with the registered capital, are not distributable as cash dividends. As a result of these laws, rules and regulations, our subsidiaries, VIEs and their subsidiaries incorporated in China are restricted in their ability to transfer a portion of their respective net assets to their shareholders as dividends, loans or advances. As of December 31, 2022, the restricted net assets were RMB24,955.7 million (US\$3,618.2 million), including those of the VIEs and their subsidiaries of RMB284.6 million (US\$41.3 million) and our subsidiaries of RMB24,671.1 million (US\$3,577.0 million), which mainly consisted of paid-in registered capital. In addition, registered share capital and capital reserve accounts are also restricted from withdrawal in the PRC, up to the amount of net assets held in each operating subsidiary.

Limitations on the ability of VIEs to make remittance to the wholly-foreign owned enterprise and on the ability of our subsidiaries to pay dividends to us could limit our ability to access cash generated by the operations of those entities, including to make investments or acquisitions that could be beneficial to our businesses, pay dividends to our shareholders or otherwise fund and conduct our business.

In January 2017, SAFE promulgated the *Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification*, or SAFE Circular 3, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities, including (i) under the principle of genuine transactions, banks shall check board resolutions regarding profit distribution, original copies of tax filing records and audited financial statements; and (ii) domestic entities shall hold income to account for previous years' losses before remitting any profits. Moreover, pursuant to SAFE Circular 3, domestic entities shall make detailed explanations of their sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with any outbound investment.

We may be treated as a resident enterprise for PRC tax purposes under the PRC Enterprise Income Tax Law, and we may therefore be subject to PRC income tax on our global income.

Under the *PRC Enterprise Income Tax Law* and its implementing rules, enterprises established under the laws of jurisdictions outside of China with “de facto management bodies” located in China may be considered PRC tax resident enterprises for tax purposes and may be subject to the PRC enterprise income tax at the rate of 25% on their global income. “De facto management body” refers to a managing body that exercises substantive and overall management and control over the production and business, personnel, accounting books and assets of an enterprise. The STA issued Circular 82 on April 22, 2009. Circular 82 provides certain specific criteria for determining whether the “de facto management body” of a Chinese-controlled offshore-incorporated enterprise is located in China. Although Circular 82 only applies to offshore enterprises controlled by PRC enterprises, not those controlled by foreign enterprises or individuals, the determining criteria set forth in Circular 82 may reflect the STA general position on how the “de facto management body” test should be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC enterprises. If we were to be considered a PRC resident enterprise, we would be subject to PRC enterprise income tax at the rate of 25% on our global income. In such case, our profitability and cash flow may be materially reduced as a result of our global income being taxed under the Enterprise Income Tax Law. We believe that none of our entities outside of China is a PRC resident enterprise for PRC tax 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.”

We may not be able to obtain certain benefits under the relevant tax treaty on dividends paid by our PRC subsidiaries to us through our Hong Kong subsidiary.

We are a holding company incorporated under the laws of the Cayman Islands and as such rely on dividends and other distributions on equity from our PRC subsidiaries to satisfy part of our liquidity requirements. Pursuant to the *PRC Enterprise Income Tax Law*, a withholding tax rate of 10% currently applies to dividends paid by a PRC “resident enterprise” to a foreign enterprise investor, unless any such foreign investor’s jurisdiction of incorporation has a tax treaty with China that provides for preferential tax treatment. Pursuant to the *Arrangement between Mainland China and the Hong Kong for the Avoidance of Double Taxation and Prevention of Fiscal Evasion with Respect to Taxes on Income*, such withholding tax rate may be lowered to 5% if a Hong Kong resident enterprise owns no less than 25% of a PRC enterprise. However, the 5% withholding tax rate does not automatically apply and certain requirements must be satisfied, including without limitation that (a) the Hong Kong enterprise must be the beneficial owner of the relevant dividends; and (b) the Hong Kong enterprise must directly hold no less than 25% share ownership in the PRC enterprise during the 12 consecutive months preceding its receipt of the dividends.

Dividends payable to our foreign investors and gains on the sale of our ADSs and/or ordinary shares by our foreign investors may become subject to PRC tax.

Under the *Enterprise Income Tax Law* and its implementation regulations issued by the State Council, a 10% PRC withholding tax, subject to any reduction or exemption set forth in applicable tax treaties or under applicable tax arrangements between jurisdictions, is applicable to dividends payable to investors that are non-resident enterprises, which do not have an establishment or place of business in the PRC or which have such establishment or place of business but the dividends are not effectively connected with such establishment or place of business, to the extent such dividends are derived from sources within the PRC. Similarly, any gain realized on the transfer of ADSs and/or ordinary shares by such investors is also subject to PRC tax at a current rate of 10%, subject to any reduction or exemption set forth in applicable tax treaties or under applicable tax arrangements between jurisdictions, if such gain is regarded as income derived from sources within the PRC. If we are deemed a PRC resident enterprise, dividends paid on our ordinary shares and/or ADSs, and any gain realized from the transfer of our ordinary shares and/or ADSs, would be treated as income derived from sources within the PRC and would as a result be subject to PRC taxation. Furthermore, if we are deemed a PRC resident enterprise, dividends payable to individual investors who are non-PRC residents and any gain realized on the transfer of ADSs and/or ordinary shares by such investors may be subject to PRC tax at a current rate of 20%, subject to any reduction or exemption set forth in applicable tax treaties or under applicable tax arrangements between jurisdictions. If we or any of our subsidiaries established outside China are considered a PRC resident enterprise, it is unclear whether holders of our ADSs and/or ordinary shares would be able to claim the benefit of income tax treaties or agreements entered into between China and other countries or areas. If dividends payable to our non-PRC investors, or gains from the transfer of our ADSs and/or ordinary shares by such investors, are deemed as income derived from sources within the PRC and thus are subject to PRC tax, the value of your investment in our ADSs and/or ordinary shares may decline significantly.

We and our shareholders face uncertainties with respect to indirect transfers of equity interests in PRC resident enterprises or other assets attributed to a Chinese establishment of a non-Chinese company, or immovable properties located in China owned by non-Chinese companies.

On February 3, 2015, the STA issued the *Bulletin on Issues of Enterprise Income Tax on Indirect Transfers of Assets by Non-PRC Resident Enterprises*, or STA Bulletin 7, which replaced or supplemented previous rules under the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises, or Circular 698, issued by the STA, on December 10, 2009. Pursuant to STA Bulletin 7, an “indirect transfer” of assets, including equity interests in a PRC resident enterprise, by non-PRC resident enterprises may be recharacterized and treated as a direct transfer of PRC taxable assets, if such arrangement does not have a reasonable commercial purpose and was established for the purpose of avoiding payment of PRC enterprise income tax. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax. According to STA Bulletin 7, “PRC taxable assets” include assets attributed to an establishment in China, immovable properties located in China, and equity investments in PRC resident enterprises, in respect of which gains from their transfer by a direct holder, being a non-PRC resident enterprise, would be subject to PRC enterprise income taxes. When determining whether there is a “reasonable commercial purpose” of the transaction arrangement, features to be taken into consideration include: whether the main value of the equity interest of the relevant offshore enterprise derives from PRC taxable assets; whether the assets of the relevant offshore enterprise mainly consists of direct or indirect investment in China or if its income mainly derives from China; whether the offshore enterprise and its subsidiaries directly or indirectly holding PRC taxable assets have real commercial nature which is evidenced by their actual function and risk exposure; the duration of existence of the business model and organizational structure; the replicability of the transaction by direct transfer of PRC taxable assets; and the tax situation of such indirect transfer and applicable tax treaties or similar arrangements. In respect of an indirect offshore transfer of assets of a PRC establishment, the resulting gain is to be included with the enterprise income tax filing of the PRC establishment or place of business being transferred, and would consequently be subject to PRC enterprise income tax at a rate of 25%. Where the underlying transfer relates to the immovable properties located in China or to equity investments in a PRC resident enterprise, which is not related to a PRC establishment or place of business of a non-resident enterprise, a PRC enterprise income tax of 10% would apply, subject to available preferential tax treatment under applicable tax treaties or similar arrangements, and the party who is obligated to make the transfer payments has the withholding obligation. Where the payor fails to withhold any or sufficient tax, the transferor shall declare and pay such tax to the tax authority by itself within the statutory time limit. Late payment of applicable tax will subject the transferor to default interest. STA Bulletin 7 does not apply to transactions of sale of ordinary shares by investors through a public stock exchange where such ordinary shares were acquired from a transaction through a public stock exchange.

On October 17, 2017, the STA issued the *Announcement on Issues Relating to Withholding at Source of Income Tax of Non-resident Enterprises*, or STA Circular 37. STA Circular 37 supersedes Circular 698 in its entirety, and amends certain provisions in STA Bulletin 7, but does not touch upon other provisions of STA Bulletin 7, which remain in full force. STA Circular 37 purports to clarify certain issues in the implementation of the above regime, by providing, among others, the definitions of equity transfer income and tax basis, the foreign exchange rate to be used in the calculation of withholding amounts and the date of occurrence of the withholding obligation. Specifically, STA Circular 37 provides that where the transfer income subject to withholding at its source is derived by a non-PRC resident enterprise by way of instalments, the instalments may first be treated as recovery of costs of previous investments; upon recovery of all costs, the tax amount to be withheld shall then be computed and withheld.

There is uncertainty as to the application of STA Bulletin 7 and STA Circular 37. STA Bulletin 7 and STA Circular 37 may be determined by the tax authorities to be applicable to our historical or future offshore restructuring transactions or sale of our ordinary shares or ADSs or those of our offshore subsidiaries, with non-resident enterprises being the transferors. We may be subject to filing obligations or taxed as the transferor, or subject to withholding obligations as the transferee, in such transactions. For transfers of our ordinary shares or ADSs by investors that are non-PRC resident enterprises, our PRC subsidiaries may be requested to assist with filings under STA Bulletin 7 and STA Circular 37. For example, in the past, we acquired EDC Holding Limited, or EDC Holding, by issuing shares of GDS Holdings, to its shareholders in exchange for all of the outstanding shares of EDC Holding that were not held by us then. In addition, certain of our direct and indirect shareholders transferred some or all of their equity interest in us through indirect transfers conducted by their respective overseas holding companies which held ordinary shares in us. As a result, the transferors and transferees in these transactions, including us may be subject to the tax filing and withholding or tax payment obligation, while our PRC subsidiaries may be requested to assist in the filing. Furthermore, we, our non-resident enterprises and PRC subsidiaries may be required to spend valuable resources to comply with STA Bulletin 7 and STA Circular 37 or to establish that we and our non-resident enterprises should not be taxed under STA Bulletin 7 and STA Circular 37, for our previous and future restructuring or disposal of shares of our offshore subsidiaries, which may have a material adverse effect on our financial condition and results of operations.

Restrictions on currency exchange may limit our ability to utilize our net revenue effectively.

Substantially all of our net revenue is denominated in Renminbi. The Renminbi is currently convertible under the “current account,” which includes dividends, trade and service-related foreign exchange transactions, but not under the “capital account,” which includes foreign direct investment and loans, including loans we may secure from our onshore subsidiaries, VIEs or their subsidiaries. Currently, certain of our PRC subsidiaries, may purchase foreign currency for settlement of “current account transactions,” including payment of dividends to us, without the approval of SAFE by complying with certain procedural requirements. However, the relevant PRC governmental authorities may limit or eliminate our ability to purchase foreign currencies in the future for current account transactions. Foreign exchange transactions under the capital account remain subject to limitations and require approvals from, or registration with, SAFE and other relevant PRC governmental authorities. Since a significant amount of our future net revenue will be denominated in Renminbi, any existing and future restrictions on currency exchange may limit our ability to utilize net revenue generated in Renminbi to fund our business activities outside of the PRC or pay dividends in foreign currencies to our shareholders, including holders of our ADSs and/or ordinary shares, and may limit our ability to obtain foreign currency through debt or equity financing for our subsidiaries, VIEs or their subsidiaries.

The audit report included in this annual report is prepared by an auditor which the U.S. Public Company Accounting Oversight Board was unable to inspect and investigate completely before 2022 and, as such, our investors had been deprived of the benefits of such inspections in the past, and may be deprived of the benefits of such inspections in the future.

Our auditor, the independent registered public accounting firm that issues the audit report included elsewhere in this annual report, as an auditor of companies that are traded publicly in the U.S. and a firm registered with the PCAOB, is required by the laws of the U.S. to undergo regular inspections by the PCAOB to assess its compliance with the laws of the U.S. and professional standards. According to Article 177 of the PRC Securities Law which became effective in March 2020, no overseas securities regulator is allowed to directly conduct investigation or evidence collection activities within the territory of the PRC. Accordingly, without the consent of the competent PRC securities regulators and relevant authorities, no organization or individual may provide the documents and materials relating to securities business activities to overseas parties. In 2021, PCAOB made determinations that the positions taken by PRC authorities prevented the PCAOB from inspecting and investigating firms headquartered in mainland China and Hong Kong completely. On August 26, 2022, the PCAOB signed a Statement of Protocol with the CSRC and the Ministry of Finance of the PRC, taking the first step toward opening access for the PCAOB to inspect and investigate completely registered public accounting firms headquartered in mainland China and Hong Kong including our auditor. According to its announcement, the PCAOB sent staff to conduct on-site inspections and investigations in Hong Kong from September to November 2022 and conducted inspection field work and investigative testimony in a manner consistent with the PCAOB’s methodology and approach to inspections and investigations in the U.S. and globally. The PCAOB inspections have preliminarily identified numerous deficiencies in the audit firms in China, which are consistent with the types and number of findings the PCAOB has encountered in other first-time inspections around the world, and the final inspection reports are expected to be completed and made public in 2023. If audit firms in China had been subject to such inspections in the past, such deficiencies may have been identified earlier and these audit firms, including our auditor, may have taken remedial measures to address any such deficiencies, and the historical inability of the PCAOB to inspect audit firms in China has deprived our investors of the benefits of such inspections. The inability of the PCAOB to conduct complete inspections of auditors in China before 2022 may have made 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, which could cause investors or potential investors in our ADSs to lose confidence in the quality of our consolidated financial statements.

In addition, while the PCAOB announced in December 2022 that it secured complete access to inspect and investigate registered public accounting firms headquartered in China, we cannot assure you that the PCAOB will continue to have such access in the future. If the PCAOB is not able to inspect and investigate completely auditors in China for any reason, such as any change in the position of the governmental authorities in China in the future, our investors may be deprived of the benefits of such inspections again.

The market prices of our ADSs and/or other securities could be adversely affected as a result of anticipated negative impacts of the HFCA Act upon, as well as negative investor sentiment towards, China-based companies listed in the United States, regardless of our actual operating performance. If our ADSs were not listed on a national stock exchange in the U.S., the Hong Kong Stock Exchange will regard us as having a primary listing in Hong Kong and we will no longer enjoy certain exemptions or waivers from strict compliance with the requirements under the Hong Kong Listing Rules, the Companies (WUMP) Ordinance, the Takeovers Codes and the SFO, which could result in our incurring incremental compliance costs. Notwithstanding the foregoing, in the event that the Hong Kong Stock Exchange deemed us as having a dual primary listing in Hong Kong, we will be permitted to retain our existing weighted voting rights structure and our variable interest entity structure. See “—Risks Related to Our ADSs and Class A Ordinary Shares—We adopt different practices as to certain matters as compared with many other companies listed on the Hong Kong Stock Exchange.”

If the PCAOB determines that it is unable to inspect or investigate completely our auditor at any point in the future, our ADSs may be prohibited from trading in the United States under the HFCA Act, as amended, and any such trading prohibition on our ADSs or threat thereof may materially and adversely affect the price of our ADSs and value of your investment.

The HFCA Act was signed into law on December 18, 2020 and amended pursuant to the Consolidated Appropriations Act, 2023 on December 29, 2022. Under the HFCA Act and the rules issued by the SEC and the PCAOB thereunder, if we have retained a registered public accounting firm to issue an audit report where the registered public accounting firm has a branch or office that is located in a foreign jurisdiction and the PCAOB has determined that it is unable to inspect or investigate completely because of a position taken by an authority in the foreign jurisdiction, the SEC will identify us as a “covered issuer”, or SEC-identified issuer, shortly after we file with the SEC a report required under the Securities Exchange Act of 1934, or the Exchange Act (such as our annual report on Form 20-F) that includes an audit report issued by such accounting firm; and if we were to be identified as an SEC-identified issuer for two consecutive years, the SEC would prohibit our securities (including our shares or ADSs) from being traded on a national securities exchange or in the over-the-counter trading market in the United States.

In December 2021, the PCAOB made its determinations, or the 2021 determinations, pursuant to the HFCA Act that it was unable to inspect or investigate completely registered public accounting firms headquartered in mainland China or Hong Kong including our auditor, KPMG Huazhen LLP. After we filed our annual report on Form 20-F for the fiscal year ended December 31, 2021 that included an audit report issued by KPMG Huazhen LLP on April 28, 2022, the SEC conclusively identified us as an SEC-identified issuer on May 26, 2022. As such, we are required to satisfy additional disclosure requirement for SEC-identified issuers that are also foreign issuers in this annual report. See “Item 16I. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.”

Following the Statement of Protocol signed between the PCAOB and the CSRC and the Ministry of Finance of the PRC in August 2022 and the on-site inspections and investigations conducted by the PCAOB staff in Hong Kong from September to November 2022, the PCAOB Board voted in December 2022 to vacate the previous 2021 determinations, and as a result, our auditor, KPMG Huazhen LLP, is no longer a registered public accounting firm that the PCAOB is unable to inspect or investigate completely as of the date of this annual report or at the time of issuance of the audit report included herein. As such, we do not expect to be identified as an SEC-identified issuer again in 2023. However, the PCAOB may change its determinations under the HFCA Act at any point in the future. In particular, if the PCAOB finds its ability to completely inspect and investigate registered public accounting firms headquartered in mainland China or Hong Kong is obstructed by the PRC authorities in any way in the future, the PCAOB may act immediately to consider the need to issue new determinations consistent with the HFCA Act. We cannot assure you that the PCAOB will always have complete access to inspect and investigate our auditor, or that we will not be identified as an SEC-identified issuer again in the future.

If we are identified as an SEC-identified issuer again in the future, we cannot assure you that we will be able to change our auditor or take other remedial measures in a timely manner, and if we were to be identified as an SEC-identified issuer for two consecutive years, we would be delisted from the Nasdaq and our securities (including our shares and ADSs) will not be permitted for trading “over-the-counter” either. If our securities are prohibited from trading in the United States, or threatened with such a prohibition, the risk and uncertainty associated with delisting would have a negative impact on the price of our ADSs and ordinary shares. Also, such a prohibition or any threat thereof would significantly affect our ability to raise capital on terms acceptable to us, or at all, which would have a material adverse impact on our business, financial condition, and prospects. Moreover, the implementation of the HFCA Act and other efforts to increase the U.S. regulatory access to audit information could cause investor uncertainty as to China-based issuers’ ability to maintain their listings on the U.S. national securities exchanges and the market price of the securities of China-based issuers, including us, could be adversely affected.

If additional remedial measures are imposed on the “big four” PRC-based accounting firms, including our independent registered public accounting firm, in administrative proceedings brought by the SEC alleging such firms’ failure to meet specific criteria set by the SEC with respect to requests for the production of documents, we could be unable to timely file future financial statements in compliance with the requirements of the U.S. Exchange Act.

Starting in 2011 the Chinese affiliates of the “big four” accounting firms, including our independent registered public accounting firm, were affected by a conflict between U.S. and Chinese law. Specifically, for certain U.S. listed companies operating and audited in mainland China, the SEC and the PCAOB sought to obtain from the Chinese accounting firms access to their audit work papers and related documents. The firms were, however, advised and directed that under Chinese law they could not respond directly to the U.S. regulators on those requests, and that requests by foreign regulators for access to such papers in China had to be channeled through the CSRC.

In December 2012, this impasse led the SEC to commence administrative proceedings under Rule 102(e) of its Rules of Practice and also under the Sarbanes-Oxley Act against the Chinese affiliates of the “big four” accounting firms, including our independent registered public accounting firm. In January 2014, the administrative law judge reached an initial decision to impose penalties on the firms including a temporary suspension of their right to practice before the SEC. The accounting firms filed a petition for review of the initial decision. On February 6, 2015, before a review by the commissioners of the SEC had taken place, the firms reached a settlement with the SEC. Under the settlement, the SEC accepts that future requests by the SEC for the production of documents will normally be made to the CSRC. The firms will receive matching Section 106 requests and are required to abide by a detailed set of procedures with respect to such requests, which in substance require them to facilitate production via the CSRC. If they fail to meet the specified criteria, the SEC retains authority to impose a variety of additional remedial measures on the firms depending on the nature of the failure. Remedies for any future noncompliance could include, as appropriate, an automatic six-month bar on a single firm’s performance of certain audit work, commencement of a new proceeding against a firm, or in extreme cases the resumption of the current proceeding against all four firms. Under the terms of the settlement, the underlying proceeding against the four PRC-based accounting firms was deemed dismissed with prejudice four years after entry of the settlement. The four-year mark occurred on February 6, 2019. It is uncertain whether the SEC will further challenge the four PRC-based accounting firms’ compliance with U.S. laws in connection with U.S. regulatory requests for audit work papers or if the results of such challenge would result in the SEC imposing penalties such as suspensions. If additional remedial measures are imposed on the Chinese affiliates of the “big four” accounting firms, including our independent registered public accounting firm, we could be unable to timely file future financial statements in compliance with the requirements of the U.S. Exchange Act.

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 U.S. Exchange Act, including possible delisting. Moreover, any negative news about any such future proceedings against these audit firms may cause investor uncertainty regarding China-based, United States-listed companies and the market price of our ADSs and/or ordinary shares may be adversely affected.

The perception among investors that the Company is at heightened risk of delisting from Nasdaq could negatively affect the market price of our securities and trading volume of our ADSs. If a delisting were to occur, we would face material adverse consequences.

The perception among investors, due to current and proposed rules and regulations relating to the ability of the PCAOB to inspect our auditors, political tensions between the United States and China, and other matters, that the Company is at heightened risk of delisting from Nasdaq, could negatively affect the market price of our securities and trading volume of our ADSs. There have been recent media reports on deliberations within the U.S. government regarding limiting or restricting China-based companies from accessing U.S. capital markets, and delisting China-based companies from U.S. national securities exchanges. If any further such deliberations were to materialize, the resulting legislation may have a material and adverse impact on the stock performance of China-based issuers listed in the United States such as us, and there can be no assurance that we will always be able to maintain the listing of our ADSs on a national stock exchange in the U.S., such as the NYSE or the Nasdaq Stock Market, or that you will always be allowed to trade our shares or ADSs. See “—The audit report included in this annual report is prepared by an auditor which the U.S. Public Company Accounting Oversight Board was unable to inspect and investigate completely before 2022 and, as such, our investors had been deprived of the benefits of such inspections in the past, and may be deprived of the benefits of such inspections in the future.” If our ADSs were not listed on a national stock exchange in the U.S., the Hong Kong Stock Exchange will regard us as having a primary listing in Hong Kong and we will no longer enjoy certain exemptions or waivers from strict compliance with the requirements under the Hong Kong Listing Rules, the Companies (WUMP) Ordinance, the Takeovers Codes and the SFO, which could result in our incurring incremental compliance costs. Notwithstanding the foregoing, in the event that the Hong Kong Stock Exchange deemed us as having a dual primary listing in Hong Kong, we will be permitted to retain our existing weighted voting rights structure and our variable interest entity structure. See “—Risks Related to Our ADSs and Class A Ordinary Shares—We adopt different practices as to certain matters as compared with many other companies listed on the Hong Kong Stock Exchange.”

Additionally, any actual delisting determination could seriously decrease or eliminate the value of an investment in our ADSs. We could face substantial material adverse consequences, including, but not limited to, among other things: limited availability for market quotations for our ADSs; reduced liquidity with respect to our shares; a reduced number of investors willing to hold or acquire our shares, which could negatively impact our ability to raise equity financing; an impaired ability to provide equity incentives to our employees; and limited news and analyst coverage. Additionally, many of our loan agreements include a covenant that we maintain our shares listed on at least one of the following stock exchanges before the maturity date: (i) Nasdaq; or (ii) The Singapore Exchange Securities Trading Limited; or (iii) the Hong Kong Stock Exchange; or (iv) any other stock exchange acceptable to the lender. The breach of such covenant could result in a default with respect to the related indebtedness. If a default occurs, the relevant lenders could elect to declare the indebtedness, together with accrued interest and other fees, to be due and payable immediately. This, in turn, could cause our other debt, to become due and payable as a result of cross-default or acceleration provisions contained in the agreements governing such other debt. In the event that some or all of our debt is accelerated and becomes immediately due and payable, we may not have the funds to repay, or the ability to refinance, such debt.

Risks Related to Our ADSs and Class A Ordinary Shares

The trading prices of our ADSs and ordinary shares may be volatile, which could result in substantial losses to you.

The trading prices of our ADSs and ordinary shares have been, and are likely to continue to be, volatile and could fluctuate widely due to factors beyond our control. The trading price of our ordinary shares, likewise, can be volatile for similar or different reasons. This may happen because of broad market and industry factors, like the performance and fluctuation in the market prices or the underperformance or deteriorating financial results of other listed companies based in China. 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, including internet and e-commerce companies, may affect the attitudes of investors toward Chinese companies listed in Hong Kong and/or the United States, which consequently may impact the trading performance of our ADSs and/or ordinary shares, regardless of our actual operating performance. In addition, any negative news or perceptions about inadequate corporate governance practices or fraudulent accounting, corporate structure or matters of other 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 to the above factors, the prices and trading volumes of our ADSs and/or ordinary shares may be highly volatile due to multiple factors, including the following:

- regulatory developments affecting us or our industry, customers or suppliers;
- announcements of studies and reports relating to the quality of our service offerings or those of our competitors;
- changes in the economic performance or market valuations of other data center services companies;
- actual or anticipated fluctuations in our quarterly results of operations and changes or revisions of our expected results;
- changes in financial estimates by securities research analysts;
- conditions in the market for data center services;
- announcements by us or our competitors of new product and service offerings, acquisitions, strategic relationships, joint ventures, capital raisings or capital commitments;
- additions to or departures of our senior management;
- any actual or alleged illegal acts of our senior management or other key employees;
- actual or expected changes in monetary and fiscal policies adopted by central banks and financial authorities, particularly any increases in the target range for the federal funds rate announced by the Federal Open Market Committee of the U.S. Federal Reserve System;
- actual or expected increases in prices for commodities, consumer prices, and inflation rates;
- fluctuations in exchange rates between the Renminbi, the Hong Kong dollar, the U.S. dollar, the Macanese pataca, the Singapore dollar, the Malaysian ringgit and the Indonesian rupiah;
- litigation, government investigation or other legal or regulatory proceeding;
- political or market instability or disruptions, and actual or perceived social unrest in the United States, Hong Kong, or other jurisdictions;
- release or expiry of lock-up or other transfer restrictions on our ADSs and/or ordinary shares;
- sales or perceived potential sales or other dispositions of existing or additional ADSs and/or ordinary shares or other equity or equity-linked securities; and
- attacks by short sellers, including the publication of negative opinions regarding us and our business prospects in order to create negative market momentum and generate profits for themselves after selling a stock short. See “—Techniques employed by short sellers may drive down the market price of our ADSs and/or ordinary shares.”

Any of these factors may result in large and sudden changes in the volume and trading prices of our ADSs and/or ordinary shares. In addition, securities markets may from time to time experience significant price and volume fluctuations that are not related to the operating performance of particular companies and industries, such as the large decline in share prices in the United States, China and other jurisdictions in late 2008, early 2009, the second half of 2011, in 2015 and early 2020. Any additional volatility or further declines in securities markets, such as the Nasdaq, on which our ADSs are listed, and the Hong Kong Stock Exchange, on which our ordinary shares are listed, may have a material and adverse effect on the prices and trading volumes of our ADSs and/or ordinary shares. Furthermore, any fluctuations in the prices and/or trading volumes of our securities, regardless of the underlying cause of such fluctuations, may attract the attention or scrutiny of governmental or regulatory authorities, which could have further material and adverse effects on the prices and trading volumes of our ADSs and/or ordinary shares.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, the market price for our ADSs and/or ordinary shares and trading volume could decline.

The trading market for our ADSs and ordinary shares depends in part on the research and reports that securities or industry analysts publish about us or our business. If research analysts do not establish and maintain adequate research coverage or if one or more of the analysts who covers us downgrades our ADSs and/or ordinary shares or publishes inaccurate or unfavorable research about our business, the market price for our ADSs and ordinary shares would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which, in turn, could cause the market price or trading volume for our ADSs and ordinary shares to decline.

Techniques employed by short sellers may drive down the market price of our ADSs and/or ordinary shares.

Short selling is the practice of selling securities that the seller does not own but rather has borrowed from a third party with the intention of buying identical securities back at a later date to return to the lender. The short seller hopes to profit from a decline in the value of the securities between the sale of the borrowed securities and the purchase of the replacement shares, as the short seller expects to pay less in that purchase than it received in the sale. As it is in the short seller's best interests for the price of the stock to decline, many short sellers publish, or arrange for the publication of, negative opinions regarding the relevant issuer and its business prospects in order to create negative market momentum and generate profits for themselves after selling a stock short. These short attacks have, in the past, led to selling of shares in the market.

Public companies that have substantially all of their operations in China have been the subject of short selling. Much of the scrutiny and negative publicity has centered on allegations of a lack of effective internal control over financial reporting resulting in financial and accounting irregularities and mistakes, inadequate corporate governance policies or a lack of adherence thereto and, in many cases, allegations of fraud. As a result, many of these companies are now conducting internal and external investigations into the allegations and, in the interim, are subject to shareholder lawsuits and/or SEC enforcement actions.

We have in the past been, are currently, and may in the future be, the subject of unfavorable allegations made by a short seller. Any such allegations may be followed by periods of instability in the market price of our ADSs and ordinary shares and negative publicity. Regardless of whether such allegations are proven to be true or untrue, it is not clear what effect such negative publicity could have on us, and we could have to expend a significant amount of resources to investigate such allegations and/or defend ourselves. While we would strongly defend against any such short seller attacks, we may be constrained in the manner in which it can proceed against the relevant short seller by principles of freedom of speech, applicable state law or issues of commercial confidentiality. Such a situation could be costly and time-consuming and could distract our management from growing our business. Even if such allegations are ultimately proven to be groundless, allegations against us could severely impact our business operations and shareholders' equity, and any investment in our ADSs or ordinary shares could be greatly reduced or rendered worthless.

Because we do not expect to pay dividends in the foreseeable future, you must rely on price appreciation of our ADSs and/or ordinary shares for return on your investment.

We currently intend to retain most, if not all, of our available funds and any future earnings to fund the development and growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future. See "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy and Distributions." Therefore, you should not rely on an investment in our ADSs and/or ordinary shares as a source for any future dividend income.

Our board of directors has complete discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, the amount of distributions, if any, received by us from our subsidiaries, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in our ADSs and/or ordinary shares will likely depend entirely upon any future price appreciation of our ADSs and/or ordinary shares. There is no guarantee that our ADSs and/or ordinary shares will appreciate in value or even maintain the price at which you purchased the ADSs and/or ordinary shares. You may not realize a return on your investment in our ADSs and/or ordinary shares and you may even lose your entire investment in our ADSs and/or ordinary shares.

The different characteristics of the capital markets in Hong Kong and the U.S. may negatively affect the trading prices of our ADSs and/or ordinary shares.

As a dual-listed company, we are subject to Hong Kong and Nasdaq listing and regulatory requirements concurrently. The Hong Kong Stock Exchange and Nasdaq have different trading hours, trading characteristics (including trading volume and liquidity), trading and listing rules, and investor bases (including different levels of retail and institutional participation). As a result of these differences, the trading prices of our ADSs and our ordinary shares may not be the same, even allowing for currency differences. Fluctuations in the price of our ADSs due to circumstances peculiar to the U.S. capital markets could materially and adversely affect the price of our ordinary shares, or vice versa. Certain events having significant negative impact specifically on the U.S. capital markets may result in a decline in the trading price of our ordinary shares notwithstanding that such event may not impact the trading prices of securities listed in Hong Kong generally or to the same extent, or vice versa.

Substantial future sales or perceived potential sales of our ADSs, ordinary shares, or other equity or equity-linked securities in the public market could cause the price of our ADSs and/or ordinary shares to decline significantly.

Sales of our ADSs, ordinary shares, or other equity or equity-linked securities in the public market, or the perception that these sales could occur, could cause the market price of our ADSs and/or ordinary shares to decline significantly. As of March 15, 2023, we had 1,468,842,655 ordinary shares outstanding, comprising 1,456,842,659 Class A ordinary shares (including 57,232,624 Class A ordinary shares issued and held by JPMorgan Chase Bank, N.A., as depositary, which are reserved for future delivery upon exercise or vesting of share awards granted under our share incentive plans) and 55,590,336 Class B ordinary shares. All ADSs representing our Class A ordinary shares sold in our public offerings are freely transferable by persons other than our “affiliates” without restriction or additional registration under the U.S. Securities Act. All of the other Class A ordinary shares may be available for sale, subject to volume and other restrictions as applicable under Rules 144 and 701 under the U.S. Securities Act.

Divestiture in the future of our ADSs and/or ordinary shares by shareholders, the announcement of any plan to divest our ADS and/or ordinary shares, or hedging activity by third-party financial institutions in connection with similar derivative or other financing arrangements entered into by shareholders, could cause the price of our ADSs and/or ordinary shares to decline.

Certain major holders of our ordinary shares have the right to cause us to register under the U.S. Securities Act the sale of their shares. Registration of these shares under the U.S. Securities Act would result in ADSs representing these shares becoming freely tradable without restriction under the U.S. Securities Act immediately upon the effectiveness of the registration. Sales of these registered shares in the form of ADSs in the public market could cause the price of our ADSs and/or ordinary shares to decline significantly.

We have adopted share incentive plans, under which we have the discretion to grant a broad range of equity-based awards to eligible participants. See “Item 6. Directors, Senior Management and Employees—B. Compensation—Share Incentive Plans.” We intend to register all ordinary shares that we may issue under these share incentive plans. Once we register these ordinary shares, they can be freely sold in the public market, subject to volume limitations applicable to affiliates. If a large number of our ordinary shares or securities convertible into our ordinary shares are sold in the public market after they become eligible for sale, the sales could reduce the trading price of our ADSs and/or ordinary shares and impede our ability to raise future capital.

The ADSs and ordinary shares are equity and are subordinate to our existing and future indebtedness, the convertible preferred stock and any preferred stock we may issue in the future.

The ADSs and ordinary shares are our equity interests and do not constitute indebtedness. As such, ADSs and ordinary shares will rank junior to all indebtedness and other non-equity claims on us with respect to assets available to satisfy claims on us, including in a liquidation of us. Additionally, holders of our ADSs and/or ordinary shares may be subject to prior dividend and liquidation rights of any holders of our preferred stock or depositary shares representing such preferred stock then outstanding.

Our ADSs and ordinary shares will rank junior to our convertible preferred stock with respect to the payment of dividends and amounts payable in the event of our liquidation, dissolution or winding-up of our affairs. This means that, unless accumulated dividends have been paid on all our convertible preferred stock through the most recently completed dividend period, no dividends may be declared or paid on our ADSs and ordinary shares and we will not be permitted to repurchase any of our ADSs and ordinary shares, subject to limited exceptions. Likewise, in the event of our voluntary or involuntary liquidation, dissolution or winding-up of our affairs, no distribution of our assets may be made to holders of our ADSs and/or ordinary shares until we have paid to holders of our preferred stock a liquidation preference equal to the greater of (i) the stated value per convertible preferred share, plus an amount equal to any dividends accumulated but unpaid thereon (whether or not declared), and (ii) the payment such holders would have received had such holders, immediately prior to such liquidation, converted their convertible preferred shares into Class A ordinary shares (at the then applicable conversion rate).

Our board of directors is authorized to issue additional classes or series of preferred stock without any action on the part of the shareholders. The board of directors also has the power, without shareholder approval, to set the terms of any such classes or series of preferred stock that may be issued, including voting rights, dividend rights, and preferences over our ADSs and ordinary shares with respect to dividends or upon our dissolution, winding-up and liquidation and other terms. If we issue preferred stock in the future that has a preference over our ADSs and ordinary shares with respect to the payment of dividends or upon our liquidation, dissolution, or winding up, or if we issue preferred stock with voting rights that dilute the voting power of our ADSs and ordinary shares, the rights of holders of our ADSs and/or ordinary shares or the market price of our ADSs and/or ordinary shares could be adversely affected.

Our dual-class voting structure and concentrated ownership limits your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our ADSs and/or ordinary shares may view as beneficial.

As discussed under “—Risks Related to Our Corporate Structure—Our corporate actions are substantially controlled by our principal shareholders, including our founder, chairman and chief executive officer, Mr. Huang, who have the ability to control or exert significant influence over important corporate matters that require approval of shareholders, which may deprive you of an opportunity to receive a premium for your ordinary shares and/or ADSs and materially reduce the value of your investment” above, Mr. Huang, our founder, chairman and chief executive officer and our other principal shareholders have considerable influence over matters requiring shareholder approval. To the extent that their interests differ from yours, you may be disadvantaged by any action that they may seek to pursue. This concentrated control could also discourage others from pursuing any potential merger, takeover or other change of control transactions, which could have the effect of depriving the holders of our ADSs and/or ordinary shares of the opportunity to sell their shares at a premium over the prevailing market price.

ADS holders may have fewer rights than holders of our ordinary shares and must act through the depositary to exercise those rights.

ADS holders do not have the same rights of our shareholders and may only exercise the voting rights with respect to the underlying Class A ordinary shares in accordance with the provisions of the deposit agreement. Under our Articles of Association, the minimum notice period required to convene a general meeting will be 14 calendar days. When a general meeting is convened, ADS holders may not receive sufficient notice of a shareholders' meeting to permit them to withdraw their Class A ordinary shares to allow them to cast their vote with respect to any specific matter. In addition, the depositary and its agents may not be able to send voting instructions to them or carry out their voting instructions in a timely manner. We will make all reasonable efforts to cause the depositary to extend voting rights to them in a timely manner, but there can be no assurance that they will receive the voting materials in time to ensure that they can instruct the depositary to vote their ADSs. Furthermore, the depositary and its agents will not be responsible for any failure to carry out any instructions to vote, for the manner in which any vote is cast or for the effect of any such vote. As a result, ADS holders may not be able to exercise their right to vote and they may lack recourse if their ADSs are not voted as they requested. In addition, in their capacity as an ADS holder, they will not be able to call a shareholders' meeting.

The right of ADS holders to participate in any future rights offerings may be limited, which may cause dilution to their holdings.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make rights available to ADS holders in the United States unless we register both the rights and the securities to which the rights relate under the U.S. Securities Act or an exemption from the registration requirements is available. Under the deposit agreement, the depositary will not make rights available to ADS holders unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the U.S. Securities Act or exempt from registration under the U.S. Securities Act. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause such a registration statement to be declared effective and we may not be able to establish a necessary exemption from registration under the U.S. Securities Act. Accordingly, ADS holders may be unable to participate in our rights offerings and may experience dilution in their holdings.

ADS holders may not receive cash dividends if the depositary decides it is impractical to make them available to them.

The depositary will pay cash dividends on the ADSs only to the extent that we decide to distribute dividends on our ordinary shares or other deposited securities, and we do not have any present plan to pay any cash dividends in the foreseeable future. See "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy and Distributions." To the extent that there is a distribution, the depositary of our ADSs has agreed to pay to ADS holders 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. ADS holders will receive these distributions in proportion to the number of Class A ordinary shares their ADSs represent. However, the depositary may, at its discretion, decide that it is inequitable or impractical to make a distribution available to any ADS holders. 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 to ADS holders.

ADS holders may be subject to limitations on transfer of their ADSs.

Our ADSs 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 deems 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.

Our ADSs and ordinary shares are equity securities of a Cayman Islands holding company rather than equity securities of our subsidiaries, the consolidated VIEs and their subsidiaries that have substantive business operations in China. As a result, certain judgments obtained against us by our shareholders may not be enforceable.

We are an exempted company limited by shares incorporated under the laws of the Cayman Islands with no business operations. We conduct a substantial portion of our operations through our wholly-foreign owned enterprises, the consolidated VIEs and their subsidiaries in the PRC, and majority of our assets are located in the PRC. We do not and are not, and holders of our ADSs and ordinary shares do not and are not, legally permitted to have any, or more than the permitted percentage of, equity interest in the consolidated VIEs as current PRC laws and regulations restrict foreign ownership and investment in, among other areas, the business of providing VATS, including internet data center services. As a result, we provide the services that may be subject to such restrictions in the PRC through the VIEs and their subsidiaries, and we operate our businesses in the PRC through certain contractual arrangements with the consolidated VIEs. For a summary of such contractual arrangements, see “Item 4. Information on the Company—C. Organizational Structure—Contractual Arrangements with Affiliated Consolidated Entities.” Our ADSs and ordinary shares are equity securities of a Cayman Islands holding company rather than equity securities of our subsidiaries and the consolidated VIEs. In addition, some of our directors and executive officers and the experts named in this document do not reside within the U.S. or Hong Kong, and most of their assets are not located in the U.S. or Hong Kong. As a result, it may be difficult or impossible for you to bring an action against us or against them in the United States or in Hong Kong in the event that you believe that your rights have been infringed under the U.S. federal securities laws, Hong Kong laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands or other relevant jurisdiction may render you unable to enforce a judgment against our assets or the assets of our directors and officers.

There is no statutory enforcement in the Cayman Islands of judgments obtained in the Hong Kong courts or federal or state courts of the United States (and the Cayman Islands are not a party to any treaties for the reciprocal enforcement or recognition of such judgments). The courts of the Cayman Islands would recognize as a valid judgment a final and conclusive judgment in personam obtained in such jurisdiction under which a sum of money is payable (other than a sum of money payable in respect of multiple damages, taxes or other charges of a like nature or in respect of a fine or other penalty) or, in certain circumstances, an in personam judgment for non-monetary relief, and would give a judgment based thereon provided that: (a) such courts had proper jurisdiction over the parties subject to such judgment; (b) such courts did not contravene the rules of natural justice of the Cayman Islands; (c) such judgment was not obtained by fraud; (d) the enforcement of the judgment would not be contrary to the public policy of the Cayman Islands; (e) no new admissible evidence relevant to the action is submitted prior to the rendering of the judgment by the courts of the Cayman Islands; and (f) there is due compliance with the correct procedures under the laws of the Cayman Islands. However, the Cayman Islands courts are unlikely to enforce a judgment obtained from the U.S. or Hong Kong courts under civil liability provisions of the U.S. federal securities law or Hong Kong law if such judgment is determined by the courts of the Cayman Islands to give rise to obligations to make payments that are penal or punitive in nature. Because such a determination has not yet been made by a court of the Cayman Islands, it is uncertain whether such civil liability judgments from U.S. or Hong Kong courts would be enforceable in the Cayman Islands.

The recognition and enforcement of foreign judgments are provided for under the PRC Civil Procedures Law. PRC courts may recognize and enforce foreign judgments in accordance with the requirements of the PRC Civil Procedures Law based either on treaties between China and the country where the judgment is made or on principles of reciprocity between jurisdictions. China does not have any treaties or other forms of reciprocity with the United States that provide for the reciprocal recognition and enforcement of foreign judgments. In addition, according to the PRC Civil Procedures Law, the PRC courts will not enforce a foreign judgment against us or our director and officers if they decide that the judgment violates the basic principles of PRC laws or national sovereignty, security or public interest. As a result, it is uncertain whether and on what basis a PRC court would enforce a judgment rendered by a court in the United States.

Since we are a Cayman Islands exempted company, the rights of our shareholders may be different from those of shareholders of a company organized in the United States or Hong Kong.

Under the laws of some jurisdictions in the United States, majority and controlling shareholders generally have certain fiduciary responsibilities to the minority shareholders. Shareholder action must be taken in good faith, and actions by controlling shareholders which are obviously unreasonable may be declared null and void. Cayman Islands law protecting the interests of minority shareholders may not be as protective in all circumstances as the law protecting minority shareholders in some U.S. jurisdictions. In addition, the circumstances in which a shareholder of a Cayman Islands company may sue the company derivatively, and the procedures and defenses that may be available to the company, may result in the rights of shareholders of a Cayman Islands company being more limited than those of shareholders of a company organized in the United States.

Furthermore, our directors have the power to take certain actions without shareholder approval which would require shareholder approval under Hong Kong law or the laws of most U.S. jurisdictions. Our ability to create and issue new classes or series of shares without shareholders' approval could have the effect of delaying, deterring or preventing a change in control without any further action by our shareholders, including a tender offer to purchase our ordinary shares at a premium over then current market prices.

Furthermore, our Articles of Association are specific to us and include certain provisions that may be different from common practices in Hong Kong, such as the absence of requirements that the appointment, removal and remuneration of auditors must be approved by a majority of our shareholders.

You may face difficulties in protecting your interests, and your ability to protect your rights through Hong Kong or U.S. courts may be limited, because we are incorporated under Cayman Islands law.

We are an exempted company limited by shares incorporated under the laws of the Cayman Islands. Our corporate affairs are governed by our Memorandum and Articles of Association, the Companies Act (As Revised) of the Cayman Islands and the common law of the Cayman Islands. The rights of shareholders to take action against our directors, 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 the common law of England, the decisions of whose courts are of persuasive authority, but are not binding, 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 precedent in some jurisdictions in the United States or the Hong Kong courts. In particular, the Cayman Islands has a less developed body of securities laws than the United States or Hong Kong. In addition, Cayman Islands companies may not have standing to initiate a shareholder derivative action in a federal court of the United States or Hong Kong courts.

Shareholders of Cayman Islands exempted companies like us have no general rights under Cayman Islands law to inspect corporate records or to obtain copies of lists of shareholders of these companies. Our directors have discretion under our Memorandum and Articles of Association to determine whether or not, and under what conditions, our corporate records may be inspected by our shareholders, but are not obliged to make them available to our shareholders. This may make it more difficult for you to obtain the information needed to establish any facts necessary for a shareholder resolution or to solicit proxies from other shareholders in connection with a proxy contest.

As a result of all of the above, our public shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or Controlling Shareholders than they would as public shareholders of a company incorporated in the United States or Hong Kong.

Our Articles of Association contain anti-takeover provisions that could discourage a third party from acquiring us, which could limit our shareholders' opportunity to sell their ADSs and/or ordinary shares at a premium.

We have adopted Articles of Association that contain provisions to limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions. These provisions could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transaction. For example, our board of directors has the authority, without further action by our shareholders, to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our ordinary shares, in the form of ADS or otherwise. Preferred shares could be issued quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. If our board of directors decides to issue preferred shares, the price of our ADSs and/or ordinary shares may fall and the voting and other rights of the holders of our ADSs and/or ordinary shares may be materially and adversely affected. In addition, our Articles of Association contain other provisions that could limit the ability of third parties to acquire control of our company or cause us to engage in a transaction resulting in a change of control, as defined in our Articles of Association, including: a provision that entitles Class B ordinary shares to 20 votes per share at general meetings of our shareholders with respect to the election or removal of a simple majority of our directors; a provision that entitles Class B shareholders to nominate five of our directors; a provision that allows one of our principal shareholders to appoint up to three directors to our board of directors for so long as they beneficially own certain percentages of our issued share capital; and a classified board with staggered terms for our directors, which will prevent the replacement of a majority of directors at one time.

These provisions could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transaction.

We are a foreign private issuer within the meaning of the rules under the U.S. Exchange Act, and as such we are exempt from certain provisions applicable to U.S. domestic public companies.

Because we qualify as a foreign private issuer under the U.S. Exchange Act, we are exempt from certain provisions of the securities rules and regulations in the United States that are applicable to U.S. domestic issuers, including:

- the rules under the U.S. Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q or current reports on Form 8-K;
- the sections of the U.S. Exchange Act regulating the solicitation of proxies, consents, or authorizations in respect of a security registered under the U.S. Exchange Act;
- the sections of the U.S. Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time; and
- the selective disclosure rules by issuers of material nonpublic information under Regulation Fair Disclosure.

We are required to file an annual report on Form 20-F within four months of the end of each fiscal year. In addition, we intend to publish our results on a quarterly basis as press releases, distributed pursuant to the rules and regulations of Nasdaq. Press releases relating to financial results and material events will also be furnished to the SEC on Form 6-K. However, the information we are required to file with or furnish to the SEC will be less extensive and less timely compared to that required to be filed with the SEC by U.S. domestic issuers. As a result, ADS holders may not be afforded the same protections or information that would be made available to them were they investing in a U.S. domestic issuer.

As a company incorporated in the Cayman Islands, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from the Nasdaq corporate governance listing standards; these practices may afford less protection to shareholders than they would enjoy if we complied fully with the Nasdaq corporate governance listing standards.

As a Cayman Islands company listed on the Nasdaq, we are subject to the Nasdaq corporate governance listing standards. However, Nasdaq Stock Market Rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq corporate governance listing standards.

For instance, we are not required to:

- have a majority of the board be independent (although all of the members of the audit committee must be independent under the U.S. Exchange Act);
- have a compensation committee or a nominations or corporate governance committee consisting entirely of independent directors; or
- have regularly scheduled executive sessions with only independent directors each year.

We have relied on and intend to continue to rely on some of these exemptions. As a result, you may not be provided with the benefits of certain corporate governance requirements of Nasdaq.

We adopt different practices as to certain matters as compared with many other companies listed on the Hong Kong Stock Exchange.

We completed our public offering in Hong Kong in November 2020 and the trading of our ordinary shares on the Hong Kong Stock Exchange commenced on November 2, 2020 under the stock code “9698.” As a company listed on the Hong Kong Stock Exchange pursuant to Chapter 19C of the Hong Kong Listing Rules, we are not subject to certain provisions of the Hong Kong Listing Rules pursuant to Rule 19C.11, including, among others, rules on notifiable transactions, connected transactions, share option schemes, content of financial statements as well as certain other continuing obligations. In addition, in connection with the listing of our ordinary shares on the Hong Kong Stock Exchange, we have been granted a number of waivers and/or exemptions from strict compliance with the Hong Kong Listing Rules, the Companies (WUMP) Ordinance, the Takeovers Codes and the SFO. As a result, we adopt different practices as to those matters, including with respect to the content and presentation of our annual reports and interim reports, as compared with other companies listed on the Hong Kong Stock Exchange that do not enjoy those exemptions or waivers.

Furthermore, if 55% or more of the total worldwide trading volume, by dollar value, of our ADSs and ordinary shares over our most recent fiscal year takes place on the Hong Kong Stock Exchange, the Hong Kong Stock Exchange will regard us as having a dual primary listing in Hong Kong. If our ADSs were not listed on a national stock exchange in the U.S., the Hong Kong Stock Exchange will regard us as having a primary listing in Hong Kong. See “—Risks Related to Doing Business in the People’s Republic of China—The audit report included in this annual report is prepared by an auditor which the U.S. Public Company Accounting Oversight Board was unable to inspect and investigate completely before 2022 and, as such, our investors had been deprived of the benefits of such inspections in the past, and may be deprived of the benefits of such inspections in the future” and “—Risks Related to Doing Business in the People’s Republic of China—The perception among investors that the Company is at heightened risk of delisting from Nasdaq could negatively affect the market price of our securities and trading volume of our ADSs. If a delisting were to occur, we would face material adverse consequences.” If the Hong Kong Stock Exchange were to regard us as having a dual primary listing or primary listing in Hong Kong, we will no longer enjoy certain exemptions or waivers from strict compliance with the requirements under the Hong Kong Listing Rules, the Companies (WUMP) Ordinance, the Takeovers Codes and the SFO, which could result in our incurring incremental compliance costs. Notwithstanding the foregoing, in the event that the Hong Kong Stock Exchange deemed us as having a dual primary listing in Hong Kong, we will be permitted to retain our existing weighted voting rights structure and our variable interest entity structure.

Exchange between our ordinary shares and our ADSs may adversely affect the liquidity and/or trading price of each other.

Our ADSs are currently traded on Nasdaq. Subject to compliance with U.S. securities law and the terms of the deposit agreement, holders of our Class A ordinary shares may deposit Class A ordinary shares with the depositary in exchange for the issuance of our ADSs. Any holder of ADSs may also withdraw the underlying Class A ordinary shares represented by the ADSs pursuant to the terms of the deposit agreement for trading on the Hong Kong Stock Exchange. In the event that a substantial number of Class A ordinary shares are deposited with the depositary in exchange for ADSs or vice versa, the liquidity and trading price of our Class A ordinary shares on the Hong Kong Stock Exchange and our ADSs on Nasdaq may be adversely affected.

The time required for the exchange between ADSs and ordinary shares might be longer than expected and investors might not be able to settle or effect any sale of their securities during this period, and the exchange of ADSs into Class A ordinary shares involves costs.

There is no direct trading or settlement between Nasdaq and the Hong Kong Stock Exchange on which our ADSs and our ordinary shares are respectively traded. In addition, the time differences between Hong Kong and New York and unforeseen market circumstances or other factors may delay the deposit of ordinary shares in exchange of ADSs or the withdrawal of ordinary shares underlying the ADSs. Investors will be prevented from settling or effecting the sale of their securities during such periods of delay. In addition, there is no assurance that any exchange of ordinary shares into ADSs (and vice versa) will be completed in accordance with the timelines investors may anticipate.

Furthermore, the depositary for the ADSs is entitled to charge holders fees for various services including for the issuance of ADSs upon deposit of ordinary shares, cancellation of ADSs, distributions of cash dividends or other cash distributions, distributions of ADSs pursuant to share dividends or other free share distributions, distributions of securities other than ADSs and annual service fees. As a result, shareholders who exchange ordinary shares into ADSs, and vice versa, may not achieve the level of economic return the shareholders may anticipate.

We may become a passive foreign investment company, which could result in adverse United States federal income tax consequences to United States investors.

Based on the past and projected composition of our income and assets, and the valuation of our assets, including goodwill, we do not believe we were a passive foreign investment company, or PFIC, for our most recent taxable year and we do not expect to become one in the future, although there can be no assurance in this regard. The determination of whether or not we are a PFIC is made on an annual basis and will depend on the composition of our income and assets from time to time. Specifically, for any taxable year, we will be classified as a PFIC for United States federal income tax purposes if either (i) 75% or more of our gross income in that taxable year is passive income or (ii) the average percentage of our assets (which includes cash) by value in that taxable year which produce, or are held for the production of, passive income is at least 50%. The calculation of the value of our assets will be based, in part, on the quarterly market value of our ADSs, which is subject to change. See “Item 10. Additional Information—E. Taxation—Material United States Federal Income Tax Considerations—Passive Foreign Investment Company.”

In addition, there is uncertainty as to the treatment of our corporate structure and ownership of the VIEs for United States federal income tax purposes. For United States federal income tax purposes, we consider ourselves to own the stock of the VIEs. If it is determined, contrary to our view, that we do not own the stock of the VIEs for United States federal income tax purposes (for instance, because the relevant PRC authorities do not respect these arrangements), we may be treated as a PFIC.

If we are a PFIC for any taxable year during which you hold our ADSs or Class A ordinary shares, our PFIC status could result in adverse United States federal income tax consequences to you if you are a United States Holder, as defined under “Item 10. Additional Information—E. Taxation—Material United States Federal Income Tax Considerations.” For example, if we are or become a PFIC, you may become subject to increased tax liabilities under United States federal income tax laws and regulations and will become subject to burdensome reporting requirements. See “Item 10. Additional Information—E. Taxation—Material United States Federal Income Tax Considerations—Passive Foreign Investment Company.” There can be no assurance that we will not be a PFIC for the current or any future taxable year.

We will continue to incur increased costs as a result of being a public company, particularly since we have ceased to qualify as an “emerging growth company.”

Since the completion of our initial public offering, we have incurred significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, as well as rules subsequently implemented by the SEC and Nasdaq, impose various requirements on the corporate governance practices of public companies. Since December 31, 2018, we have been deemed to be a “large accelerated filer” as the term is defined in Rule 12b-2 of the U.S. Exchange Act, and we thereby ceased to be an “emerging growth company” as the term is defined in the JOBS Act.

These rules and regulations have increased our legal and financial compliance costs and made some corporate activities more time-consuming and costly. Since we have ceased to be an “emerging growth company,” we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act and the other rules and regulations of the SEC. Operating as a public company has also made it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. In addition, we have incurred additional costs associated with our public company reporting requirements. It may also be more difficult for us to find qualified persons to serve on our board of directors or as executive officers. We will also incur additional costs as a result of the listing of our ordinary shares on the Hong Kong Stock Exchange. We are currently evaluating and monitoring developments with respect to these rules and regulations, and we cannot predict or estimate with any degree of certainty the amount of additional costs we may incur or the timing of such costs.

Shareholders of our company have in the past brought, and may in the future bring, securities class action lawsuits against our company following periods of instability in the market price of our ADSs and/or ordinary shares. On August 2, 2018, a securities class action lawsuit was filed in the United States District Court in the Eastern District of Texas against GDS Holdings Limited, our Chief Executive Officer Mr. Huang, and our Chief Financial Officer Mr. Daniel Newman (collectively, “Defendants”) by Hamza Ramzan, a GDS shareholder. See “Item 4. Information on the Company—B. Business Overview—Legal Proceedings.” On April 7, 2020, the court granted Defendants’ motion to dismiss the amended complaint, and dismissed the action in its entirety against all Defendants. On May 6, 2020, plaintiffs filed a notice of appeal of that decision. On June 29, 2020, plaintiffs voluntarily withdrew their appeal, resulting in the dismissal of the case against all Defendants with prejudice. Any further class action lawsuit could divert a significant amount of our management’s attention and other resources from our business and operations, which could harm our results of operations and require us to incur significant expenses to defend the suit. Any such class action lawsuit, whether or not successful, could harm our reputation and restrict our ability to raise capital in the future.

We are exposed to risks associated with the potential spin-off of one or more of our businesses.

We are exposed to risks associated with the potential spin-off of one or more of our businesses. We have been granted a waiver from strict compliance with the requirements in Paragraph 3(b) of Practice Note 15 to the Hong Kong Listing Rules such that we are able to spin-off a subsidiary entity and list on the Hong Kong Stock Exchange within three years of the listing of our ordinary shares on the Hong Kong Stock Exchange. While we currently do not have any plan with respect to any spin-off listing on the Hong Kong Stock Exchange, we may consider a spin-off listing on the Hong Kong Stock Exchange for one or more of our businesses within the three year period subsequent to the listing of our ordinary shares on the Hong Kong Stock Exchange. The waiver granted by the Hong Kong Stock Exchange is conditional upon us confirming to the Hong Kong Stock Exchange in advance of any spin-off that it would not render our company incapable of fulfilling the eligibility requirements under Rule 19C.05 of the Hong Kong Listing Rules based on the financial information of the entity or entities to be spun-off at the time of the listing of our ordinary shares on the Hong Kong Stock Exchange (calculated cumulatively if more than one entity is spun-off). In the event that we proceed with a spin-off, our interest in the entity to be spun-off will be reduced accordingly.

There is uncertainty as to whether Hong Kong stamp duty will apply to the trading or conversion of our ADSs.

In connection with the initial public offering of our Class A ordinary shares in Hong Kong in November 2020, or the Hong Kong IPO, we established a branch register of members in Hong Kong, or the Hong Kong share register. Our Class A ordinary shares that are traded on the Hong Kong Stock Exchange, including those issued in the Hong Kong IPO and those that may be converted from ADSs, are registered on the Hong Kong share register, and the trading of these Class A ordinary shares on the Hong Kong Stock Exchange are subject to Hong Kong stamp duty. To facilitate ADS-ordinary share conversion and trading between Nasdaq and the Hong Kong Stock Exchange, we have moved a portion of our issued Class A ordinary shares from our register of members maintained in the Cayman Islands to our Hong Kong share register.

Under the Hong Kong Stamp Duty Ordinance, any person who effects any sale or purchase of Hong Kong stock, defined as stock the transfer of which is required to be registered in Hong Kong, is required to pay Hong Kong stamp duty. The stamp duty is currently set at a total rate of 0.26% of the greater of the consideration for, or the value of, shares transferred, with 0.13% payable by each of the buyer and the seller.

To the best of our knowledge, Hong Kong stamp duty has not been levied in practice on the trading or conversion of ADSs of companies that are listed in both the United States and Hong Kong and that have maintained all or a portion of their ordinary shares, including ordinary shares underlying ADSs, in their Hong Kong share registers. However, it is unclear whether, as a matter of Hong Kong law, the trading or conversion of ADSs of these dual-listed companies constitutes a sale or purchase of the underlying Hong Kong-registered ordinary shares that is subject to Hong Kong stamp duty. We advise investors to consult their own tax advisors on this matter. If Hong Kong stamp duty is determined by the competent authority to apply to the trading or conversion of our ADSs, the trading price and the value of your investment in our ordinary shares and/or ADSs may be affected.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

We are an exempted company and were incorporated under the laws of the Cayman Islands on December 1, 2006. Our ADSs are listed on the Nasdaq under the symbol “GDS.” Our ordinary shares are listed on the Hong Kong Stock Exchange under the stock code “9698.”

We operate our business through our wholly-owned subsidiaries, joint ventures, the VIEs and their subsidiaries. We own 100% of the shares in EDC Holding, an exempted company also incorporated in the Cayman Islands, through which we indirectly hold 100% of the equity interests in holding companies in Hong Kong, many of which own our data centers through one or more data center companies. Through EDC Holding we also indirectly hold 100% of the equity interests in GDS Investment Company.

The following are our key business milestones:

In 2001, we started our business as an IT service provider. Our initial focus was on business continuity and disaster recovery solutions. Many of our early customers were financial service institutions with demanding IT compliance standards. To guarantee the reliability and availability of services to them, we leased data center capacity from third parties.

In 2009, after realizing that there was a shortage of qualified data center capacity in key markets, we began developing our own data centers, thereby entering the data center business. We established our presence in Shanghai and Chengdu in 2010 and 2011, by bringing three data centers into service in these markets. From 2013 to 2014, we expanded our footprint to Beijing and Shenzhen and completed the construction of three data centers in these markets. By 2014, we had developed a supply of capacity in all of China’s Tier 1 markets.

In 2014, we received a major infusion of capital to fund data center development from STT GDC. We have since established a long-term strategic partnership with STT GDC, which has made several subsequent rounds of investment in us. STT GDC is a wholly owned subsidiary of ST Telemedia. STT GDC is an experienced and strategic data center player which owns a portfolio of data centers in Singapore, UK, Thailand, India, Indonesia, South Korea, Japan and in China through GDS. As of March 15, 2023, STT GDC is our single largest shareholder and we benefit from STT GDC’s industry expertise, access to potential customer and supplier relationships, and solid corporate governance guidance.

In 2016, we completed our initial public offering on NASDAQ under the symbol “GDS.”

In 2017, we began developing B-O-T data centers for specific customers. In August 2019, we entered into a strategic cooperation framework agreement with GIC, Singapore’s sovereign wealth fund, to develop and operate hyperscale B-O-T data centers for a strategic customer on a joint venture basis. According to the agreement, we will own 10% equity interests in the joint venture asset companies and GIC will own 90%. In September 2021, we entered into a new master joint venture investment agreement with GIC, pursuant to which the two parties will form joint ventures for the investment and development of hyperscale B-O-T data centers for several customers. According to the new agreement, we will own 51% equity interest in the joint venture asset companies and GIC will own 49%. We will continue to provide management and operation services to the joint ventures and earn recurring service fees. As of December 31, 2022, we completed the sale of a 49% equity interests of the project company of HL1 Phase 1 data center and UL1 data center to GIC, as the first two B-O-T joint venture data centers pursuant to the new master joint venture investment agreement.

In 2018, we expanded our footprint of self-developed data centers to Hong Kong by purchasing an industrial property for conversion to a data center.

In 2020, we completed our secondary listing on the Hong Kong Stock Exchange under the stock code of “9698.”

In 2021, we expanded our presence to Southeast Asia by acquiring two parcels of greenfield land in Johor, Malaysia and Batam, Indonesia, both in close proximity to Singapore, as part of our Singapore-Johor-Batam strategy in the region.

In 2022, we commenced construction on our greenfield land in Johor, Malaysia and took steps to acquire additional land at the same site in order to secure a pipeline for future development as we scale up our Singapore-Johor-Batam strategy. We also successfully secured an anchor customer commitment for our Malaysia site.

Principal Offices

Our principal executive offices are located at F4/F5, Building C, Sunland International, No. 999 Zhouhai Road, Pudong, Shanghai 200137, People’s Republic of China. Our registered office in the Cayman Islands is located at the offices of Conyers Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands. Prior to September 30, 2018, our agent for service of process in the United States was Law Debenture Corporate Services Inc., located at 801 2nd Avenue, Suite 403, New York, New York 10017, U.S.A. We appointed Cogency Global Inc., located at 122 East 42nd Street, 18th Floor, New York, New York 10168, U.S.A., as our successor agent for service of process in the United States, effective as of and after October 1, 2018.

B. Business Overview

We are a leading developer and operator of high-performance data centers in mainland China and Hong Kong. Our facilities are strategically located in primary economic hubs where demand for high-performance data center services is concentrated. We also build, operate and transfer data centers at other locations in mainland China selected by our customers to fulfill their broader requirements and recently expanded our presence to serve the Southeast Asia Region.

Our data centers are designed and configured as high-performance data centers with large net floor area and power capacity, high power density and efficiency, and multiple redundancy across all critical systems. We are carrier and cloud neutral, which enables our customers to access all the major PRC telecommunications networks, as well as the largest PRC and global public clouds which we host in many of our facilities.

We offer colocation and managed services, including direct private connection to leading public clouds, an innovative service platform for managing hybrid clouds. Our innovative and unique platform of interconnected data centers enables cloud service providers to expand in a flexible way in their key markets, and also enables enterprises to deploy their hybrid clouds in close proximity to the networked nodes of leading public clouds.

We have a 22-year track record of service delivery, successfully fulfilling the requirements of some of the largest and most demanding customers for outsourced data center services. As of December 31, 2022, we had an aggregate net floor area of 515,787 sqm in service, 95.5% of which was committed by customers, and an aggregate net floor area of 192,713 sqm under construction, 71.5% of which was pre-committed by customers.

We believe the market for high-performance data center services in mainland China and Hong Kong continue to grow at a strong underlying rate. Demand is driven by rapid growth in the volume of data created, transmitted, processed and stored as a result of the accelerating trend of digital transformation and the rising adoption of new technologies such as cloud computing, 5G, artificial intelligence, big data, machine learning, blockchain, internet of things, augmented and virtual reality, e-payments and digital currency. This has been strongly endorsed and further encouraged by the PRC government policies which consistently and actively support technology-driven development and the growth of the digital economy. The PRC government has promoted the concept of “new infrastructure” which includes, among other things, largescale data centers, artificial intelligence and industrial internet. The PRC government has rolled out plan for overall layout of the country’s digital development. According to the plan, important progress will be made in the construction of a digital China by 2025, with effective interconnectivity in digital infrastructure, a significantly improved digital economy, and major breakthroughs achieved in digital technology innovation. A newly formed National Bureau of Data will be responsible for overall coordination and promoting the development of digital China.

Our platform of interconnected data centers and secured expansion capacity is strategically located to address this growing demand. We develop and operate our data centers predominantly in and around Shanghai, Beijing, Shenzhen, Guangzhou, Chengdu/Chongqing and Hong Kong, the primary financial, commercial, industrial and communications hubs in each region. We refer to the areas in and around these hubs as Tier 1 markets. Our customers typically use our data centers in Tier 1 markets to house their mission-critical, latency-sensitive data and applications. Our data locations provide convenient access for our customers and, furthermore, the extensive multi-carrier telecommunications networks in these markets enable our customers to enhance the performance and lower the cost of connectivity to our facilities.

In the past, our data centers were mainly clustered in key urban districts within each Tier 1 market in accordance with customer preference. In order to keep pace with demand and overcome the challenge of creating new supply, we are also developing more data centers at strategy locations on the outer edge of these markets, including on campuses we can expand capacity in multiple phases. These outer edge developments, which we still consider Tier 1 markets, enable our hyperscale customers to fulfill their requirement for larger developments of IT capacity on a single site and to upscale over time, while remaining within acceptable parameters for network latency. In addition to our presence in Tier 1 markets, we also build, operate and transfer data centers at other locations selected by our customers in order to house their offline and less critical data and applications in lower cost areas where, at times, renewable energy sources are also accessible.

In recent years, we have seen strong growth in demand for high-performance data center services in Southeast Asia. We believe that a large part of this demand originates from our home market customers in China as they seek to capture opportunities arising from the take-off of the digital economy in Southeast Asia. In order to better serve our customers’ requirements, we have begun to expand our presence to Southeast Asia. In 2021, we acquired two parcels of greenfield land in Johor, Malaysia and Batam, Indonesia, both in close proximity to Singapore, as part of our Singapore-Johor-Batam strategy to serve the region. In 2022, we commenced construction on our greenfield land in Johor and took steps to acquire additional land at the same site in order to secure a pipeline for future development as we scale up. We also successfully secured an anchor customer commitment for this project. At the same time, we are progressing preparations to commence construction at our greenfield land in Batam. We believe that our developments in Johor and Batam, where we are one of the first movers, will enable us to support customers who require largescale, low cost capacity in diverse locations with low-latency connectivity to the major network hubs in Singapore. It follows a development pattern of urban and outer edge data centers which we have successfully deployed in and around Tier 1 markets in China.

From our inception, we have built up our own in-house data center design capability, which we believe is unparalleled in the industry. We were one of the first movers in developing high-performance data centers in China, anticipating the trend for IT to become increasingly mission-critical, and then in combining high availability with larger net floor area and power capacity to meet the unprecedented requirements of hyperscale cloud service providers and large internet companies. Our data centers are largescale, highly reliable and highly efficient facilities that provide a flexible, modular and secure operating environment in which our customers can house, power and cool the computer systems and networking equipment that support their mission-critical IT. We install high power density (which refers to the ratio of power capacity to net floor area) and optimize power usage efficiency, which enables our customers to deploy their IT systems more efficiently and reduce their operating and capital costs. As a result of our advanced data center design, high technical specifications and robust operating procedures, we are able to make service level commitments related to service availability and other key metrics that meet our customers' required standards. Within our data centers, we have also developed an innovative service platform to assist our enterprise customers to integrate and control every aspect of their hybrid cloud computing environment across their private servers and one or more public cloud service providers.

As of December 31, 2022, we served 830 customers, including PRC and global hyperscale cloud service providers and large internet companies, a diverse community of financial institutions, telecommunications carriers and IT service providers and large domestic private sector and multinational corporations, many of which are leaders in their respective industries. We host the largest public cloud platforms operating in China, some of which are present in multiple GDS data centers. Agreements with our hyperscale cloud service provider and large internet customers generally have terms of three to ten years, while agreements with our financial institution and enterprise customers typically have terms of one to five years.

As of December 31, 2022, we operated 86 self-developed data centers with an aggregate net floor area of 508,224 sqm in service. We also operated capacity at 20 third-party data centers with an aggregate net floor area of 7,563 sqm in service, which we lease on a wholesale basis and use to provide colocation and managed services to our customers. As of the same date, we also had an aggregate net floor area of 192,713 sqm under construction. In total, we have 103 self-developed data centers in service and under construction. As of the same date, we had an estimated aggregate developable net floor area of approximately 329,283 sqm held for potential future development. Our net revenue and results of operations are largely determined by the degree to which our data center capacity is committed or pre-committed as well as its utilization. We had commitment rates for our area in service of 94.6%, 93.8% and 95.5% as of December 31, 2020, 2021 and 2022, respectively. We had utilization rates for our area in service of 70.3%, 65.5% and 71.8% as of December 31, 2020, 2021 and 2022, respectively. The difference between commitment rate and utilization rate is primarily attributable to customers who have entered into agreements but have not yet started to use revenue-generating services.

We have experienced significant growth in recent years. Our net revenue grew from RMB5,739.0 million in 2020 to RMB7,818.7 million in 2021, representing an increase of 36.2%, and increased to RMB9,325.6 million (US\$1,352.1 million) in 2022, representing an increase of 19.3%. Our net loss increased from RMB669.2 million in 2020 to RMB1,191.2 million in 2021, and increased to RMB1,266.1 million (US\$183.6 million) in 2022. Our adjusted EBITDA increased from RMB2,680.6 million in 2020 to RMB3,703.4 million in 2021, and increased to RMB4,251.4 million (US\$616.4 million) in 2022. As of December 31, 2020, 2021 and 2022, our accumulated deficit was RMB2,723.6 million, RMB3,910.8 million and RMB5,179.7 million (US\$751.0 million), respectively.

Our Business Model

Our core business operations entail the planning and sourcing of new data centers, developing such facilities, securing customer commitments, providing our colocation and managed services to customers, and maintaining high levels of service and customer satisfaction to develop and maintain long-term relationships with our customers. We focus on developing and operating what we refer to as high-performance data centers. These are data centers that feature large net floor area and power capacity, high power density and efficiency, and multiple redundancy across all critical systems.

Sourcing

Our strong customer and industry relationships offer us insight into the size, timing, and location of future demand which is reflected in our data center capacity development plan. Based on this insight, we aim to secure land and buildings in Tier 1 markets, together with the required power capacity and regulatory approvals, including energy quota under the energy conservation review opinion, for future development commensurate with anticipated demand for our services. Our in-house team begins sourcing potential sites a few years in advance of planned development. We source new data center capacity by: (i) acquiring or leasing property which we develop for use as data center facilities, whether through constructing on greenfield land, redeveloping brownfield sites, converting existing industrial buildings, or fitting out and equipping purpose-built building shells; (ii) leasing existing data center capacity from third-party wholesale providers; and (iii) acquiring high-performance data centers from other companies.

Regardless of the source of our data center capacity, we ensure that the facilities meet the high-performance standards required by our target customers.

Construction

After procuring greenfield or brownfield sites or existing industrial buildings or purpose-built building shells, we design and, through cooperation with developers, contractors, and suppliers, build out the facility to achieve our advanced design and high technical specifications.

We take a modular approach to developing, commissioning, equipping and fitting out of facilities, so that we can cater to a range of customer requirements with regard to redundancy, power density, cooling, rack configuration and other technical specifications. In addition, by taking a modular approach, we are able to phase our capital expenditures related to equipping and fitting out individual computer rooms in accordance with proven sales demand or contractual delivery commitments to customers.

Marketing

We usually commence marketing new data center facilities before we commence construction by seeking strong indications of interest from customers. We aim to convert such indications of interest into pre-commitment agreements for a substantial part of the capacity under development as early as possible in the construction cycle. Such pre-commitments typically come from anchor customers who require largescale capacity, such as hyperscale cloud service providers and large internet companies. Through securing such pre-commitments, we are able to reduce investment risk and optimize resource planning. We had pre-commitment rates of 77.4%, 61.3% and 71.5% as of December 31, 2020, 2021 and 2022, respectively. Once construction is complete, and the data center enters service, we re-categorize area pre-committed as area committed. We aim to maintain high commitment rates for each of our data centers.

Due to the strength of customer demand, for certain sites, we deliberately do not seek pre-commitments, in order to reserve sufficient capacity for our financial institution and large enterprise customers who typically procure with a shorter lead time once data centers are in service. This also helps to ensure that we have sufficient capacity available to fulfill the anticipated expansion requirements of strategic customers who we are already serving in the same location. As a result of this sales approach, some of our data centers under construction and in service have lower pre-commitment and commitment rates, respectively.

Delivery

Once construction is complete, and the data center enters service, we re-categorize area under construction as area in service.

Anchor customers with largescale commitments typically move in over a period of 12 to 24 months, whereas financial institutions and large enterprise customers typically move in over a period of three to six months. The longer move-in period for anchor customers is due to the larger scale of their deployments and operational models, under which they increase utilization of committed data center capacity in multiple phases and in line with the increasing load on their IT systems. During such move-in periods, customers have the right to use part or all of the services for which they have committed. They are billed for the amount of services they actually use, subject to a minimum billable amount as stated in the sales agreements. Such minimum billable amount typically steps up over time. Customers are usually not allowed to terminate their sales agreements before the end of the move-in period. See “Our Business—Our Customers—Sales Agreements.” The portion of area committed by customers which is revenue generating is referred to as area utilized. As a result of the flexibility granted to customers to use part or all of the services during the move-in period, some of our data centers have lower utilization rates.

Commitment and Utilization Rates

Our business model provides us with high levels of revenue visibility due to the long-term nature of our customer agreements and substantial backlog. Backlog is defined as area committed or pre-committed by customers but yet to be utilized (total area committed minus area utilized at the end of each period). As of December 31, 2020, 2021 and 2022, we had backlog of 203,369 sqm, 237,347 sqm and 260,168 sqm, respectively. The increase in backlog across these periods was primarily due to higher levels of customer commitments and pre-commitments. We endeavor to provide high levels of customer service, support, and satisfaction to maintain long-term customer relationships and high rates of agreement renewals for our services. Our average quarterly churn rate was 0.8%, 0.4% and 0.5% for the years ended December 31, 2020, 2021 and 2022, respectively.

For our in-service data centers, we aim to maintain high levels of long-term commitment and utilization rates. We had commitment rates for our area in service of 94.6%, 93.8% and 95.5% as of December 31, 2020, 2021 and 2022, respectively. We had utilization rates for our area in service of 70.3%, 65.5% and 71.8% as of December 31, 2020, 2021 and 2022, respectively. The difference between commitment rate and utilization rate is primarily attributable to customers who have not yet fully utilized all the revenue-generating services for which they have committed. Until the end of the move-in period, the area committed is not fully categorized as area utilized.

Due to the typical time lag for move-in, the continual expansion of our data center capacity, and the high proportion of anchor customers with largescale commitments, we expect that our utilization rate will continue to lag behind our commitment rate. For data centers that have been in operation for a longer period of time, the commitment rate and utilization rate will tend to converge, as customers have fully moved in.

Our Data Centers

Our data centers are largescale, highly reliable and highly efficient facilities that provide a flexible, modular and secure operating environment in which our customers can house, power and cool the computer systems and networking equipment that support their mission-critical IT infrastructure. We install large power capacity, together with engineering technologies to optimize PUE, enabling our customers to deploy their IT infrastructure more efficiently and reduce their operating and capital costs.

In 2022, we commenced construction of 6 new self-developed data centers and multiple phases of 2 existing data centers. As of December 31, 2022, we had an aggregate net floor area under construction of 192,713 sqm, 71.5% of which was pre-committed. In 2022, we completed construction and brought into service 5 new self-developed data centers and second phase of 1 existing self-developed data center with a total net floor area of 29,323 sqm. As of December 31, 2022, we had an aggregate net floor area in service of 515,787 sqm, this capacity was 95.5% committed and 71.8% utilized.

The following table presents certain information relating to our data center portfolio as of December 31, 2022:

(Sqm)		Area in service	Area under construction	Area held for future development
Location				
Mainland China	Beijing - Tianjin - Hebei	234,627	80,661	27,966
	Yangtze River Delta	167,513	36,406	115,262
	Greater Bay Area ⁽¹⁾	80,450	28,223	94,200
	Chengdu - Chongqing	18,988	4,190	38,005
	Other	13,066	2,800	29,368
International	Hong Kong	—	14,501	14,482
	Southeast Asia	1,145	25,933	10,000
Total		515,787	192,713	329,283
Type				
Self-developed		439,314	189,273	329,283
B-O-T		68,910	3,440	—
Third party		7,563	—	—
Total		515,787	192,713	329,283

(1) Greater Bay Area excludes self-developed data centers in Hong Kong, but includes 3rd party data centers in Hong Kong and Macau.

As of December 31, 2022, our total area committed was 630,716 sqm, of which 492,832 sqm and 137,884 sqm related to data centers in service and data centers under construction, respectively.

Self-Developed Data Centers

As of December 31, 2022, we operated 86 self-developed data centers with an aggregate net floor area of 508,224 sqm in service. As of the same date, we also had an aggregate net floor area of 192,713 sqm under construction. In total, we have 103 self-developed data centers in service and under construction. In addition, we had an estimated aggregate developable net floor area of approximately 329,283 sqm held for potential future development.

High-Performance Features. Our self-developed data centers generally feature:

- **High Availability.** Approximately 90% of our self-developed data center capacity in service and under construction is equipped with 2N redundant and the remaining is equipped with distributed redundant N+1 delivery paths for power system. Either 2N or distributed N+1 redundancy entails significant additional up-front investment and decreases the yield of net floor area in a building of a given size. Combining 2N or distributed N+1 redundant power system, N+1 concurrent maintainable cooling system and other critical systems to operate our facilities to meet the highest standards, we are able to satisfy the requirements of the most demanding customers for housing their mission-critical IT infrastructure.
- **High Power Density.** Our self-developed data center capacity in service has an average power density of approximately 2.17 kW/sqm while our self-developed data center capacity of under construction has an average power density of approximately 2.39 kW/sqm. High power density must be incorporated into the data center design from inception and entails increased development cost per sqm of net floor area. By installing high power density, we enable our customers to deploy their IT infrastructure more efficiently and to optimize their IT infrastructure performance. This is of particular importance to hyperscale cloud service provider and large internet customers as it reduces their IT investment and operating costs.

- *High Power Efficiency.* Our self-developed data centers are designed to achieve high power efficiency, which is expressed conversely by a low PUE ratio. In 2022, our self-developed data centers with IT power usage of 30% or above had an average PUE of around 1.29. High power efficiency reduces operating costs, for the benefit of our customers and ourselves, and reduces our carbon footprint. A low PUE ratio is of particular importance to hyperscale cloud service provider and large internet customers who have the most demanding performance targets.

In addition to the high-performance features described above, our data centers provide flexible fit-out, sufficient floor load bearing strength and clear slab-to-slab height to support dense deployment of IT hardware, multiple layers of physical security, early fire detection monitoring and fire suppression systems, diverse connectivity, and other amenities.

We believe that this combination of high availability, high power density, high power efficiency and other features enables us to serve the most sophisticated and demanding users of data center services who seek cost efficient solutions for their requirements, without compromise on performance across multiple operating parameters.

Types of Data Centers. We have a diversified and flexible approach to developing our data center portfolio. We categorize our self-developed data centers into the following two types:

- *Purpose-Built.* Purpose-built data centers are facilities which are designed and constructed specifically for use as data centers. Our purpose-built facilities comprise those that we design ourselves and for which we directly oversee the construction and fit out, as well as certain of the facilities that we lease or have acquired from third parties. In addition, our build-operate-transfer data centers are also purpose-built data centers. Build-operate-transfer data centers are facilities which are located in other locations to fulfill the broader requirements of our strategic customers. We undertake B-O-T projects through wholly-owned vehicles, as well as through the joint ventures which we are establishing with GIC. The projects are typically greenfield developments on the customer's own campus. Purpose-built and build-operate-transfer facilities represented approximately 51.8% by aggregate net floor area of our self-developed data centers in service and under construction as of December 31, 2022.
- *Converted.* Conversion involves repurposing existing industrial buildings for use as data centers. We undertake conversions in order to fulfill demand where time-to-market and site opportunity do not allow us to purpose-build. We carefully select such buildings based on their suitability for use as data centers. We design and construct to the same high technical specifications as our purpose-built data centers, so as to ensure that the end product is of a comparable standard. Converted facilities represented approximately 48.2% by aggregate net floor area of our self-developed data centers in service and under construction as of December 31, 2022.

Data Center Tenure. We hold our self-developed data center buildings either through direct ownership or lease. In China, land cannot be owned outright, but is secured through land use rights. For data center buildings which we own, we have the right to use the underlying land for up to 50 years, which is the longest permissible period, plus ownership of the buildings and other fixed assets comprising the data center. In Hong Kong, almost all the land is leasehold land leased from the Hong Kong government. The tenure of the relevant government leases for the two parcels of brownfield land where HK1 and HK2 are located that were purchased by us in 2018 and 2019 respectively will expire in June 2047 and the residue of the term of years of the relevant government leases is approximately 25 years. In Malaysia, the land parcel where NTP1, NTP2 and NTP3 are located is all freehold land. In the “free trade zone” of Batam, Indonesia, where the land parcel acquired in Nongsa, or Nongsa Land, is located, land is technically leased from the governing authority. Our ownership of Nongsa Land is represented by “right to build” and “license to use” permits from the relevant authorities. The residue of the term of these permits is around 21 years as they expire on January 2044. For data centers that we lease, we enter into long-term leases with the owners of the building generally for periods of 15 to 20 years, which is the longest permitted lease period under PRC law. However, in the case of the build-operate-transfer projects which we have undertaken to date, where the owner of the building shell is our customer, the lease term is usually ten years.

Our owned facilities and leased facilities (including B-O-T projects) represented approximately 40.1% and 59.9% respectively by aggregate net floor area of our self-developed data centers in service and under construction as of December 31, 2022.

Stage of Development. We categorize our data centers, and the corresponding net floor area, according to the following stages of development:

- *In Service.* Data centers are categorized as in service once the construction of the building is complete, critical systems have been installed, the facility has passed rigorous integrated system testing, government approvals for operation are obtained, and one or more computer rooms have been fully equipped and fitted out ready for utilization by customers. Once this stage has been reached, we categorize the entire net floor area of the data center (or phase of a data center) as area in service, including the net floor area of computer rooms, if any, which may require additional capex for equipping and fitting out prior to utilization by customers.
- *Under Construction.* Data centers are categorized as under construction once we have secured control of the site, obtained the necessary construction and other permits, established the design, and building and engineering works are in progress. We also categorize data centers as under construction when the shell and core are being developed by the building landlord under certain circumstances. We usually construct our data centers in a single phase. However, in some cases, we construct data centers in several distinct phases for reasons such as optimal design, sales plan, and timing of activation of power supply. When we successfully secure pre-commitments from customers, we calculate pre-commitment rate based on the area under construction.
- *Held for Future Development.* Area held for future development consists of the estimated data center net floor area that we have secured for potential future development by different means, including greenfield and brownfield land which we have acquired or which we expect to acquire pursuant to binding framework agreements with local governments, building shells which we have purpose-built on land which we own, and existing buildings for which we have entered into agreements in connection with the acquisition or lease with the intention of converting or redeveloping into data centers, but which are not actively under construction. Our in-house team begins sourcing potential greenfield and brownfield land several years in advance of planned delivery. We begin construction of a facility from six months to over two years in advance of planned delivery, depending on the complexity of the project. The developable net floor area estimates are subject to a number of contingencies and uncertainties.

Self-Developed Data Centers in Service: The following table sets forth additional details concerning our portfolio of self-developed data centers in service as of December 31, 2022:

Market	Data center ⁽¹⁾	Date ready for service (HHYY)	Type	Tenure	Area in service (sqm)	Area committed (sqm)	Commitment rate ⁽²⁾	Area utilized (sqm)	Utilization rate ⁽³⁾	
Beijing - Tianjin - Hebei	BJ1	2H15	Convert	Lease	2,435	2,427	99.7 %	2,368	97.3 %	
	BJ2	2H17	Convert	Lease	5,819	5,327	91.5 %	4,240	72.9 %	
	BJ3	2H17	Convert	Lease	3,144	3,144	100.0 %	3,021	96.1 %	
	BJ4	1H19	Convert	Lease	4,695	3,688	78.6 %	3,410	72.6 %	
	BJ5	1H19	Convert	Lease	13,366	13,243	99.1 %	13,159	98.4 %	
	BJ6	2H19	Convert	Lease	5,965	5,585	93.6 %	5,076	85.1 %	
	BJ7	2H20	Convert	Lease	10,246	10,240	99.9 %	3,911	38.2 %	
	BJ8	1H21	Convert	Lease	10,383	10,383	100.0 %	5,816	56.0 %	
	BJ9	2H19	Convert	Lease	8,029	7,326	91.2 %	6,778	84.4 %	
	BJ10	1H20	Convert	Lease	6,440	6,440	100.0 %	6,057	94.0 %	
	BJ11	1H20	Convert	Lease	6,832	6,832	100.0 %	6,505	95.2 %	
	BJ12	1H20	Convert	Lease	7,016	7,016	100.0 %	6,492	92.5 %	
	BJ13 Phase 1	2H22	Purpose-Built	Own	5,499	5,499	100.0 %	—	0.0 %	
	BJ15	1H21	Convert	Lease	19,166	19,166	100.0 %	17,824	93.0 %	
	BJ16	2H21	Convert	Lease	8,678	8,678	100.0 %	2,787	32.1 %	
	BJ17	2H21	Purpose-Built	Own	1,849	1,849	100.0 %	1,835	99.2 %	
	BJ18	2H21	Purpose-Built	Own	1,849	1,849	100.0 %	1,830	99.0 %	
	BJ20	2H21	Convert	Own	2,507	406	16.2 %	181	7.2 %	
	BJ21	2H21	Convert	Own	3,347	3,347	100.0 %	1,646	49.2 %	
	BJ22	2H21	Convert	Own	3,321	3,321	100.0 %	448	13.5 %	
	BJ23	2H21	Convert	Own	2,457	—	0.0 %	—	0.0 %	
	LF1	2H19	Convert	Lease	4,949	4,949	100.0 %	4,949	100.0 %	
	LF2	2H20	Convert	Lease	5,458	5,458	100.0 %	4,915	90.1 %	
	LF3	1H21	Purpose-Built	Own	11,868	11,868	100.0 %	4,955	41.8 %	
	LF4 Phase 1	2H21	Purpose-Built	Own	6,921	6,921	100.0 %	2,753	39.8 %	
	LF5 Phase 1	1H22	Purpose-Built	Own	7,606	7,606	100.0 %	804	10.6 %	
	LF6	1H20	Convert	Lease	3,787	3,787	100.0 %	3,667	96.8 %	
	LF7	1H20	Convert	Lease	5,558	5,558	100.0 %	3,762	67.7 %	
	LF8	2H20	Convert	Lease	2,670	2,670	100.0 %	2,449	91.7 %	
	LF9	1H21	Convert	Lease	10,820	10,820	100.0 %	2,916	27.0 %	
	LF10	1H21	Purpose-Built	B-O-T	10,456	10,456	100.0 %	7,719	73.8 %	
	HL1 Phase 1	1H21	Purpose-Built	B-O-T	3,440	3,440	100.0 %	3,350	97.4 %	
	TJ1 Phase 1	2H21	Purpose-Built	Own	6,432	4,010	62.3 %	3,112	48.4 %	
	ZB1	1H18	Purpose-Built	B-O-T	5,132	5,132	100.0 %	4,870	94.9 %	
	ZB2	2H18	Purpose-Built	B-O-T	4,662	4,662	100.0 %	4,407	94.5 %	
	ZB3	2H18	Purpose-Built	B-O-T	4,662	4,662	100.0 %	4,412	94.6 %	
	ZB4	1H20	Purpose-Built	B-O-T	4,012	4,012	100.0 %	3,812	95.0 %	
	Yangtze River Delta	SH1	2H11	Purpose-Built	Lease	6,432	6,080	94.5 %	5,875	91.3 %
		SH2	2H15	Purpose-Built	Lease	7,712	7,702	99.9 %	7,268	94.2 %
		SH3	2H16	Purpose-Built	Lease	7,950	7,860	98.9 %	7,774	97.8 %
SH4		2H17	Purpose-Built	Lease	8,395	8,260	98.4 %	7,966	94.9 %	
SH5		1H18	Convert	Lease	2,062	1,898	92.1 %	1,830	88.8 %	
SH6		2H18	Purpose-Built	Lease	7,620	6,179	81.1 %	5,322	69.8 %	
SH7		2H19	Purpose-Built	Lease	6,366	5,743	90.2 %	3,825	60.1 %	
SH8		2H18	Convert	Lease	4,924	4,719	95.8 %	4,556	92.5 %	
SH9		1H19	Convert	Lease	3,330	3,330	100.0 %	3,330	100.0 %	
SH10		1H19	Convert	Lease	3,745	3,745	100.0 %	3,616	96.5 %	
SH11		1H18	Convert	Lease	4,515	4,515	100.0 %	3,781	83.8 %	
SH12		1H21	Purpose-Built	Lease	3,567	2,660	74.6 %	45	1.3 %	
SH13		2H20	Convert	Lease	6,634	4,715	71.1 %	3,073	46.3 %	
SH14 Phase 1		2H20	Convert	Own	7,000	7,000	100.0 %	6,855	97.9 %	
SH15		2H20	Convert	Lease	1,587	1,587	100.0 %	1,507	95.0 %	
SH16		2H20	Purpose-Built	Own	3,736	3,452	92.4 %	2,185	58.5 %	
SH17 Phase 1		1H21	Convert	Own	5,472	5,472	100.0 %	1,380	25.2 %	
SH17 Phase 2		2H21	Convert	Own	6,123	6,123	100.0 %	4,040	66.0 %	
SH18 Phase 1		2H22	Convert	Own	7,501	5,574	74.3 %	960	12.8 %	
SH19 Phase 1		2H20	Convert	Lease	7,984	7,984	100.0 %	5,402	67.7 %	
KS1		2H10	Purpose-Built	Own	6,546	6,466	98.8 %	6,164	94.2 %	
KS2		1H20	Purpose-Built	Own	7,771	7,771	100.0 %	7,308	94.0 %	
KS3		2H20	Purpose-Built	Own	7,410	7,410	100.0 %	6,911	93.3 %	
CS1 Phase 1		2H21	Purpose-Built	Own	5,992	5,992	100.0 %	1,992	33.3 %	
CS2 Phase 1		2H21	Purpose-Built	Own	2,866	2,866	100.0 %	2,118	73.9 %	
CS2 Phase 2		1H22	Purpose-Built	Own	2,866	2,866	100.0 %	868	30.3 %	
NT1		2H19	Purpose-Built	B-O-T	3,888	3,888	100.0 %	3,792	97.5 %	
NT2		1H20	Purpose-Built	B-O-T	3,888	3,888	100.0 %	3,701	95.2 %	
NT3		2H20	Purpose-Built	B-O-T	3,917	3,917	100.0 %	3,721	95.0 %	
NT4		1H21	Purpose-Built	B-O-T	4,650	4,650	100.0 %	3,738	80.4 %	
NT5		1H21	Purpose-Built	B-O-T	4,650	4,650	100.0 %	3,220	69.2 %	
Greater Bay Area		SZ1	2H14	Convert	Lease	4,286	4,273	99.7 %	4,261	99.4 %
		SZ2	1H16	Convert	Lease	4,308	4,308	100.0 %	2,154	50.0 %
	SZ3	2H16	Convert	Lease	2,678	2,534	94.6 %	2,485	92.8 %	
	SZ4	2H17	Convert	Lease	4,678	4,222	90.3 %	4,128	88.2 %	
	SZ5	2H19	Convert	Lease	20,583	20,583	100.0 %	19,950	96.9 %	
	SZ6	2H19	Convert	Lease	2,133	—	0.0 %	—	0.0 %	
	SZ8	2H21	Convert	Lease	2,494	2,432	97.5 %	1,711	68.6 %	
	SZ9	2H21	Convert	Lease	2,217	2,217	100.0 %	871	39.3 %	
	GZ1	1H16	Convert	Lease	6,548	6,537	99.8 %	6,468	98.8 %	
	GZ2	2H17	Convert	Lease	6,131	6,131	100.0 %	6,101	99.5 %	
	GZ3	2H19	Purpose-Built	Lease	11,071	11,071	100.0 %	11,025	99.6 %	
	GZ6	2H19	Convert	Lease	6,608	5,729	86.7 %	5,005	75.7 %	
	HY1	1H21	Purpose-Built	B-O-T	3,888	3,888	100.0 %	—	0.0 %	
	Chengdu - Chongqing	CD1	1H17	Purpose-Built	Own	6,262	5,958	95.1 %	4,039	64.5 %
		CD2 Phase 1	2H18	Purpose-Built	Own	8,250	8,250	100.0 %	4,938	59.8 %
		CQ1 Phase 1	1H22	Purpose-Built	Own	4,451	4,451	100.0 %	352	7.9 %
WH1 Phase 1		1H22	Convert	Lease	1,400	1,400	100.0 %	1,235	88.2 %	
Other (China)	UL1	1H20	Purpose-Built	B-O-T	3,889	3,889	100.0 %	3,698	95.1 %	
	UL2	1H21	Purpose-Built	B-O-T	3,889	3,889	100.0 %	3,550	91.3 %	
	UL3	2H21	Purpose-Built	B-O-T	3,889	3,889	100.0 %	2,521	64.8 %	

(1) We are developing our BJ13, LF4, LF5, HL1, TJ1, SH14, SH17, SH18, SH19, CS1, CS2, CD2, CQ1 and WH1 data centers in phases. The categorization of data centers by stage of development is applied to each phase of the BJ13, LF4, LF5, HL1, TJ1, SH14, SH17, SH18, SH19, CS1, CS2, CD2, CQ1 and WH1 project.

- (2) The ratio of area committed to area in service.
(3) The ratio of area utilized to area in service.

As of December 31, 2022, 26.7% of our self-developed area in service was in data center buildings which we own and 73.3% was in data center buildings which we lease.

Apart from the current lease period for our SZ2 data center, which expires in May 2025, in the above table, no other self-developed data center that is leased has a remaining lease period of less than five years. The lease agreement for the SZ2 data center provides that, in the event that the lessee notifies the lessor of the lessee's request to renew the lease within three months prior to the expiration of the foregoing lease term, the lessor will be obligated to renew the lease on the same terms for another five years as long as the rental fee is not lower than the recent highest rental fee under the existing agreement, and not higher than the average rent of similar buildings in the area where the lease property is located. For self-developed data center buildings leased from third parties, we have entered into long-term leases with the owners of the buildings generally for periods of 15 to 20 years, which is the longest permitted lease period under PRC law.

Self-Developed Data Centers Under Construction. The following data table presents certain information relating to our self-developed data centers under construction as of December 31, 2022:

Market	Data center ⁽¹⁾	Estimated date ready for service (HHYY)	Type	Tenure	Area under construction (sqm)	Area pre-committed (sqm)	Pre-commitment rate ⁽²⁾
Beijing - Tianjin - Hebei	BJ13 Phase 2	2024	Purpose-Built	Own	8,404	8,404	100.0 %
	BJ14 Phase 1	2024	Purpose-Built	Own	8,140	8,140	100.0 %
	BJ14 Phase 2	1H23	Purpose-Built	Own	4,050	4,050	100.0 %
	BJ14 Phase 3	2024	Purpose-Built	Own	2,774	—	0.0 %
	LF4 Phase 2	2024	Purpose-Built	Own	7,416	7,416	100.0 %
	LF5 Phase 2	2025 & Beyond	Purpose-Built	Own	7,167	2,893	40.4 %
	LF11	2024	Convert	Lease	2,345	2,345	100.0 %
	LF12	2025 & Beyond	Convert	Lease	2,660	2,660	100.0 %
	LF13 Phase 1	2H23	Purpose-Built	Own	5,672	5,672	100.0 %
	LF13 Phase 2	2024	Purpose-Built	Own	5,672	5,672	100.0 %
	LF14	2025 & Beyond	Purpose-Built	Own	6,904	6,904	100.0 %
	LF15 Phase 1	2H23	Purpose-Built	Own	9,034	9,034	100.0 %
	HL1 Phase 2	2025 & Beyond	Purpose-Built	B-O-T	3,440	3,440	100.0 %
	TJ1 Phase 2	2024	Purpose-Built	Own	6,984	3,797	54.4 %
Yangtze River Delta	SH14 Phase 2	2025 & Beyond	Convert	Own	4,040	—	0.0 %
	SH17 Phase 3	2H23	Convert	Own	7,280	6,268	86.1 %
	SH19 Phase 2	2024	Convert	Lease	4,826	—	0.0 %
	KS4	2025 & Beyond	Convert	Lease	3,500	—	0.0 %
	CS1 Phase 2	2025 & Beyond	Purpose-Built	Own	5,028	5,028	100.0 %
	CS2 Phase 3	2H23	Purpose-Built	Own	5,732	5,732	100.0 %
Greater Bay Area	CS3 Phase 1	2025 & Beyond	Purpose-Built	Own	6,000	6,000	100.0 %
	SZ10	1H23	Convert	Lease	1,601	625	39.0 %
	SZ11 Phase 1	2024	Convert	Lease	3,545	—	0.0 %
	SZ11 Phase 2	2025 & Beyond	Convert	Lease	3,545	—	0.0 %
	GZ4	2025 & Beyond	Convert	Lease	7,000	—	0.0 %
	HZ1 Phase 1	2024	Convert	Lease	6,267	6,267	100.0 %
Chengdu – Chongqing	HZ1 Phase 2	2025 & Beyond	Convert	Lease	6,267	6,267	100.0 %
	CQ1 Phase 2	2025 & Beyond	Purpose-Built	Own	4,190	—	0.0 %
Other (China)	WH1 Phase 2	2025 & Beyond	Convert	Lease	2,800	—	0.0 %
Hong Kong	HK1 Phase 1	1H23	Purpose-Built	Own	2,797	2,797	100.0 %
	HK1 Phase 2	2H23	Purpose-Built	Own	4,264	2,541	59.6 %
	HK2	2024	Purpose-Built	Own	7,440	—	0.0 %
Southeast Asia	NTP1	2H23	Purpose-Built	Own	8,718	8,718	100.0 %
	NTP2	2H23	Purpose-Built	Own	8,718	8,718	100.0 %
	NTP3	2024	Purpose-Built	Own	8,497	8,497	100.0 %

- (1) We are developing our BJ13, BJ14, LF4, LF5, LF13, LF15, HL1, TJ1, SH14, SH17, SH19, CS1, CS2, CS3, SZ11, HZ1, CQ1, WH1 and HK1 data centers in phases. The categorization of data centers by stage of development is applied to each phase of the BJ13, BJ14, LF4, LF5, LF13, LF15, HL1, TJ1, SH14, SH17, SH19, CS1, CS2, CS3, SZ11, HZ1, CQ1, WH1 and HK1 project.
(2) The ratio of area pre-committed divided by the area under construction.

As of December 31, 2022, 75.2% of our self-developed area under construction was in data center buildings which we own and 24.8% was in data center buildings which we lease.

Self-Developed Data Center Capacity Held for Future Development. We have also secured data center capacity that we classify as held for future development. We have acquired land and entered into binding framework agreements with local governments for further land acquisitions, and we have entered into agreements in connection with the acquisition and lease for buildings which could potentially be developed into data centers with an estimated aggregate developable net floor area of approximately 329,283 sqm as of December 31, 2022.

The following table presents certain information relating to our self-developed data centers held for future development as of December 31, 2022:

Market		Area Held For Future Development (sqm)
Mainland China	Beijing - Tianjin - Hebei	27,966
	Yangtze River Delta	115,262
	Greater Bay Area	94,200
	Chengdu - Chongqing	38,005
	Other	29,368
International	Hong Kong	14,482
	Southeast Asia	10,000
	Total	329,283

Third-Party Data Centers

In addition to operating and providing services in our self-developed data centers, we also provide data center services with respect to net floor area that we lease from third-party data center providers on a wholesale basis and use to provide colocation and managed services to our customers. For this kind of facility, we typically enter into leases for fixed terms of three to ten years. As of December 31, 2022, we operated capacity at approximately 20 third-party data centers with an aggregate net floor area of 7,563 sqm in service.

The third-party data centers where we lease capacity on a wholesale basis were not purpose-built or converted according to our design and technical specification. However, on a selective basis, we may carry out improvement work at third-party data centers in order to attain the performance levels required to serve our customers. In particular, one of our third-party data centers is a facility in which we leased increasing amounts of space over time, so that we now lease the entire data center. As we accumulated leased data center capacity in the data center over time, and we never conducted any comprehensive conversion or repurposing of the facility, we continue to categorize that data center as a third-party data center.

B-O-T Joint Venture Data Centers

In August 2019, we entered into a strategic cooperation framework agreement with GIC, Singapore's sovereign wealth fund, to develop and operate hyperscale B-O-T data centers for a strategic customer on a joint venture basis. According to the agreement, we will own 10% equity interest in the joint venture asset companies and GIC will own 90%. In parallel with the framework agreement, we also signed a memorandum of understanding with the same strategic customer to develop and operate seven B-O-T data centers.

In September 2021, we entered into a new master joint venture investment agreement with GIC, pursuant to which the two parties will form joint ventures for the investment and development of hyperscale B-O-T data centers for several customers. According to the new agreement, we will own 51% equity interests in the joint venture asset companies and GIC will own 49%. We will continue to provide management and operation services to the joint ventures and earn recurring service fees. As of December 31, 2022, we completed the sale of a 49% equity interests of the project company of HL1 Phase 1 data center and UL1 data center to GIC, as the first two B-O-T joint venture data centers pursuant to the new master joint venture investment agreement.

As of December 31, 2022, we had 68,910 sqm net floor area relating to 15 B-O-T data centers in service, 100% of which were committed, and 3,440 sqm net floor area relating to second phase of 1 existing B-O-T data center under construction, 100% of which was pre-committed. Apart from HL1 Phase 1 and UL1, two B-O-T joint venture data centers of which we currently own 51% and GIC owns 49%, we still hold 100% of the equity interests in the project companies holding all the other B-O-T data centers as of December 31, 2022.

Lease Agreements Relating to Our Data Centers

We enter into leases in connection with our self-developed data centers. In addition, certain third-party data centers in which we lease capacity on a wholesale basis are subject to property lease agreements. Under relevant PRC laws and regulations, lease agreements are required to be registered or filed with the relevant housing authorities. Among the data centers that we lease, including those under construction, the majority of the lease agreements have not been filed with relevant authorities in accordance with the applicable PRC laws and regulations. The failure to register or file the lease will not affect the legal validity of the lease agreements but may subject us to fines. In order to address the situations where the relevant leases have not been registered by the lessors, we have communicated with the relevant lessors with regard to completing the registration of the relevant lease agreements to the extent practicable. However, there is no guarantee that the lessors will respond to our requests or take remedial action with regard to the lack of registration and filing, and we, or the third-party lessors, may be liable if timely rectifications are not made. A portion of any such losses will be recoverable from the lessors according to the terms of certain of the lease agreements. See “Item 3. Key Information— D. Risk Factors—Risk Factors Relating to Our Business and Industry—Our failure to comply with regulations applicable to our leased data center buildings may materially and adversely affect our ability to use such data centers.”

Our Services

We offer a broad range of services including colocation services and managed services, which includes managed hosting services and managed cloud services. We also provide certain other services, including consulting services. We primarily provide colocation services to cloud service providers while we provide both colocation services and managed services to all other customers.

Colocation Services

We offer our customers a highly secure, reliable and fault-tolerant environment in which to house their servers and related IT equipment. Our core colocation services primarily comprise the provision of critical facilities space, customer-available power, racks and cooling. Our customers have several choices for hosting their servers, networking and storage equipment. They can place their equipment in a shared or private space that can be customized to their requirements. We offer a variety of power options to suit individual customer requirements, including high power density racks. In some instances, colocation customers will request that we provide IT equipment for their use in our data centers. In such cases, we will sell such IT equipment to the colocation customer.

Our data centers are high-performance, with high availability, high power density and high power efficiency, which combination is critical to satisfying the most demanding needs of hyperscale customers. Our IT infrastructure platform of interconnected data centers is located strategically in and around Tier 1 markets, enabling high performance while lowering network latency and connectivity costs. Our ecosystem has attracted all leading public cloud service providers to our platform and thereby offers value to enterprises that have hybrid clouds or need to connect to cloud service providers.

We design and build our facilities using a modular approach, which involves an innovative construction method using pre-fabrication technology to shorten development time, improve quality control and achieve costs savings. This approach provides a flexible and efficient solution to meet the growing demands of modern cloud-based platforms and customers.

Managed Services

Managed Hosting Services. Our managed hosting services comprise a broad range of value-added services, covering each layer of the data center IT value chain. Our suite of managed hosting services includes business continuity and disaster recovery, or BCDR, solutions, network management services, data storage services, system security services, operating system services, database services and server middleware services. Our managed hosting services are tailored to meet the specific objectives of individual customers. We help our customers reduce their costs, re-engineer existing processes, improve the quality of service delivery and realize a better return on their investment.

Our network management services help our customers to design and maintain their private network systems. Our data storage services provide storage architecture design and customization for specific requirements. Our system security services include identity and access control, firewall management, intrusion protection and vulnerability protection services. Our operating system services provide pro-active administration, management, monitoring and reporting across a wide range of operating systems. Our database services provide database customization and performance tuning operation, administration and monitoring services across a range of database platforms. Our server middleware services provide customization and performance tuning services across a range of platforms. We also offer consulting services for customers who request additional know-how and guidance relating to disaster recovery and other aspects of our managed hosting services. Our managed hosting services are provided on a continuous basis over the term of the agreement.

Managed Cloud Services. The adoption of cloud computing continues to rise and has become a key element of IT strategy for enterprises globally. We believe that our data centers are well-suited for the hosting of cloud platforms. As a result, we have succeeded in attracting most of the largest cloud service providers in China to collocate their public cloud platforms in our data centers.

The presence of major public cloud platforms in our data centers enables us to offer our enterprise customers direct private connection to high capacity cloud resources of their choosing across our network infrastructure. We are able to provide such services at minimal incremental cost, while enabling our customers to enjoy a number of critical operational benefits as a result, such as high reliability, high flexibility, and high efficiency. We also assist our enterprise customers to access cloud resources by providing and reselling public cloud services offered by major cloud service providers, including certain of our major customers. This has the added benefit of assisting our cloud service provider customers with their route to market.

Large enterprises are increasingly deploying a combination of multiple private, hosted, or public cloud services, a configuration known as hybrid cloud. While this configuration can provide enterprises with greater flexibility, scalability, security and cost efficiency, it also presents new challenges in integrating and operating multiple systems. Leveraging our long track record as a provider of IT managed services, we are developing an innovative service platform to assist our enterprise customers to integrate and control every aspect of their hybrid cloud computing environment across their private servers and one or more public cloud service providers. In addition, we offer consulting services for customers who request additional know-how and assistance concerning the implementation of cloud-based solutions, such as migration from physical to cloud-based hosting. As part of the offering, we also provide our customers with cloud resources.

Data Center Sourcing and Development

We believe that the size, location, and quality of our facilities are key to maintaining our competitiveness. We apply the same rigor to the process of sourcing, design and construction as we do to our operations. We have a substantial in-house team dedicated to sourcing, feasibility analysis, technical design, costing and project management. The process is comprised of the following steps:

- *Planning and Sourcing.* Our strong customer and industry relationships, combined with our data center presence in key markets in each region and direct sales force, afford us insight into the size, timing, and location of future demand. We incorporate this insight into a multi-year resource plan for our key markets. Our in-house team begins sourcing potential sites a few years in advance of planned delivery. We seek to secure sites both in close proximity to central business districts or to areas where there is a concentration of enterprise operations centers so as to satisfy the location preferences of our target customer segments. We consider both greenfield sites when available, and also existing industrial buildings suitable for conversion. We require security of tenure for a minimum of ten years. Our team works closely with local government authorities to obtain necessary permits and approvals, including energy quota under the energy conservation review opinion, and with telecommunications carriers to ensure multi-carrier connectivity to our data centers. We generally seek to secure sites that can support a net floor area of at least 5,000 sqm per data center building and sufficient power capacity to fulfill the requirements of the customer segments which we expect to serve in the facility.
- *Design and Construction.* We undertake the technical design, specification and costing in-house as we believe that these are important to ensuring the data center meets our strategic requirements. This also enables us to achieve a high level of design standardization. We continuously study new engineering and technologies to maintain an advanced design. Our in-house team also takes responsibility for construction project management, which includes scheduling, vendor selection, procurement, budget control and cost analysis, and quality supervision and assurance. We believe that these elements are important to ensure the project is completed on time, within budget and to the required quality standard. We begin construction of a facility from six months to over two years in advance of planned delivery, depending on the complexity of the project.
- *Commissioning and Fit Out.* After the shell and core of a building are completed, we work with our contractors and suppliers to make the data center ready for service. This involves: (i) obtaining necessary operating permits and approvals; (ii) equipping and fitting out the critical facilities area for utilization by customers; and, (iii) pre-operational testing, also referred to as commissioning, to ensure that the facility is fully functioning and capable of providing the required service levels. We have a team dedicated to testing and commissioning before operations commence.

Operations

We have separate teams for data center operations and service delivery. Our data center operations team is responsible for directing, coordinating and monitoring the daily operation of our data center facilities. Our service delivery team is responsible for delivery of the services which we provide to customers on a 24/7 basis. Our teams are deployed in regional operations centers, as well as on site, in order to provide two layers of management and support. We outsource part of the above operations and service delivery, primarily on-site security, cleaning and greening service, part of the 24/7 on duty operations and IT and customer service delivery to reputable third-party service providers.

We undertake in-house all technical functions which impact data center performance, including floor planning, equipment lifecycle management, optimizing data center efficiency, surveillance of the critical facilities environment and network performance, incident response management and rectification. We also undertake in-house substantially all activities which have a direct bearing on customers, including support for setting up customer IT equipment, remote hands services, outsourced IT operations, incident and compliance reporting, and response to customer requests.

We have developed a proprietary Data Center Operation Management Platform which provides real-time information on many aspects of data center operating performance and enables us to streamline our data center management processes. We have also developed robust operating procedures, protocols and standards which enable us to meet or exceed the performance and quality levels specified in our service level agreements, or SLAs, with the most sophisticated customers. We have been certified ISO9001, ISO20000 and ISO27001 for more than ten years, and received certification for ISO 22301 in September 2016. We also received certification for ISO 14001, ISO 45001, ISO 50001 in November 2020. As of December 31, 2022, we had 26 data centers awarded with Management and Operations, or M&O, Approved Site awards by the Uptime Institute, an unbiased advisory organization focused on improving the performance, efficiency, and reliability of business-critical infrastructure. In 2018, we signed a three-year framework contract with the Uptime Institute to support continuous verification of operation and maintenance capabilities of our data centers. At the same time, in order to verify the unified regional operation and management capability based on our Data Center Operation Management Platform, the Uptime Institute also awarded the regional “M&O Approved Site” to GDS. We believe that our standard of data center operations, which reflects our history and culture as an IT service provider, set us apart from many data center service providers in China.

Our Customers

We had two customers that generated 26.3% and 20.5% of our total net revenue, respectively, in 2020. We had two customers that generated 23.7% and 22.2% of our total net revenue, respectively, in 2021. We had two customers that generated 25.1% and 19.9% of our total net revenue, respectively, in 2022. No other customer accounted for 10% or more of our total net revenue during those periods.

We consider our customers to be the end users of our services because: (i) we are selected as vendor by our end users; (ii) we negotiate and agree all aspects of the sales agreements with our end users, including scope of work, pricing and other commercial terms, design, specification, and customization of the parts of the facility which they will use, delivery schedule, and extensive service level parameters; (iii) we work directly with our end users on the delivery, installation, cabling, testing, operation, and monitoring of their IT systems; and (iv) we generally reconcile with our end users the amount of services (including net floor area and power) which they have used and the financial amount billable for each billing period. We may enter into sales agreements directly with our customers or, at the customer’s request, provide services to our customers through agreements with intermediate contracting parties, such as the major PRC telecommunications carriers. We understand our customers may request us to provide services to them through the major PRC telecommunications carriers for commercial reasons. When a PRC telecommunications carrier acts as an intermediate contracting party, we bill them and collect cash payment from them. We have long-standing relationships with all the major PRC telecommunications carriers who are both intermediate contracting parties for the sale of our services to our customers, as well as partners providing network services to our customers and, to a significantly lesser extent, end users of our services.

As of December 31, 2022, we served 830 customers, including hyperscale cloud service providers and large internet companies, a diverse community of PRC and foreign financial institutions as well as telecommunications carriers and IT service providers and large domestic private sector and multinational corporations, many of which are leaders in their respective industry verticals. We host the largest PRC and global public cloud platforms operating in China, some of which are present in multiple GDS data centers.

Our cloud service provider, large internet, financial institution and enterprise customers accounted for 63.1%, 24.8% and 12.1% of our total area committed as of December 31, 2022, respectively. Our two largest customers accounted for 37.7% and 14.6%, respectively, of our total area committed as of December 31, 2022. No other customer accounted for 10% or more of our total area committed as of that date.

The following table presents the total area committed of our top five customers, all of which are cloud service providers or large internet companies, as of December 31, 2022:

End User Customer	Total area committed (sqm) ⁽¹⁾	Total area committed (%)
Customer 1	237,986	37.7 %
Customer 2	92,043	14.6 %
Customer 3	34,177	5.4 %
Customer 4	32,004	5.1 %
Customer 5	25,324	4.0 %

(1) Includes data center area for which we have entered into non-binding agreements or letters of intent, or have received other confirmations from, certain customers.

We endeavor to establish strategic relationships with key customers, particularly hyperscale cloud service providers and large internet companies who have large data center capacity requirements and who can help enhance the value of our data center ecosystem.

Sales Agreements

Contract Term

A substantial majority of our sales agreements are for multi-year service periods. Agreements with our cloud service provider and large internet customers typically have service periods of three to ten years, while agreements with our financial institution and enterprise customers typically have service periods of one to five years. The service period starts either on a date specified in the sales agreement, or within a specific time period when the data center is ready for the customer's use and the customer has accepted delivery in accordance with the provisions of the sales agreements.

Pricing Structure

We have two main pricing structures depending on the preferences of individual customers. Most of our sales agreements with our cloud service provider and large internet customers have unbundled pricing. Under such pricing structure, we charge our customers for the right to use a specific amount of net floor area, power capacity and other services. In addition to which, we also charge our customers based on the actual amount of power which they consume. Unbundled pricing is often expressed as a price per square meter or a price per kilowatt for the right of use and a price per kilowatt/hour for power consumed. Most of our sales agreements with our financial institution and large enterprise customers have bundled pricing. Under such pricing structure, we charge our customers for the right to use a specific amount of net floor area, power capacity and other services, without any additional charge for power consumed as long as their actual power usage does not exceed a stated limit. Bundled pricing is often expressed as a price per rack or cabinet. Under both unbundled and bundled structures, the unit price which we charge per square meter, per kilowatt, per rack or cabinet is generally fixed over the term of the sales agreement, except for permitted adjustments when input power tariffs change. We do not usually charge any fee for reserving or committing capacity prior to the commencement of the service period.

Move-in Period

Commencing at the start of the service period our sales agreements typically provide for a flexible move-in period. During such period, customers have the right to use part or all of the services for which they have committed. They are billed for the amount of services they actually use, subject to a minimum billable amount as stated in such sales agreements. Such minimum billable amount typically steps up over time. Our sales agreements with anchor customers with largescale commitments typically allow for a move-in period of 12 to 24 months, whereas our sales agreements with financial institutions and large enterprise customers typically allow for a move-in period of three to six months.

Contract Renewal and Termination

Most of our sales agreements provide for automatic renewal at the end of the service period, subject to mutual agreement of renewal terms.

Many of our sales agreements give customers the option of early termination after the end of the move-in period, subject to a notice period of one to six months and payment by the customer of specified costs and penalties. In certain cases, we are entitled to a substantial amount of early termination damages equivalent to up to 12 months' service fee, in addition to payment for our services already provided before such early termination. Customers may also terminate the sales agreements if we fail to perform the contracted services. In this circumstance, customers are generally required to notify us of their intention to terminate and to allow us a period of time to rectify any service failure.

Our average quarterly churn rate was 0.8%, 0.4% and 0.5% for the years ended December 31, 2020, 2021 and 2022, respectively.

In 2022, we were notified by one of our major customers that they were going to move out of several of our data centers in Beijing, which we believe is a major churn event. We expect this churn will occur in 2023. See "Risk Factors—Risks Relating to Our Business and Industry—Our net revenue is highly dependent on a limited number of customers, and the loss of, or any significant decrease in business from, any one or more of our major customers could adversely affect our financial condition and results of operations."

Billing

We generally bill customers on a monthly or quarterly basis in arrears. On a monthly basis, we recognize revenue as service is rendered in the period. As we are billing in arrears, this results in unbilled receivables between the time when we have the unconditional right to the consideration for the services we provided to our customers (i.e. billable revenue) and the time when we actually bill our customers. Once we issue the bill at the end of the monthly or quarterly billing period, it becomes a billed receivable and then we collect cash payment. This is a recurring cycle and it is common in businesses which provide services on a long-term contract basis, recognizing revenue as services are rendered and billing in arrears. We have a very low incidence of doubtful accounts and write-offs. See "Risk Factors—Risks Relating to Our Business and Industry—If we fail to manage effectively or collect our accounts receivable, our results of operations, financial condition and liquidity may be adversely affected." During the years ended December 31, 2020, 2021 and 2022, we recorded RMB2.0 million, RMB10.1 million and RMB9.9 million (US\$1.4 million) of allowance for doubtful accounts, respectively.

Customer Satisfaction

We endeavor to provide high levels of customer service, support, and satisfaction. We interact regularly with our customers to receive their feedback and continuously improve. In 2022, we engaged third-party research firm NielsenIQ to conduct a client satisfaction survey. NielsenIQ conducted their survey from November 28, 2022 to January 6, 2023. The survey used quota sampling, computer assisted telephone interviews, and in-depth interviews. It covered our company's business users in an array of industries. The survey collected feedback from 289 business users. The average client satisfaction score was 9.619 out of 10. The net promoter score was 88%.

Our Suppliers

Our five largest suppliers accounted for less than 70% of our purchases in our operating expenditures for each of the three years ended December 31, 2020, 2021 and 2022; and none of them individually accounted for more than 30% of our annual purchases for the year ended December 31, 2020 and one of them accounted for more than 30% but less than 40% of our annual purchase for the year ended December 31, 2021 and one of them accounted for more than 40% but less than 50% of our annual purchase for the year ended December 31, 2022.

Sales and Marketing

Sales. Our sales activities are mainly conducted through our direct sales force. We organize our direct sales force into four geographic regions, Northern China, Southern China, Eastern China and South-western China. We incentivize our sales force to meet their annual targets through performance-based bonuses. For new customers, our sales cycle typically begins with creating a sales plan for a particular region or industry and then identifying new customers in these regions or industries. We also receive referrals from our vendors and other relationships, and often our reputation attracts customers to our services without any directed sales efforts. For our existing customers, our sales team focuses on identifying upsell opportunities.

Many of our customer agreements are won through a competitive bidding process. For new customers, the bidding process begins with evaluation of the potential customer's requirements. We formulate a service proposal based on these requirements. Our team representing multiple departments prepares a proposal to meet the required service scope and level. We negotiate the agreement and service details.


Marketing. To support our sales effort and to actively promote our brand, we conduct wide-ranging marketing programs. Our marketing strategies include active public relations and ongoing customer communications programs. We participate in a variety of IT industry and financial services industry conferences and workshops to raise awareness about the value of data center services. We also build our brand recognition by participating in industry and government workshops and industry standard-setting bodies, such as the China National Institute of Standardization Committee on Disaster Recovery for Information Systems.

Innovation, Technology and Intellectual Property

We employ a modular approach to developing, commissioning, equipping and fitting out our data center facilities. This approach allows us to cater to a range of customer requirements with regard to redundancy, power density, cooling, rack configuration and other technical specifications. The modular approach is an innovative construction technique designed to shorten the development timeline and lower costs, as advocated by leading industry participants. Additionally, we are adopting innovative pre-fabrication technology to further shorten the development period in order to meet the requirements for increasingly larger scale data centers. We were able to develop these innovative approaches as a result of having established and grown our own in-house data center design and construction project management capability, the experience gained through executing a hyperscale development program over multiple years, and by leveraging the know-how of certain of our international strategic partners.

We operate our data center facilities using a proprietary Data Center Operation Management Platform that was almost entirely developed in-house. It provides real-time monitoring of key operational metrics, allowing for greater efficiency of data center management processes. In addition, we have self-developed additional operational enhancement tools and technologies including robots, AI and smart buildings. This system was developed based on our proprietary know-how in customer service and the operation of data centers.

As of December 31, 2022, we had 176 registered computer software copyrights and 139 trademark registrations in China, 1 trademark registration outside China and 48 pending trademark applications in China, 105 pending trademark applications outside China, including registered trademarks for “万国数据” “GDS” and , our figure trademark. As of December 31, 2022, we had 112 patents granted and 78 patent applications in mainland China, 7 patent applications outside China and had registered 17 domain names, including *gds-services.com*.

We rely on a combination of copyright, trademark, trade secrets and other intellectual property laws, nondisclosure agreements and other measures to protect our intellectual property, such as our proprietary storage and management system, for which we have registered a copyright. We also promote protection through contractual prohibitions, such as requiring our employees to enter into confidentiality and non-compete agreements which are applicable to selected employees. We derive most our revenues in China and use , our figure trademark, in a majority of our services. We have registered the figure trademark in China in several categories that cover our service areas and we plan to register the figure trademark in China in certain additional categories. We have also registered the pure text of “GDS” as a trademark in several categories that cover our services areas, however, a third party has also registered the pure text of “GDS” as a trademark in certain IT-related services. It is our belief, based on our industrial experience, that our business is different from the services for which the third party registered its trademark. Nevertheless, since the services for which the third party’s trademark is registered are also IT-related and could be deemed as similar to ours to some extent, we cannot assure you that a government authority or court will hold the same view with us that such similarity will not cause confusion in the market. In such a case, if we are to use the pure text of GDS as our trademark, we may be required to explore the possibility of acquiring this trademark, or entering into an exclusive licensing agreement with the third party, which will cause us to incur additional cost. See “Item 3. Key Information—D. Risk Factors—Risk Factors Relating to Our Business and Industry—We may be subject to third-party claims of intellectual property infringement.”

Seasonality

Our business is not materially affected by seasonality.

Insurance

We maintain various insurance policies to safeguard against risks and unexpected events. We have in place insurance coverage up to a level which we consider to be reasonable and which covers the type of risks usually insured by companies on the same or similar types of business as ours in China. Our insurance broadly falls under the following categories: construction and installation, work interruption expense due to public health event, business interruption for lost profits, property and casualty, public liability, cyber security liability, directors and officers liability, employer liability and commercial employee insurance.

Competition

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer.

We compete on the basis of our data center quality, operating track record and differentiated managed service capabilities.

We primarily compete with other carrier-neutral data center service providers, including:

- *Domestic carrier-neutral data center service providers.* We compete with domestic carrier-neutral data center service providers with a presence in some of our markets. We believe that we are well-positioned in terms of our operational track record and our ability to: deliver high-performance data center services in all key markets; maintain consistently high facility and service quality; continue capacity expansion in all key markets to accommodate growing demand; and provide differentiated managed service offerings with a unique value proposition.
- *International carrier-neutral data center service providers.* We compete to a lesser extent with foreign carrier-neutral data center service providers. We believe that we distinguish ourselves by our larger capacity and more extensive market presence across the key economics hubs in China, deep operating knowledge and long track record in the China market, and long-term relationships with the telecommunications carriers.

We also face competition from the state-owned telecommunications carriers, namely China Telecom, China Unicom and China Mobile. One of the main purposes for which these carriers develop data centers is in order to facilitate the sale of related telecommunications network services. In locations outside of the key economic hubs, these three carriers may sometimes be the only available provider of data center services. We distinguish ourselves from these carriers because we are carrier-neutral, enabling our customers to connect within our facilities with all three carriers based on their cost and/or network and application requirements. Although we compete with carriers for colocation customers, our customers also rely on the connectivity that carriers provide. We believe that we also have a mutually beneficial relationship with these carriers since our data center services often help carriers attract more customers for their telecommunications services.

In 2021, we launched our Southeast Asia business to develop data centers in strategic locations in and around Singapore to better serve our customers' requirements in the region. Competition in these markets include domestic Chinese and international carrier-neutral data center service providers, as well as domestic Chinese and global telecommunications carriers. We believe our first-mover advantage in having secured capacity in close proximity to Singapore and our strong customer relationships differentiate us from our competitors in the region. We believe that we also have a mutually beneficial relationship with domestic Chinese and international carriers since our data center services often help attract more customers for their telecommunications services.

Risk Management and Internal Control

We have established risk management and internal control systems consisting of policies and procedures that we consider to be appropriate for our business operations. We described these risk management and internal control systems in our 2020 ESG report, which is accessible via hyperlink in our press release, Exhibit 99.1 to our Form 6-K (File No. 001-37925), furnished to the SEC on November 30, 2021. See “—Environmental and Operational Sustainability Initiatives” for more information regarding our 2020 ESG report.

Information Security Risk Management

We have formulated cyber security management policies and guidelines, based on the ISO 27001 information security management and ISO 27701 privacy information management standard, to provide a framework for the protection of our information security and all valuable information, data and intellectual property within our company.

We have established a corporate information security committee to oversee our information security, and under the committee we have established several sub-committees to manage relevant topics. We conduct internal and external information security audits on an annual basis. We also invite independent third-party auditors to conduct information security risk assessments on an ad hoc basis.

We have adopted and published a privacy policy on our website that explains how we collect, use, share and protect personal information. We sign confidentiality agreements with all our employees, customers and suppliers to prevent unauthorized disclosure of information. We also regularly conduct trainings and inspections under the supervision of our management to strengthen information security.

Anti-corruption Risk Management

We have anti-corruption compliance policies in place that clearly define requirements for our employees, vendors and suppliers to comply with applicable laws and regulations and act with integrity.

Business Continuity

We have established a plan and management system to ensure the continuity of our business. We conduct impact analyses of our business and our customer engagements to identify resources necessary for each line of our business and its potential risks.

As part of our business continuity plan, we have adopted an emergency operating procedure to mitigate potential disruptions from power outages, fires or floods, typhoons, other natural disasters and public health events. We conduct an emergency drill on an annual basis and evaluate our performance during the drill to further improve our procedure. We also regularly conduct trainings with relevant personnel to ensure their preparedness to manage emergency situations and handle potential contingencies.

In order to ensure the availability of our power supplies, energy transmission as well as fire prevention and detection systems, we implement a monthly operating and inspection plan and annual maintenance plan for relevant equipment.

Environmental and Operational Sustainability Initiatives

We published our second annual ESG report in December 2022, wherein we explain our progress in 2021 toward fulfilling our ESG commitments. For more information, please refer to our 2021 ESG report, which is accessible via hyperlink in our press release, Exhibit 99.1 to our Form 6-K (File No. 001-37925), furnished to the SEC on December 1, 2022.

We plan to publish our 2022 ESG report later this year, which will describe our 2022 ESG performance and initiatives. Below is a summary of 2022 ESG highlights:

Environmental. In 2022, over 35% of our electricity consumption was from renewable energy sources. The renewable energy we used includes renewable energy direct purchase and renewable energy certificates. Our self-developed data centers with an IT power usage of 30% or more had an average PUE of around 1.29. As of December 31, 2022, 34 of our self-developed data centers have been recognized and awarded sustainability related certifications by leading domestic and global organizations.

Social. In 2022, 27% of our mid to senior level management staff, 37% senior level management staff and 18% of our board of directors were women. Average training hours per employee per year was 36.4. The annual employee turnover rate was 14.1%.

Governance. In 2022, 100% of our employees received compliance and anticorruption training. 100% of our employees received cyber security training. We established an ESG management framework and sustainability committee.

Employees

We aim to provide our employees with a fair and transparent career development platform, with training opportunities available to all employees. We adopt “growth mindset” and use 3E (Experience, Exposure and Education) as our main development methodology to provide a wide range of orientations for new hires, on-job training, internal and external knowledge sharing, formal professional training, job related certification and others. We had approximately 1,479, 1,878 and 2,185 employees as of December 31, 2020, 2021 and 2022, respectively. The following table sets forth the number of our employees by function as of December 31, 2022:

	<u>Number of Employees</u>	<u>% of Total</u>
Colocation services	1,558	71.30 %
Managed services	145	6.64 %
Sales and marketing	110	5.03 %
Management, finance and administration	372	17.03 %
Total	<u>2,185</u>	<u>100.00 %</u>

To maintain the highest level of service, employee training and certification is essential to ensure that our employees meet and exceed industry requirements. Many of our engineering employees have received training and certifications from globally recognized IT service organizations, such as IBM AS/400 certifications, CCIE Safety Certified qualifications, VMware VCP and CISP Certificates.

We pay most of our employees a base salary and performance-based bonuses and provide welfare and other benefits required by law. In addition, we provide some of our employees with share-based compensation to align their interests more closely with our shareholders. We believe that our compensation and benefits packages are competitive within our industry. We have not had any labor disputes that materially interfered with our operations and we believe that our employee relations are good.

We also outsource certain operations, primarily on-site security, cleaning and greening service, part of the 24/7 on duty operations and IT and customer service delivery to reputable third-party service providers.

Facilities

Our headquarters are located at F4/F5, Building C, Sunland International, No. 999 Zhouhai Road, Pudong, Shanghai 200137, People's Republic of China. We also have regional offices in Suzhou, Beijing, Chengdu, Shenzhen, Guangzhou, Hong Kong, Singapore and Malaysia.

As of December 31, 2022, our offices were located on leased premises totaling approximately 12,250 sqm across China, Singapore and Malaysia. We lease our office premises from third parties.

There was no single property interest of our Group that formed part of non-property activities had a carrying amount of 15% or more of our Group's total assets as of December 31, 2022. Pursuant to section 6(2) of the Hong Kong Companies (Exemption of Companies and Prospectuses from Compliance with Provisions) Notice, this document is exempted from compliance with the requirement of section 342(1)(b) of the Companies (WUMP) Ordinance in relation to paragraph 34(2) of the Third Schedule to the Companies (WUMP) Ordinance, which requires a valuation report with respect to all of our interests in land or buildings.

Legal Proceedings

We may become subject to legal proceedings, investigations and claims incidental to the conduct of our business from time to time.

On August 2, 2018, a securities class action lawsuit was filed against GDS Holdings Limited, our Chief Executive Officer Mr. Huang, and our Chief Financial Officer Mr. Daniel Newman (collectively, "Defendants") by Hamza Ramzan, a GDS shareholder in the United States District Court for the Eastern District of Texas. The complaint purports to assert claims on behalf of a class comprising purchasers of GDS's ADS shares during the proposed class period from March 29, 2018 to July 31, 2018. On October 26, 2018 the Court appointed GDS shareholder Yuanli He as the lead plaintiff in the lawsuit, and on December 24, 2018 plaintiffs filed a consolidated amended complaint. The amended complaint alleged, among other things, that GDS made material misstatements and omissions in its 2017 Form 20-F Annual Report with respect to the commitment rate and utilization rate at GDS's GZ1 data center, and inflated the purchase prices for its acquisitions of the GZ2, GZ3, and SZ5 data centers. The complaint alleged violations of Section 10(b) of the U.S. Exchange Act, 15 U.S.C. § 78j(b), and Rule 10b-5 promulgated thereunder by the SEC, against all Defendants and also alleged control person claims under Section 20(a) of the U.S. Exchange Act against our Chief Executive Officer Mr. Huang and our Chief Financial Officer Mr. Daniel Newman. The complaint sought, among other relief, class certification of the lawsuit, unspecified damages, prejudgment and postjudgment interest, costs and expenses. On February 22, 2019, Defendants filed a motion to dismiss the amended complaint in the United States District Court for the Eastern District of Texas and, alternatively, to transfer venue to the United States District Court for the Southern District of New York. On September 30, 2019, the court granted Defendants' motion to transfer the case to the United States District Court for the Southern District of New York. Defendants then moved to dismiss the action in the United States District Court for the Southern District of New York on December 6, 2019. On April 7, 2020, the court granted Defendants' motion and dismissed the action in its entirety against all Defendants. On May 6, 2020, plaintiffs filed a notice of appeal of that decision. On June 29, 2020, plaintiffs voluntarily withdrew their appeal, resulting in the dismissal of the case against all Defendants with prejudice.

Other than as described above, we are not currently a party to, nor are we aware of, any legal proceeding, investigation or claim which, in the opinion of our management, could have a material adverse effect on our business, financial condition or results of operation.

Regulatory Matters

People's Republic of China Regulations

The following is a summary of the material laws and regulations or requirements that affect our business activities in China or the rights of our shareholders to receive dividends and other distributions from us.

Our internet data center businesses are classified as VATS by the PRC government. Current PRC laws, rules and regulations restrict foreign ownership of companies that engage in telecommunications-related businesses, including the provision of VATS. As a result, we operate our internet data center businesses through the VIEs and their subsidiaries, each of which is ultimately owned by PRC citizens and certain of which hold the licenses associated with these businesses. As the development of the internet and telecommunications industry in China is still 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 “Item 3. Key Information—D. Risk Factors—Risk Relating to Doing Business in the People’s Republic of China.”

Regulations Relating to Foreign Investment and Wholly Foreign Owned Enterprises

The establishment, operation and management of corporate entities in the PRC are governed by the *PRC Company Law*, which was promulgated by the SCNPC on December 29, 1993, became effective on July 1, 1994 and was subsequently amended on December 25, 1999, August 28, 2004, October 27, 2005, December 28, 2013 and October 26, 2018. The PRC Company Law generally governs two types of companies, namely limited liability companies and joint stock limited companies, each a limited liability company or a joint stock limited company being an enterprise legal person and liable for its debts with all its assets. The PRC Company Law shall also apply to foreign-invested companies in the form of limited liability companies or joint stock limited companies, except otherwise set out in any other regulations. On March 15, 2019, the National People’s Congress adopted the 2019 PRC Foreign Investment Law, which became effective on January 1, 2020 and replaced three existing laws regulating foreign investment in China, namely, the Wholly Foreign-Invested Enterprise Law of the PRC, the Sino-Foreign Cooperative Joint Venture Enterprise Law of the PRC and the Sino-Foreign Equity Joint Venture Enterprise Law of the PRC, together with their implementation rules and ancillary regulations. On December 26, 2019, the State Council issued the Regulations on Implementing the 2019 PRC Foreign Investment Law, which became effective on January 1, 2020, and replaced the Regulations on Implementing the Sino-Foreign Equity Joint Venture Enterprise Law of the PRC, Provisional Regulations on the Duration of Sino-Foreign Equity Joint Venture Enterprise Law, the Regulations on Implementing the Wholly Foreign-Invested Enterprise Law of the PRC, and the Regulations on Implementing the Sino-Foreign Cooperative Joint Venture Enterprise Law of the PRC. The 2019 PRC Foreign Investment Law embodies 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.

Pursuant to the 2019 PRC Foreign Investment Law, foreign investment means the investment activities within the PRC directly or indirectly conducted by foreign natural persons, enterprises, and other organizations, or the foreign investor, including the following circumstances: a foreign investor acquires any shares, equities, portion of property, or other similar interest in an enterprise within the PRC. The PRC applies the administrative system of pre-establishment national treatment plus negative list to foreign investment. Where a foreign investor invests in a field prohibited from investment by the Negative List (2021), the competent department shall order cessation of investment activity, disposition of shares and assets or adoption of other necessary measures during a specified period, and restoration to the state before investment; and its illegal income, if any, shall be confiscated. Where the investment activity of a foreign investor violates any special administrative measure for restrictive access as set out in the Negative List (2021), the competent department shall order the investor to take corrective action during a specified period and adopt necessary measures to meet the requirements of the special administrative measure. Where the investment activity of a foreign investor violates the Negative List (2021), it shall be otherwise subject to corresponding legal liabilities under the applicable law.

According to *Measures for Reporting of Information on Foreign Investment*, promulgated by the MOFCOM and the SAMR on December 30, 2019 and became effective on January 1, 2020, foreign investors or foreign-invested enterprises shall submit their investment information to the competent commerce authorities through the enterprise registration system and the National Enterprise Credit Information Publicity System. Market regulators shall post the aforesaid investment information submitted by foreign investors and foreign-invested enterprises to competent commerce authorities in a timely manner. When submitting the initial report, a foreign investor shall submit the information including but not limited to basic enterprise information, the information on the investor and the actual controller thereof, and investment transaction information. Where any information in the initial report changes, a foreign-invested enterprise shall submit the report of changes through the enterprise registration system. Where a foreign investor or a foreign-invested enterprise fails to submit the investment information as required, and fails to resubmit or correct such information after being notified by the competent commerce authority, the competent commerce authority shall order it to make corrections within 20 business days; in case that it fails to make corrections within the specified period, the competent commerce authority shall impose a fine of not less than RMB100,000 but not more than RMB300,000, or a fine of RMB300,000 to RMB500,000 if other severe violations exist simultaneously.

On December 19, 2020, the NDRC and the MOFCOM jointly promulgated the *Measures on the Security Review of Foreign Investment*, effective on January 18, 2021, setting forth provisions concerning the security review mechanism on foreign investment, including the types of investments subject to review, review scopes and procedures, among others. The Office of the Working Mechanism of the Security Review of Foreign Investment, or the Office of the Working Mechanism, will be established under the NDRC, which will lead the task together with the MOFCOM. Foreign investor or relevant parties in China must declare the security review to the Office of the Working Mechanism prior to (i) the investments in the military industry, military industrial supporting and other fields relating to the security of national defense, and investments in areas surrounding military facilities and military industry facilities; and (ii) investments in important agricultural products, important energy and resources, important equipment manufacturing, important infrastructure, important transport services, important cultural products and services, important information technology and Internet products and services, important financial services, key technologies and other important fields relating to national security, and obtain control in the target enterprise. Control exists when the foreign investor (i) holds over 50% equity interests in the target, (ii) has voting rights that can materially impact on the resolutions of the board of directors or shareholders meeting of the target even when it holds less than 50% equity interests in the target, or (iii) has material impact on target's business decisions, human resources, accounting and technology.

Regulation on Foreign Investment Restrictions

Investment activities in the PRC by foreign investors are principally governed by the *Industry Catalog Relating to Foreign Investment*, or the Catalog, which was promulgated and is amended from time to time by the MOFCOM and the NDRC. The Catalog divides industries into three categories: encouraged, restricted and prohibited. Industries not listed in the Catalog are generally deemed as constituting a fourth "permitted" category and open to foreign investment unless specifically restricted by other PRC regulations. Industries such as VATS, including internet data center services, are restricted to foreign investment.

On December 27, 2021, the MOFCOM and the NDRC promulgated the *Special Management Measures (Negative List) for the Access of Foreign Investment*, or the Negative List (2021), which became effective on January 1, 2022. The Negative List (2021) expands the scope of industries in which foreign investment is permitted by reducing the number of industries that fall within the Negative List (2021). Foreign investment in value-added telecommunications services (other than e-commerce, domestic multi-party communications, store-and-forward and call center), including internet data center services, still falls within the Negative List (2021).

According to the *Administrative Regulations on Foreign-Invested Telecommunications Enterprises* issued by the State Council on December 11, 2001 and amended on September 10, 2008, February 6, 2016 and March 29, 2022 respectively, foreign-invested value-added telecommunications enterprises must be in the form of a Sino-foreign equity joint venture. The regulations restrict the ultimate capital contribution percentage held by foreign investor(s) in a foreign-invested value-added telecommunications enterprise to 50% or less, except as otherwise provided by the state.

According to the Mainland China and Hong Kong Closer Economic Partnership Arrangement entered into by the MOFCOM and the Financial Department of Hong Kong on June 29, 2003 and the Mainland and Macau Closer Economic Partnership Arrangement entered into by the MOFCOM and the Department of Economy and Finance of Macau on October 17, 2003 together with their supplemental agreements, services providers from Hong Kong and Macau are permitted to set up foreign-invested enterprises in the form of a Sino-foreign equity joint venture in mainland to provide five types of specific VATS, including internet data center services, and the ultimate capital contribution percentage held by the services provider from Hong Kong and Macau is restricted to 50% or less.

On July 13, 2006, the MIIT issued the Circular of the Ministry of Information Industry on Strengthening the Administration of Foreign Investment in Value-added Telecommunications Business, or the MIIT Circular, according to which, a foreign investor in the telecommunications service industry in China must establish a foreign invested enterprise and apply for a telecommunications businesses operation license. The MIIT Circular further requires that: (i) PRC domestic telecommunications business enterprises must not, through any form, lease, transfer or sell a telecommunications businesses operation license to a foreign investor, or provide resources, offices and working places, facilities or other assistance to support the illegal telecommunications services operations of a foreign investor; (ii) value-added telecommunications business enterprises or their shareholders must directly own the domain names and trademarks used by such enterprises in their daily operations; (iii) each value-added telecommunications business enterprise must have the necessary facilities for its approved business operations and to maintain such facilities in the regions covered by its license; and (iv) all VATS providers are required to maintain network and internet security in accordance with the standards set forth in relevant PRC regulations. If a license holder fails to comply with the requirements in the MIIT Circular and cure such noncompliance, the MIIT or its local counterparts have the discretion to take measures against such license holder, including revoking its value-added telecommunications business operation license.

On June 29, 2021, the MIIT promulgated the Circular on Deepening the Reform of the “Separation of Certificates and Licenses,” according to which the prior examination and approval of foreign investment in value-added telecommunications services is cancelled nationwide, and the corresponding examination of foreign investment will be included during the process of the issuance of VATS licenses.

In light of the above restrictions and requirements, we conduct our value-added telecommunications businesses through the VIEs and their subsidiaries.

Regulations Related to Value-Added Telecommunications Business

Among all of the applicable laws and regulations, the *Telecommunications Regulations of the People’s Republic of China*, or the Telecom Regulations, promulgated by the State Council on September 25, 2000 and amended on July 29, 2014 and February 6, 2016 respectively, is the primary governing law, and sets out the general framework for the provision of telecommunications 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 VATS.

The Telecom Catalogue was issued as an attachment to the Telecom Regulations to categorize telecommunications services as either basic or value-added. The Telecom Catalogue amended on December 28, 2015 (which took effect from March 1, 2016 and was further amended on June 6, 2019), or the 2015 Telecom Catalogue, categorizes internet data centers, online data and transaction processing, on-demand voice and image communications, domestic internet virtual private networks, message storage and forwarding (including voice mailbox, e-mail and online fax services), call centers, internet access and online information and data search, among others, as VATS. The “internet data center” business is defined under the 2015 Telecom Catalogue as a business that (i) uses relevant infrastructure facilities in order to render outsourcing services for housing, maintenance, system configuration and management services for clients’ internet or other network related equipment such as servers, (ii) provides the leasing of equipment, such as database systems or servers, and the storage space housing the equipment and (iii) provides lease agency services of connectivity lines and bandwidth of infrastructure facilities and other application services. Also, internet resources collaboration services business is incorporated into the definition of internet data center business under the 2015 Telecom Catalogue, and defined as “the data storage, internet application development environment, internet application deployment and running management and other services provided for users through internet or other networks in the manners of access at any time and on demand, expansion at any time and coordination and sharing, by using the equipment and resources built on database centers.” Under the 2015 Telecom Catalogue, “fixed network domestic data transmission services” is categorized as a basic telecommunications business and defined as “a domestic end-to-end data transfer business by wired mode under fixed-net, except for the internet data transfer business,” and the “domestic internet virtual private networks service” is categorized as a value-added telecommunications business and defined as “a customization business of internet closed user group network for domestic users by self-owned or leased internet network resources of the operators and adopting TCP/IP agreement.”

On March 1, 2009, the MIIT promulgated the *Administrative Measures for Telecommunications Business Operating License*, or the original Telecom License Measures, which took effect on April 10, 2009. The original Telecom License Measures set forth the types of licenses required to provide telecommunications services in China and the procedures and requirements for obtaining such licenses. With respect to licenses for value-added telecommunications businesses, the original Telecom License Measures distinguish between licenses for business conducted in a single province, which are issued by the provincial-level counterparts of the MIIT and licenses for cross-regional businesses, which are issued by the MIIT. The licenses for foreign invested telecommunications business operators need to be applied with MIIT. An approved telecommunications services operator must conduct its business in accordance with the specifications stated on its telecommunications business operating license. Pursuant to the original Telecom License Measures, cross-regional VATS licenses shall be approved and issued by the MIIT with five-year terms. On July 3, 2017, the MIIT issued the Telecom License Measures, which took effect on September 1, 2017 and replaced the original Telecom License Measures. The changes mainly include among others, (i) the establishment of a telecommunications business integrated management online platform; (ii) provisions allowing the holder of a telecommunications business license (including the IDC license) to authorize a company, of which such license holder holds at least 51% of the equity interests indirectly, to engage in the relevant telecommunications business; and (iii) the cancellation of the requirement of an annual inspection of telecommunications business licenses, instead, requiring license holders to complete an annual report.

On November 30, 2012, the MIIT issued the Circular of the Ministry of Industry and Information Technology of the People's Republic of China on Further Standardizing the Market Access-related Work for Businesses Concerning Internet Data Centers and Internet Service Providers which clarifies the application requirements and verification procedures for the licensing of IDC and internet service provider, or ISP, businesses and states that entities intending to engage in the IDC or ISP business could apply for a license since December 1, 2012.

On May 6, 2013, the Q&A was published on the website of China Academy of Information and Communications Technology. The Q&A, although not an official law or regulation, is deemed by the market as a guideline in practice which reflected the attitude of MIIT as to the application for VATS licenses, especially as to IDC services.

To comply with the above restrictions and requirements, among others, GDS Beijing has obtained a cross-regional value-added telecommunications license which permits it to provide data center services, including internet resources collaboration services, across 14 cities in China: Beijing, Chengdu, Shanghai, Shenzhen, Suzhou, Guangzhou, Zhangjiakou, Langfang, Tianjin, Huizhou, Wulanchabu, Nantong, Wuhan and Chongqing. GDS Shanghai has obtained a cross-regional value-added telecommunications license which permits it to provide data center services across five cities in China: Beijing, Chengdu, Shanghai, Shenzhen and Suzhou, and GDS Suzhou has obtained a cross-regional value-added telecommunications license which permits it to provide data center services across 44 cities in China which can be divided into three categories: (i) data center services (including internet resources collaboration services), including Beijing, Tianjin, Zhangjiakou, Langfang, Dalian, Mudanjiang, Shanghai, Suzhou, Jiaying, Yichang, Guangzhou, Shenzhen, Haikou, Chongqing, Chengdu and Lanzhou; (ii) data center services without internet resources collaboration services, including Changzhou, Nantong, Yancheng, Jinhua, Taizhou, Xiaogan, Wuhan, Zhuhai, Zhaoqing, Huizhou and Heyuan; and (iii) data center services limited to internet resources collaboration services, including Taiyuan, Wulanchabu, Changchun, Hefei, Fuzhou, Nanchang, Jinan, Zhengzhou, Changsha, Nanning, Guiyang, Kunming, Lhase, Xian, Xining, Yinchuan and Urumqi.

On January 17, 2017, the MIIT issued the Circular of the Ministry of Industry and Information Technology on Clearing up and Regulating the Internet Access Service Market, or the 2017 MIIT Circular, according to which the MIIT determined to clear up and regulate the internet access service market nationwide from the issuance date of the 2017 MIIT Circular until March 31, 2018. The 2017 MIIT Circular provides, among others, that (i) an enterprise that holds the corresponding telecom business license, including the relevant VATS license, shall not provide, in the name of technical cooperation or other similar ways, qualifications or resources to any unlicensed enterprises for their illegal operation of the telecom business, (ii) if an enterprise with its IDC license obtained prior to the implementation of 2015 Telecom Catalogue effective on March 1, 2016, has actually carried out internet resources collaboration services, it shall make a written commitment to its original license issuing authority before March 31, 2017 to meet the relevant requirements for business licensing and obtain the corresponding telecom business license by the end of 2017, failure of which will result in such enterprise not being able to continue operating the business of internet resources collaboration services as it currently does as of January 1, 2018, and (iii) without the approval of the MIIT, enterprises are not allowed to carry out cross-border business operations by setting up on its own or leasing private network circuits (including virtual private networks, or VPNs) or other information channels.

We received approvals from the MIIT to expand the scope of GDS Beijing's IDC license and enable GDS Suzhou's IDC license to cover internet resources collaboration services, fixed network domestic data transmission services and domestic internet virtual private networks service which, among other things, enable us to provide connectivity services over our own network to cloud and enterprise customers collocated in all of our data centers.

Regulations Related to Information Technology Outsourcing Services Provided to Banking Financial Institutions

On June 4, 2010, the CBIRC issued the *Guidelines on the Management of Outsourcing Risks of Banking Financial Institutions*, or the Guidelines, which requires that the banking financial institutions should manage risks in relation to outsourcing services, and thus, outsourcing services providers should meet the relevant standards and requirements with respect to their technical strength, service capacity, emergency response capacity, familiarity to the banking industry and etc., to pass the due diligence investigations conducted by the banking financial institutions pursuant to the Guidelines, and should also make commitments as to fulfilling reporting, cooperating, or other obligations as may be required by the banking financial institutions under the Guidelines.

On December 30, 2021, the CBIRC issued *Notice of the General Office of the China Banking and Insurance Regulatory Commission on Issuing the Measures for the Regulation of Risks in the Information Technology Outsourcing by Banking and Insurance Institutions*, or Circular 141. Circular 141 puts forward comprehensive requirements for IT outsourcing of banking and insurance institutions, including the requirements on IT outsourcing governance, access, monitoring and evaluation, risk management. According to such measures, IT outsourcing refers to the activities that banking and insurance institutions entrust the information technology activities originally handled by themselves to service providers for processing. According to Circular 141, the CBIRC is responsible for supervising banking and insurance institutions in their access management of information technology outsourcing service providers conducting risk assessment and rating of such service providers and establishing a risk monitoring and verification mechanism. For the outsourcing services providers, including those that are engaged in providing outsourcing services of operation and maintenance, such as outsourcing of operation and maintenance of the physical environment data centers (machine room), and etc., a banking and insurance institution shall submit a report to the CBIRC or the local CBIRC office 20 business days before entering into an outsourcing contract, and the CBIRC or the local CBIRC office may take measures, such as risk alert, interview, regulatory inquiry or requiring the banking and insurance institution to suspend or stop relevant outsourcing activities, for outsourcing risks of the banking and insurance institution if the outsourcing services are with high risks. Outsourcing service providers may not subcontract material services to others. The CBIRC requires the contracts between the outsourcing services providers and the banking and insurance institutions specify, among other things, that outsourcing services providers should comply with the laws and regulations and other internal management requirements for banking and insurance institutions and accept the supervision and review as conducted by the CBIRC.

Regulations Related to Land Use Rights and Construction

On June 11, 2003, the Ministry of Land and Resources, or the MLR, promulgated the *Regulation on Grant of State-owned Land Use Rights by Agreement*, which became effective on August 1, 2003. According to such regulation, the land use rights (excluding land use rights of properties to be used for business purposes, such as commercial, tourism, entertainment and commodity residential properties, which land use rights must be granted by way of tender, auction or listing-for-sale according to relevant laws and regulations) may be granted by way of agreement. The local land bureau and the intended user will negotiate the land fees which shall not be lower than the minimum price approved by the relevant government and enter into the grant contract. Upon signing of the contract for the grant of land use rights, the grantee is required to pay the land fees pursuant to the terms of the contract and the contract is then submitted to the relevant local land bureau for the issue of the land use right certificate.

If two or more entities are interested in the land use rights proposed to be granted, such land use rights shall be granted by way of tender, auction or listing-for-sale. Furthermore, according to the *Provisions on the Grant of State-owned Construction Land Use Right by Way of Tender, Auction and Listing-for-Sale*, which is effective from November 1, 2007, land use rights for properties for commercial use, tourism, entertainment and commodity residential purposes can only be granted through tender, auction and listing-for-sale.

According to the Interim Regulations of the People's Republic of China Concerning the Assignment and Transfer of the Right to the Use of the State-Owned Land in the Urban Areas, which is effective from May 19, 1990 and amended on November 29, 2020, after land use rights relating to a particular area of land have been granted by the State, unless any restriction is imposed, the party to whom such land use rights are granted may transfer (for a term not exceeding the term which has been granted by the State), lease or mortgage such land use rights on the conditions provided by laws and regulations. Upon a transfer of land use rights, all rights and obligations contained in the contract pursuant to which the land use rights were originally granted by the State are assigned from the transferor to the transferee. Upon expiration of the term of grant, the grantee may apply for renewal of the term. Upon approval by the relevant local land bureau, a new contract shall be entered into to renew the grant, and a grant fee shall be paid.

According to the *Land Registration Regulations* promulgated by the State Land Administration Bureau, the predecessor of the MLR, on December 28, 1995 and implemented on February 1, 1996, all land use rights which are duly registered are protected by the law, and the land registration is achieved by the issue of a land use right certificate by the relevant authority to the land user.

Under the *Administration Law of Urban Real Property of the People's Republic of China*, which was promulgated by the SCNPC on July 5, 1994, amended on August 30, 2007, August 27, 2009 and August 26, 2019, and the amendment became effective on January 1, 2020, the land must be developed in line with the purposes of the land and the deadline for commencement of construction as stipulated in the grant contract. Where construction does not commence within one year of commencement of construction as stipulated in the grant contract, an idle land fee may be charged at a rate of not more than 20% of the fee for the grant of land use rights. Where construction does not commence within two years, land use rights may be forfeited without compensation, except where the commencement of construction is delayed due to force majeure, an act of the government or relevant government departments, or preliminary work necessary for the commencement of construction.

Regulations Related to Fire Control

Pursuant to the *Fire Safety Law*, which was promulgated by the SCNPC on April 29, 1998, amended on October 28, 2008, April 23, 2019 and April 29, 2021, and the *Interim Provisions on Administration of Fire Control Design Review and Acceptance of Construction Project* promulgated by the Ministry of Housing and Urban-Rural Development on April 1, 2020, which became effective on June 1, 2020, the construction entity of a largescale crowded venue (including the construction of a manufacturing plant whose size is over 2,500 square meters) and other special construction projects must apply for fire prevention design review with fire control authorities, and complete fire assessment inspection and acceptance procedures after the construction project is completed. The construction entity of other construction projects must complete the fire safety completion inspection and acceptance procedures within five business days after passing the construction completion inspection and acceptance. If the construction entity fails to pass the fire safety inspection before such venue is put into use or fails to conform to the fire safety requirements after such inspection but still put it into use, it will be subject to (i) orders to suspend the construction of projects, use of such projects, or operation of relevant business, and (ii) a fine between RMB30,000 and RMB300,000.

Regulations Related to Filing and Energy Conservation of Fixed-Asset Investment

On November 30, 2016, the State Council promulgated the Administrative Regulations on the Approval and Filing of Enterprises' Investment Projects, which became effective on February 1, 2017. On March 8, 2017, the NDRC promulgated the *Measures for the Administration of the Approval and Filing of Enterprises' Investment Projects* which became effective on April 8, 2017. Under such regulation, except those concerning national security or involving the allocation of major productive forces nationwide, strategic resource development or vital public interests, among others, investment projects shall be subject to filing administration. The projects subject to filing administration shall undergo the filing formalities under the territorial principle, except as otherwise provided by the State Council. After a project has completed the filing formalities, if the legal person of the project changes, there is any material change in the construction site, scale or content of the project, or the construction of the project is given up, the construction entity shall inform the project filing authority in a timely manner through the online platform, and modify the relevant information. Provinces in China have formulated the administrative measures for the project filing administration measures within their respective administrative regions, and specified the filing authorities and their power.

Under the *Measures for the Energy Conservation Review of Fixed-Asset Investment Projects*, which was promulgated by the NDRC on November 27, 2016, and effective from January 1, 2017, for an enterprise investment project, the construction entity shall, before commencing construction, obtain the energy conservation review opinion issued by the energy conservation review authority. The construction entity shall not commence the construction of a project which fails to undergo energy conservation review in accordance with the provisions of these Measures or fails to pass energy conservation review, and if the project has been completed, it shall not be put into production and use. In the case of any major change in the construction content and energy efficiency level of a fixed-asset investment project passing energy conservation review, the construction entity shall file an amendment application with the energy conservation review authority. Shanghai, Beijing, Shenzhen, Guangdong, Chengdu, Hebei, Jiangsu, Inner Mongolia and other provinces and cities have formulated detailed regulations on the review of energy conservation of fixed-asset investment within their jurisdictions, and reinforced interim and post-filing supervision. On November 25, 2022, the NDRC published the *Measures for the Energy Conservation Review of Fixed-Asset Investment Projects (Draft for Comments)*, which if officially published and implemented, provides that projects which are divided and constructed into several phases shall conduct energy conservation acceptance by each phase before being put into operation.

New regulations, policies and rules have been issued 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, the MIIT, the 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, reaching the PUE of newly constructed large and extra-large data centers at or below 1.4 in the year 2022 and PUE of existing large and extra-large data centers at or below 1.8 by way of technical upgrade.
- On November 5, 2020, the General Office of the People's Government of Guangdong Province issued the *Three-year Implementation Plan (2020-2022) on Promotion of the Construction of New Infrastructures in Guangdong Province*, pursuant to which the average utilization rate of data centers in Guangdong Province shall reach 65% and the average designed PUE of data centers in Guangdong Province shall be lower than 1.3 in the year 2022.
- The NDRC, the Office of the Central Cyberspace Affairs Commission, the MIIT and National Energy Administration jointly published the *Guiding Opinion on Accelerating the Construction of National Integrated Big Data Center Collaborative Innovation System* on December 23, 2020, pursuant to which the PUE of large and extra-large data centers shall be at or below 1.3 in the year 2025.
- The NDRC, the Office of the Central Cyberspace Affairs Commission, the MIIT and National Energy Administration jointly published the *Implementation Plan for Carrying Out Target Requirements on Carbon Neutrality and Promoting the Green and High-quality Development of New Infrastructure such as Data Centers and 5G Networks* on November 30, 2021, pursuant to which authorities aim to reach: 1) the average PUE of newly constructed large and extra-large data centers shall be at or below 1.3 and the average PUE of such data centers in national hubs shall further be at or below 1.25 in the year 2025; 2) data centers of which the PUE is above 1.5 shall be upgraded; and 3) the overall utilization rate of data centers shall be significantly improved and the utilization rate of data centers in western areas shall be increased from 30% to over 50%.
- On April 25, 2021, the Energy Bureau of Guangdong Province published the *Notice on Clarifying the Relevant Requirements for Energy Consumption Guarantee of Data Centers in Guangdong Province*, pursuant to which: 1) the newly increased IDC racks will not be supported in Guangdong Province in principle from 2021 to 2022, except for the integration of existing resources and the construction of projects with marginal computing demand (small data centers with less than 1,000 standard racks), and from 2023-2025, if the utilization rate of data centers in Guangdong Province could reach 70% or above, subject to the reduction of energy consumption, the energy conservation review opinion could be considered to be issued to newly constructed data center projects or expansion projects of data centers; and 2) the PUE of data centers shall be below 1.3 during the Fourteenth Five-year plan period.

- On April 27, 2021, the Beijing Municipal Bureau of Economy and Information Technology, or the Beijing EIT, issued the Implementation Plan on Coordinated Development of Data Centers in Beijing (2021-2023), or the 2021-2023 Implementation Plan, which stipulates that: 1) data centers involved in providing backup and storage services with outdated functions of which the PUE is above 2.0, the average single rack capacity is below 2.5 kilowatts or the average utilization rate is below 30% shall be gradually shut down; 2) data centers of which the PUE is above 1.8 or the average single rack capacity is below 3 kilowatts shall be upgraded (the PUE of cloud computing data centers shall be at or below 1.3 and the PUE of edge data centers shall be at or below 1.6 after such upgrade); and 3) the PUE of newly constructed cloud data centers shall be at or below 1.3 and the average single rack capacity of such data centers shall be at or above 6 kilowatts.
- On July 4, 2021, the MIIT published the *Three Year Action Plan on the Development of New Data Center (2021-2023)*, pursuant to which the PUE of large and above scale data centers which are newly constructed shall be at or below 1.3 and the PUE of such data centers located in severe cold areas should aim to be at or below 1.25 by the end of year 2023.
- On July 22, 2021, the Beijing DRC published the *Several Provisions on Further Strengthening the Energy Conservation Review of Data Center Projects*, which provides, among other things, that: 1) renewable energy usage plan shall be included in the energy conservation report, and renewable energy usage ratio of newly constructed data centers shall be increased gradually, which could be realized by means of renewable power trading and renewable energy certificates trading. The renewable energy usage level of data centers for the previous year shall be verified based on their energy conservation review opinions and energy conservation reports, and in accordance with the *Technical Guidelines for Verification and Evaluation of Annual Renewable Energy Utilization Levels in Data Centers (Trial)* published by the Beijing DRC on March 3, 2023; 2) for new construction or expansion of data centers, the PUE of such data centers shall be at or below 1.3, 1.25, 1.2 and 1.15 correspondingly if the annual energy consumption is less than 10,000 tons of standard coal, less than 20,000 tons of standard coal but not less than 10,000 tons of standard coal, less than 30,000 tons of standard coal but not less than 20,000 tons of standard coal, and not less than 30,000 tons of standard coal (energy equivalent value); 3) change formalities shall be conducted if the utilization rate of data centers is less than 80% within two years after the issuance of the energy conservation review opinion; and 4) differential power price shall be applicable to data centers of which the PUE is more than 1.4.
- On February 14, 2022, the General Office of People's Government of Beijing Municipality, or the GOPGB, issued the *Beijing Municipality's Catalogue for the Prohibition and Restriction of Newly Increased Industries (2022 Edition)*, or the 2022 Catalogue, which is a revised edition of the catalogue GOPGB issued in 2015 and 2018. The 2022 Catalogue prohibits new construction or expansion within Beijing's municipal boundaries of data centers which are involved in providing internet data services or information processing and storage support services, except for those meeting the 2021- 2023 Implementation Plan. In addition, new construction or expansion of data centers which are involved in providing internet data services or information processing and storage support services is also prohibited within the boundaries of Beijing's Dongcheng District, Xicheng District, and new construction or expansion of data centers which are involved in providing internet data services or information processing and storage support services, except for edge data centers and computing infrastructure meeting the requirements of the 2021-2023 Implementation Plan, is prohibited within the boundaries of Chaoyang District, Haidian District, Fengtai District, Shijingshan District and Tongzhou New Town.
- On February 28, 2022, the Chongqing Commission of Economy and Informatization, or the Chongqing CEI, the Chongqing Development and Reform Commission, or the Chongqing DRC, the Chongqing Municipal Bureau of Ecology and Environment, the Chongqing Administration for Industry and Commerce, or the Chongqing AIC, and the Energy Bureau of Chongqing jointly published the *Implementation Plan of Chongqing's Strict Energy Efficiency Constraints Promoting Energy Conservation and Carbon Reduction in Key Areas*, pursuant to which the PUE of large and extra-large data centers which are newly constructed shall be at or below 1.3, and the PUE of the existing data centers aim to be at or below 1.5 in the year 2025.
- On May 7, 2022, the Beijing EIT and the Beijing DRC jointly published the *Comprehensive Governance Work Plan of Data Centers with Low Energy Efficiency*, according to which the issuance of energy conservation review opinion may be withheld for areas where energy intensity or carbon intensity does not decrease but increases, or for areas or individual projects where the overall utilization rate of data centers which have been put into operation for one year with an annual energy consumption of 2,000 tons or more of standard coal is less than 50%.

- On June 24, 2022, the Shanghai CEI and the Shanghai DRC jointly issued the *Implementation Opinions on Promoting the Healthy and Orderly Development of Data Centers in Shanghai*, according to which construction entity shall operate data centers within two years after obtaining the energy consumption quota, otherwise, the energy consumption quota may be withdrawn by the competent governmental authority if appropriate. The *Implementation Opinions on Promoting the Healthy and Orderly Development of Data Centers in Shanghai* also provides that commitment made by the construction entity such as the equity structure, the construction plan and the energy conservation measures shall not be arbitrarily changed within the specified period of time after data centers are put into operation, and if the construction entity, after making rectification, still fails to meet the commitment resulting in serious inconsistency, the construction entity may be unable to apply for new projects in Shanghai in the future.
- On August 22, 2022, the NDRC, the MIIT, the Ministry of Finance of the People’s Republic of China, the Ministry of Ecology and Environment of the People’s Republic of China, the Ministry of Housing and Urban-Rural Development of the People’s Republic of China, the State-owned Assets Supervision and Administration Commission of the State Council and the National Energy Administration jointly published the *Action Plan for Green and Low Carbon Development in the Information and Communication Industry (2022-2025)*, according to which the PUE of large and extra-large data centers which are newly constructed shall be at or below 1.3 in the year 2025.
- On September 29, 2022, the Shanghai Municipal People’s Government published the *Implementation Measures for Energy Conservation Review of Fixed Assets Investment Projects in Shanghai*, according to which the impact of energy consumption projects on “Dual Control” and carbon peak targets should be evaluated when it comes to the review of the energy conservation report.
- On September 30, 2022, the Chongqing CEI, the Chongqing DRC, the Chongqing Municipal Bureau of Ecology and Environment, the Chongqing AIC, the Chongqing Finance Bureau and the Chongqing State-owned Assets Supervision and Administration Commission jointly published the *Chongqing Industrial Energy Efficiency Improvement Action Plan*, according to which the PUE of large and extra-large data centers which are newly constructed shall be at or below 1.25 in the year 2025.
- On October 10, 2022, the Shanghai Municipal People’s Government published the *Comprehensive Work Implementation Plan for Energy Conservation and Emission Reduction in Shanghai during the “14th Five Year Plan”*, according to which the PUE of newly constructed data centers and existing data centers after technical upgrade shall be at or below 1.3 and 1.4 respectively.
- On November 29, 2022, the Shanghai CEI and the Shanghai DRC jointly issued the *Implementation Plan for Carbon Peak in Shanghai’s New Infrastructure Field*, according to which: 1) the PUE of data centers which are newly constructed shall be at or below 1.3 and the PUE of large data centers which are located in the Yangtze River Delta Hub shall be at or below 1.25 during the Fourteenth Five-year plan period; 2) the PUE of newly constructed data centers and the existing data centers aims to be at or below 1.25 and 1.4 respectively during the Fifteenth Five-year plan period; and 3) the PUE of data centers with low energy efficiency aims to be at or below 1.4 after technical upgrade.
- On December 2, 2022, the Guangdong DRC and the Guangdong IIT jointly issued the *Opinions on Strengthening the Layout and Construction of Data Centers*, according to which: 1) the average PUE of data centers which are newly constructed (other than the data centers located in data center clusters of national hubs) in Guangdong province shall be at or below 1.3; 2) the average PUE of data centers which are newly constructed and located in data center clusters of national hubs shall be at or below 1.25; 3) the PUE of the existing data centers should aim to be at or below 1.5 after technical upgrade; and 4) the average utilization rate of data centers in Guangdong Province should aim to reach 80%.
- On December 16, 2022, the Shanghai CEI issued a *Notice on Collecting the Proposed New Data Center Project in 2022*, according to which the total designed rack capacity of a project should be no less than 18 MW and the average designed rack capacity of a single rack should be no less than 6 kW.

The MIIT published the *Supervision Measures for Industrial Energy Conservation* on December 22, 2022, which became effective on February 1, 2023, and a *Notice on Carrying out Supervision of Industrial Energy Conservation in 2022* on July 28, 2022. According to such regulations, the industrial energy conservation supervision department supervises and inspects the implementation of the laws and regulations regarding the energy conservation related matters in data centers and penalties may be imposed in case of any failure to comply with these laws and regulations. Local authorities have also imposed various requirements as to the supervision of energy conservation. For example, the Beijing DRC issued a *Notice on Carrying out Energy Conservation Supervision in Beijing in 2022* on April 2, 2022, pursuant to which supervision of the energy conservation related matters will be carried out for fixed assets investment projects which have obtained the energy conservation review since 2020.

Regulations Related to Feed-in Electricity Price for Coal-Fired Power Generation

On October 21, 2019, the NDRC promulgated the *Guiding Opinions on Deepening the Reform of the Formation Mechanism on Feed-in Electricity Price for Coal-Fired Power Generation*, which stipulates that the feed-in electricity price for coal-fired power generation will be liberalized in an orderly manner, and a market-based feed-in electricity price mechanism will be established accordingly.

On October 11, 2021, the NDRC further promulgated the *Notice on Further Deepening the Market-Oriented Reform of Feed-in Electricity Price for Coal-Fired Power Generation*, or the Notice, which restates the goal of “liberating the two ends”, i.e. the liberalization of the feed-in electricity price for coal-fired power generation and the liberalization of the user-side sales. On the power generation side, according to the Notice, all coal-fired power generation will enter the electricity market in principle, and a market-based electricity price mechanism will be established. It expands the fluctuation range of coal-fired power generation market transaction prices from the current float of no more than 10%, and in principle no more than 15%, to a fluctuation of no more than 20% in principle, and the market transaction price of high energy-consuming enterprises is not subject to a rise of 20% limit. On the electricity consumption side, the Notice encourages all industrial and commercial users to enter the electricity market and purchase electricity at market prices. At the same time, the Notice clarifies that for industrial and commercial users who have not directly purchased electricity from the electricity market, the power grid companies will purchase electricity as agents, and the agent power purchase price will be established through market-oriented methods.

On December 23, 2022, the NDRC issued a *Notice on Further Improving Power Purchase Agency for Power Grid Enterprises*. On January 4, 2023, the National Energy Administration issued the *Key Points of Energy Regulatory Work in 2023*. Pursuant to these regulations, the scope of power grid enterprises as power purchase agents should be narrowed down and industrial and commercial users are encouraged to enter the electricity market directly. Local authorities have also promulgated various requirements as to the electricity market. For example, on December 14, 2022, the Beijing Municipal Commission of Urban Management issued a *Notice of the Electricity Market Trading Scheme and Green Electricity Trading Scheme in Beijing in 2023*, according to which industrial and commercial users of 10 kV and above should directly participate in market transactions in principle, and other industrial and commercial users should be encouraged to purchase electricity directly from the electricity market.

Regulations Related to Information Security and Confidentiality of User Information

Internet activities in China are regulated and restricted by the PRC government and are subject to penalties under the *Decision Regarding the Protection of Internet Security*, promulgated by the SCNPC on December 28, 2000 and amended on August 27, 2009.

The Ministry of Public Security, or the MPS, has promulgated measures that prohibit use of the internet in ways that, among other things, divulge government secrets or disseminate socially destabilizing content. The MPS and its local counterparts have authority to supervise and inspect domestic websites to implement its measures. Internet information service providers that violate these measures may have their licenses revoked and their websites shut down.

On June 22, 2007, the MPS, the State Secrecy Administration and other relevant authorities jointly issued the *Administrative Measures for the Hierarchical Protection of Information Security*, which divides information systems into five categories and requires the operators of information systems ranking above Grade II to file an application with the local Bureau of Public Security within 30 days of the date of its security protection grade determination or since its operation.

The PRC government regulates the security and confidentiality of internet users' information. The Administrative Measures on Internet Information Service promulgated by the State Council on September 25, 2000 and amended on January 8, 2011, the Regulations on Technical Measures of Internet Security Protection promulgated by the MPS on December 13, 2005 and the Provisions on Protecting Personal Information of Telecommunication and Internet Users promulgated by the MIIT on July 16, 2013 set forth strict requirements to protect personal information of internet users and require internet information service providers to maintain adequate systems to protect the security of such information. Personal information collected must be used only in connection with the services provided by the internet information service provider. Moreover, the Rules for Regulating the Order in the Market for Internet Information Service which was promulgated by the MIIT on December 29, 2011 and came into effect on March 15, 2012 also protect internet users' personal information by (i) prohibiting internet information service providers from unauthorized collection, disclosure or use of their users' personal information and (ii) requiring internet information service providers to take measures to safeguard their users' personal information.

Pursuant to the *PRC Civil Code*, the personal information of a natural person shall be protected by the law. Any organization or individual shall legally obtain such personal information of others when necessary and ensure the safety of such information, and shall not illegally collect, use, process or transmit personal information of others, or illegally purchase or sell, provide or make public personal information of others.

The *Personal Information Protection Law*, or the PIPL, which was promulgated by the SCNPC on August 20, 2021 and took effect on November 1, 2021, provides detailed rules for processing personal information and further improves the personal information protection system. It aims at protecting the personal information rights and interests, regulating the processing of personal information, ensuring the orderly and free flow of personal information in accordance with the law and promoting the reasonable use of personal information. The PIPL requires, among others, that (i) the processing of personal information should have a clear and reasonable purpose which should be directly related to the processing purpose and should be conducted in a method that has the minimum impact on personal rights and interests, and (ii) the collection of personal information should be limited to the minimum scope as necessary to achieve the processing purpose and avoid the excessive collection of personal information. The PIPL also specifies the rules for handling "sensitive personal information," which means personal information that, once leaked or illegally used, may easily cause harm to the dignity of natural persons or grave harm to personal or property security, including information on biometric characteristics, financial accounts, individual location tracking.

The *Cyber Security Law of the People's Republic of China*, or the Cyber Security Law, which was approved by the SCNPC on November 7, 2016 and came into effect on June 1, 2017, provides certain rules and requirements applicable to network service providers in China. The Cyber Security Law requires network operators to perform certain functions related to cyber security protection and strengthen network information management by taking technical and other necessary measures as required by laws and regulations to safeguard the operation of networks, effectively addressing network security, preventing illegal and criminal activities, and maintaining the integrity, confidentiality and usability of network data. In addition, the Cyber Security Law imposes certain requirements on network operators of critical information infrastructure, including that such network operators with operations in the PRC shall store personal information and important data collected and produced within the territory of PRC, and shall perform certain security obligations as required under the Cyber Security Law.

On December 28, 2021, the CAC, the NDRC, the MIIT, the MPS, the Ministry of State Security, the Ministry of Finance, the MOFCOM, the PBOC, the SAMR, the National Radio and Television Administration, or the NRTA, the CSRC, the State Secrecy Administration and the State Cryptography Administration jointly promulgated the Cybersecurity Review Measures, which came into effect on February 15, 2022. The Cybersecurity Review Measures provides that, among others, a critical information infrastructure operator which engages in data processing activities or an online platform operator conducts data processing, either of which affects or may affect national security shall be subject to the cybersecurity review. In addition to the abovementioned circumstance under which the relevant operators are mandatorily imposed with the obligation to apply for cybersecurity reviews, the Cybersecurity Review Measures also provides that if the members of the cybersecurity review working mechanism consider that certain network products and services and data processing activities affect or may affect national security, the Cybersecurity Review Office shall report to the CAC for approval and initiate a cybersecurity review even if the operators do not have an obligation to report for a cybersecurity review under such circumstances. The Cybersecurity Review Measures also elaborated the factors to be considered when assessing the national security risks of the relevant activities, including among others, risks of core data, important data or a large amount of personal information being stolen, leaked, destroyed, and illegally used or exited the country and risks of critical information infrastructure, core data, important data or a large amount of personal information data being affected, controlled and maliciously used by foreign governments after a foreign listing. Many of the legislations are relatively new and certain concepts thereunder remain subject to interpretation by the regulators. For example, the Cybersecurity Review Measures provides that operators engaging in data processing who hold more than one million users' individual information and seek listing aboard shall file for cybersecurity review with the Cybersecurity Review Office under the CAC and the concepts of "listing aboard" and "hold" are still unclear.

On November 14, 2021, the CAC published the Draft Cyber Data Security Regulations (Draft for Comments), which specified that data processors refer to individuals or organizations that autonomously determine the purpose and the manner of processing data. According to the Cyber Data Security Regulations (Draft for Comments), data processors shall apply for a cybersecurity review for the following activities: (i) merger, reorganization or division of internet platform operators that have acquired a large number of data resources related to national security, economic development or public interests to the extent that affects or may affect national security; (ii) listing abroad of data processors which process over one million users' personal information; (iii) listing in Hong Kong which affects or may affect national security; or (iv) other data processing activities that affect or may affect national security. In addition, data processors that are listed overseas shall carry out an annual data security assessment.

On July 30, 2021, the State Council promulgated the *Regulations on Protection of Critical Information Infrastructure*, which became effective on September 1, 2021 and defined “critical information infrastructure” as the important network facilities or information systems of key industries or fields, such as public communication and information service, energy, transportation, water conservation, finance, public services, e-government affairs and national defense science, and important network facilities or information systems which may endanger national security, people’s livelihood and public interest once there occur damage, malfunctioning or data leakage to them. The Regulations on Protection of Critical Information Infrastructure provided that no individual or organization may carry out any illegal activity of intruding into, interfering with, or sabotaging any critical information infrastructures, or endanger the security of any critical information infrastructures. The Regulations on Protection of Critical Information Infrastructure also mandated that each critical information infrastructure operator shall establish a cybersecurity protection system and accountability system, and the principal person in-charge of a critical information infrastructure operator shall take full responsibility for the security protection of the critical information infrastructures operated by it. In addition, relevant administration departments of each important industry and sector, or the Protection Departments, shall be responsible for formulating the rule of critical information infrastructure determination applicable to their respective industry or sector, and determine the critical information infrastructure operators in their industry or sector. The result of the determination of critical information infrastructure operator shall be informed to the relevant operator by the Protection Departments, and notified to the public security department of the State Council as well.

On July 7, 2022, the CAC promulgated the Measures for the Security Assessment of Data Cross-border Transfer, and it became effective on September 1, 2022, which requires data processors apply to the national cyberspace administration through the local cyberspace administration at the provincial level under any of the following circumstances: (i) the data processor provides important data abroad, (ii) the critical information infrastructure operator or the data processor that has processed the personal information of over one million people provides personal information abroad, (iii) the data processor that has provided the personal information of over 100,000 people or the sensitive personal information of over 10,000 people cumulatively since January 1 of the previous year provides personal information abroad, or (iv) any circumstance where an application for the security assessment of outbound data transfer is required by the national cyberspace administration. PRC government authorities may have wide discretion in the interpretation and enforcement of the Security Assessment Measures, including whether we have exported “important data” as defined thereunder, and thus there is uncertainty as to whether we may be subject to security assessment. As there are still uncertainties regarding the further enactment of new laws and regulations as well as the revision, interpretation and implementation of those existing laws and regulations, we cannot assure that whether these provisions will be applicable to us.

Regulations Related to Leases

According to the PRC Civil Code, the lease agreement shall be in writing if its term is over six months, and the term of any lease agreement shall not exceed twenty years. During the lease term, any change of ownership to the leased property does not affect the validity of the lease contract. The tenant may sub-let the leased property if it is agreed by the landlord and the lease agreement between the landlord and the tenant is still valid and binding. When the landlord is to sell a leased housing under a lease agreement, it shall give the tenant a reasonable advance notice before the sale, and the tenant has the priority to buy such leased housing on equal conditions. The tenant must pay rent on time in accordance with the lease contract. In the event of default of rental payment without reasonable cause, the landlord may ask the tenant to pay within a reasonable period of time, failing which the landlord may terminate the lease. The landlord has the right to terminate the lease agreement if the tenant sub-lets the property without consent from the landlord, or causes loss to the leased properties resulting from its using the property not in compliance with the usage as stipulated in the lease agreement, or defaults in rental payment after the reasonable period as required by the landlord, or other circumstances occurs allowing the landlord terminate the lease agreement under relevant PRC laws and regulations, or otherwise, if the landlord wishes to terminate the lease before its expiry date, prior consent shall be obtained from the tenants.

On December 1, 2010, Ministry of Housing and Urban-Rural Development promulgated the *Administrative Measures for Leasing of Commodity Housing*, which became effective on February 1, 2011. According to such measures, the landlords and tenants are required to enter into lease contracts which should generally contain specified provisions, and the lease contract should be registered with the relevant construction or property authorities at municipal or county level within 30 days after its conclusion. If the lease contract is extended or terminated or if there is any change to the registered items, the landlord and the tenant are required to effect alteration registration, extension of registration or deregistration with the relevant construction or property authorities within 30 days after the occurrence of the extension, termination or alteration.

Regulations Related to Intellectual Property Rights

The State Council and the National Copyright Administration, or the NCAC, have promulgated various rules and regulations relating to the protection of software in China. Under these rules and regulations, software owners, licensees and transferees may register their rights in software with the NCAC or its local branches and obtain software copyright registration certificates. Although such registration is not mandatory under PRC law, software owners, licensees and transferees are encouraged to go through the registration process to enjoy the better protections afforded to registered software rights.

The *PRC Trademark Law*, issued in 1982 and amended in 1993, 2001, 2013 and 2019 respectively, with its implementation rules issued in 2002 and amended in 2014, protects registered trademarks. According to the PRC Trademark Law, the PRC Trademark Office of the State Administration for Industry and Commerce, the predecessor of the Trademark Office of China National Intellectual Property Administration, handles trademark registrations and grants a protection term of ten years to registered trademarks.

On August 24, 2017, the MIIT replaced the *Administrative Measures on China Internet Domain Names* promulgated on November 5, 2004 with the *Administration Measures of Internet Domain Names*, which took effect on November 1, 2017. According to these measures, the MIIT is in charge of the overall administration of domain names in China. The registration of domain names in PRC is on a “first-apply-first-registration” basis. A domain name applicant will become the domain name holder upon the completion of the application procedure.

On March 12, 1984, the SCNPC promulgated the *Patent Law*, which was amended in 1992, 2000, 2008 and 2020, respectively. On June 15, 2001, the State Council promulgated the *Implementation Regulation for the Patent Law*, which was amended on December 28, 2002 and January 9, 2010, respectively. According to these laws and regulations, the State Intellectual Property Office is responsible for administering patents in the PRC. The Chinese patent system is premised upon the “first to file” principle, which means that where more than one person files a patent application for the same invention, a patent will be granted to the person who filed the application first. To be patentable, invention or utility models must meet three conditions: novelty, inventiveness and practical applicability. A patent is valid for 20 years in the case of an invention, for ten years in the case of utility models, and for 15 years in the case of designs. A third-party user must obtain consent or a proper license from the patent owner in order to use the patent.

Regulations Related to Employment

On June 29, 2007, the SCNPC, adopted the *Labor Contract Law*, or the LCL, which became effective as of January 1, 2008 and was amended on December 28, 2012 (effective from July 1, 2013). The LCL requires employers to enter into written contracts with their employees, restricts the use of temporary workers and aims to give employees long-term job security.

Pursuant to the LCL, employment contracts lawfully concluded prior to the implementation of the LCL and continuing as of the date of its implementation will continue to be performed. Where an employment relationship was established prior to the implementation of the LCL but no written employment contract was concluded, a contract must be concluded within one month after the LCL’s implementation.

According to the Social Insurance Law promulgated by SCNPC which became effective from July 1, 2011 and was amended on December 29, 2018, the Regulation of Insurance for Work-Related Injury promulgated by the State Council on April 27, 2003 and amended on December 20, 2010, the Provisional Measures on Insurance for Maternity of Employees promulgated by the Ministry of Labor on December 14, 1994, the Regulation of Unemployment Insurance promulgated by the State Council on January 22, 1999, the Decision of the State Council on Setting Up Basic Medical Insurance System for Staff Members and Workers in Cities and Towns promulgated by the State Council on December 14, 1998, and the Interim Regulation on the Collection and Payment of Social Insurance Premiums promulgated by the State Council on January 22, 1999 and amended on March, 24, 2019, an employer is required to contribute the social insurance for its employees in the PRC, including the basic pension insurance, basic medical insurance, unemployment insurance, maternity insurance and injury insurance.

Under the *Regulations on the Administration of Housing Funds*, promulgated by the State Council on April 3, 1999 and as amended on March 24, 2002 and March 24, 2019, respectively, an employer is required to make contributions to a housing fund for its employees. Where an enterprise fails to deposit the housing provident funds within the time limit or underpays the funds for its employees which is in violation of the aforesaid regulations, the competent administration authority shall order it to deposit the funds within a time limit, failing in which the competent administration authority may apply to the people's court for enforcement.

Regulations Related to Foreign Currency Exchange and Dividend Distribution

Foreign Currency Exchange

The principal regulations governing foreign currency exchange in China are the *Foreign Exchange Administration Regulations*, promulgated by the State Council on January 29, 1996 (effective from April 1, 1996) as amended on January 14, 1997 and August 1, 2008 (which became effective on August 5, 2008), respectively. Under this regulation, the State does not restrict the international payment and transfer for current account items, including the goods and service-related foreign exchange transactions and other current exchange transactions, but not for capital account items, such as direct investments, loans, capital transfer and investments in securities, unless the prior approval of the SAFE is obtained and prior registration with the SAFE is made.

Pursuant to the *Administration Rules of the Settlement, Sale and Payment of Foreign Exchange* promulgated on June 20, 1996 by the PBOC, foreign-invested enterprises in China may purchase or remit foreign currency for settlement of current account transactions without the approval of the SAFE. Foreign currency transactions under the capital account are still subject to limitations and require approvals from, or registration with, the SAFE and other relevant PRC governmental authorities.

In addition, the Notice of the General Affairs Department of SAFE on The Relevant Operation Issues Concerning the Improvement of the Administration of Payment and Settlement of Foreign Currency Capital of Foreign-invested Enterprises, or Circular 142, which was promulgated on August 29, 2008 by SAFE, regulates the conversion by foreign-invested enterprises of foreign currency into Renminbi by restricting how the converted Renminbi may be used. Circular 142 requires that Renminbi converted from the foreign currency-denominated capital of a foreign-invested enterprise may only be used for purposes within the business scope approved by the relevant government authority and may not be used to make equity investments in PRC, unless specifically provided otherwise. The SAFE further strengthened its oversight over the flow and use of Renminbi funds converted from the foreign currency-denominated capital of a foreign-invested enterprise. The use of such Renminbi may not be changed without approval from the SAFE, and may not be used to repay Renminbi loans if the proceeds of such loans have not yet been used. Any violation of Circular 142 may result in severe penalties, including substantial fines.

On November 19, 2012, SAFE promulgated the *Circular of Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment*, which substantially amends and simplifies the current foreign exchange procedure and became partially invalid according to the *Circular on Repealing and Invalidating Five Normative Documents Concerning Administration of Foreign Exchange and some Articles of Seven Normative Documents Concerning Administration of Foreign Exchange* promulgated by the SAFE on December 30, 2019, or *Circular on Repealing and Invalidating*. Pursuant to this circular, the opening of various special purpose foreign exchange accounts, such as pre-establishment expenses accounts, foreign exchange capital accounts and guarantee accounts, the reinvestment of Renminbi proceeds by foreign investors in the PRC, and remittance of foreign exchange profits and dividends by a foreign-invested enterprise to its foreign shareholders no longer require the approval or verification of SAFE, and multiple capital accounts for the same entity may be opened in different provinces, which was not possible previously. In addition, SAFE promulgated the *Circular on Printing and Distributing the Provisions on Foreign Exchange Administration over Domestic Direct Investment by Foreign Investors and the Supporting Documents* in May 2013, or *Circular 21*, 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. *Circular 21* was partially invalid according to *Circular on Repealing and Invalidating*.

In July 2014, SAFE decided to further reform the foreign exchange administration system in order to satisfy and facilitate the business and capital operations of foreign invested enterprises, and issued the *Circular on the Relevant Issues Concerning the Launch of Reforming Trial of the Administration Model of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises in Certain Areas*, or *Circular 36*, on July 4, 2014 (which became effective on August 4, 2014). This circular suspends the application of *Circular 142* in certain areas and allows a foreign-invested enterprise registered in such areas to use the Renminbi capital converted from foreign currency registered capital for equity investments within the PRC.

On March 30, 2015, SAFE released the *Notice on the Reform of the Management Method for the Settlement of Foreign Exchange Capital of Foreign-invested Enterprises*, or *Circular 19*, which made certain adjustments to some regulatory requirements on the settlement of foreign exchange capital of foreign-invested enterprises, lifted some foreign exchange restrictions under *Circular 142*, and annulled *Circular 142* and *Circular 36*. However, *Circular 19* continues to prohibit foreign-invested enterprises from, among other things, using Renminbi fund converted from its foreign exchange capitals for expenditure beyond its business scope, providing entrusted loans or repaying loans between non-financial enterprises. *Circular 19* was partially invalid according to *Circular on Repealing and Invalidating*.

On June 9, 2016, SAFE 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 *Circular 16*, which took effect on the same day. Compared to *Circular 19*, *Circular 16* not only provides that, in addition to foreign exchange capital, foreign debt funds and proceeds remitted from foreign listings should also be subject to the discretionary foreign exchange settlement, but also lifted the restriction, that foreign exchange capital under the capital accounts and the corresponding Renminbi capital obtained from foreign exchange settlement should not be used for repaying the inter-enterprise borrowings (including advances by the third party) or repaying the bank loans in Renminbi that have been sub-lent to the third party.

On January 26, 2017, SAFE promulgated the *Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification*, or *Circular 3*, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities, including (i) under the principle of genuine transactions, banks shall check board resolutions regarding profit distribution, original copies of tax filing records and audited financial statements; and (ii) domestic entities shall hold income to account for previous years' losses before remitting any profits. Moreover, pursuant to *Circular 3*, domestic entities shall make detailed explanations of their sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with any outbound investments.

On October 23, 2019, the SAFE promulgated the *Notice for Further Advancing the Facilitation of Cross-border Trade and Investment*, or *Circular 28*, which in principle, among other things, allows all foreign-invested companies to use Renminbi converted from foreign currency-denominated capital for equity investments in China, as long as the equity investment is genuine, does not violate applicable laws, and complies with the Negative List (2021) on foreign investment.

On April 10, 2020, SAFE promulgated the *Circular on Optimizing Administration of Foreign Exchange to Support the Development of Foreign-related Business*, or Circular 8. According to Circular 8, eligible enterprises are allowed to make domestic payments by using their registered capitals, foreign debts and financings from overseas listing, with no need to provide evidentiary materials concerning authenticity of each of such funds for banks in advance, provided that their funds usage shall be authentic and in line with the currently effective administrative regulations on the use of funds under capital accounts. The concerned banks may conduct random examination in accordance with the relevant requirements, in which case the certain evidentiary materials concerning authenticity of such funds may be required to be provided.

SAFE Circular 37

SAFE Circular 37 replaced the former circular commonly known as Circular 75 promulgated by SAFE on October 21, 2005. SAFE Circular 37 requires PRC residents to register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose 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 SAFE Circular 37 as a "special purpose vehicle." SAFE Circular 37 further requires amendment to the registration in the event of 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. In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute additional capital into its PRC subsidiary. Furthermore, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for evasion of foreign exchange controls.

On February 13, 2015, SAFE released the *Notice on Further Simplifying and Improving Policies for the Foreign Exchange Administration of Direct Investment*, or Circular 13 (effective from June 1, 2015), which has amended SAFE Circular 37 by requiring PRC residents or entities to register with qualified banks rather than SAFE or its local branch in connection with their establishment or control of an offshore entity established for the purpose of overseas investment or financing. Circular 13 was partially invalid according to Circular on Repealing and Invalidating.

Share Option Rules

Under the *Administration Measures on Individual Foreign Exchange Control* issued by the PBOC on December 25, 2006 (effective from February 1, 2007), all foreign exchange matters involved in employee share ownership plans and share option plans in which PRC citizens participate require approval from SAFE or its authorized branch. Pursuant to SAFE Circular 37, PRC residents who participate in share incentive plans in overseas non-publicly-listed companies may submit applications to SAFE or its local branches for the foreign exchange registration with respect to offshore special purpose companies. In addition, under the *Notices on Issues concerning the Foreign Exchange Administration for Domestic Individuals Participating in Share Incentive Plans of Overseas Publicly-Listed Companies* issued by SAFE on February 15, 2012, or the Share Option Rules, PRC residents who are granted shares or share options by companies listed on overseas stock exchanges under share incentive plans are required to (i) register with SAFE or its local branches, (ii) retain a qualified PRC agent, which may be a PRC subsidiary of the overseas listed company or another qualified institution selected by the PRC subsidiary, to conduct the SAFE registration and other procedures with respect to the share incentive plans on behalf of the participants, and (iii) retain an overseas institution to handle matters in connection with their exercise of share options, purchase and sale of shares or interests and funds transfers.

Dividend Distribution

The principal regulations governing the distribution of dividends paid by wholly foreign-owned enterprises include the PRC Company Law, the 2019 PRC Foreign Investment Law and *Regulations on Implementing the 2019 PRC Foreign Investment Law*. Under these regulations, wholly foreign-owned enterprises in China may pay dividends only out of their accumulated profits, if any, as determined in accordance with PRC accounting standards and regulations. In addition, a wholly foreign-owned enterprise in China is required to set aside at least 10% of its after-tax profit based on PRC accounting standards each year to its general reserves until its cumulative total reserve funds reach 50% of its registered capital. These reserve funds, however, may not be distributed as cash dividends.

Foreign Debts

On January 5, 2023, NDRC issued the *Administrative Measures for Examination and Registration of Medium and Long-term Foreign Debts of Enterprises*, which became effective on February 10, 2023, provides that enterprises borrowing foreign debts must complete formalities for examination and registration of foreign debts and report and disclose the relevant information. Enterprises must complete examination and registration and obtain the Certificate of Examination and Registration from NDRC before they could legally borrow foreign debts. In addition, enterprises must submit information of utilization of foreign debts, repayment, planned arrangements and major business indicators to NDRC at the end of each January and July. Since this regulation is relatively new, uncertainties exist in relation to its interpretation and implementation.

Regulations Related to Taxation

Enterprise Income Tax

Prior to January 1, 2008, according to the Provisional Regulations of the People's Republic of China on Enterprises Income Tax promulgated by the State Council on December 13, 1993 and the Income Tax Law of the People's Republic of China for Enterprises with Foreign Investment and Foreign Enterprises promulgated by the National People's Congress on April 9, 1991, entities established in the PRC were generally subject to a 30% national and 3% local enterprise income tax rate. Various preferential tax treatments promulgated by PRC tax authorities were available to foreign-invested enterprises.

In March 2007, the National People's Congress enacted the *Enterprise Income Tax Law*, which was amended in February 2017 and December 2018, respectively, and in December 2007 the State Council promulgated the *Implementing Rules of the Enterprise Income Tax Law*, or the *Implementing Rules*, which was amended in April 2019, both of which became effective on January 1, 2008. The Enterprise Income Tax Law (i) reduces the top rate of enterprise income tax from 33% to a uniform 25% rate applicable to both foreign-invested enterprises and domestic enterprises and eliminates many of the preferential tax policies afforded to foreign investors, (ii) permits companies to continue to enjoy their existing tax incentives, subject to certain transitional phase-out rules and (iii) introduces new tax incentives, subject to various qualification criteria.

The Enterprise Income Tax Law also provides that enterprises organized under the laws of jurisdictions outside China with their "de facto management bodies" located within China may be considered PRC resident enterprises and therefore be subject to PRC enterprise income tax at the rate of 25% on their worldwide income. The Implementing Rules further define the term "de facto management body" as the management body that exercises substantial and overall management and control over the production and operations, personnel, accounts and properties of an enterprise. If an enterprise organized under the laws of jurisdiction outside China is considered a PRC resident enterprise for PRC enterprise income tax purposes, a number of unfavorable PRC tax consequences could follow. First, it would be subject to the PRC enterprise income tax at the rate of 25% on its worldwide income. Second, a 10% withholding tax would be imposed on dividends it pays to its non-PRC enterprise shareholders and with respect to gains derived by its non-PRC enterprise shareholders from transfer of its shares.

Prior to January 1, 2008, according to the Income Tax Law of the People's Republic of China for Enterprises with Foreign Investment and Foreign Enterprises promulgated by the National People's Congress on April 9, 1991 dividends payable to foreign investors derived by foreign enterprises from business operations in China were exempted from PRC enterprise income tax. However, such exemption was revoked by the Enterprise Income Tax Law and dividends generated after January 1, 2008 and payable by a foreign-invested enterprise in China to its foreign enterprise investors are subject to a 10% withholding tax, unless any such foreign investor's jurisdiction of incorporation has a tax treaty with China that provides for a preferential withholding arrangement. Pursuant to the *Notice of the State Administration of Taxation on Negotiated Reduction of Dividends and Interest Rates*, which was issued by the STA on January 29, 2008 and supplemented and revised on February 29, 2008, and the *Arrangement between Mainland China and the Hong Kong for the Avoidance of Double Taxation and Prevention of Fiscal Evasion with Respect to Taxes on Income*, which became effective on December 8, 2006 and applies to income derived in any year of assessment commencing on or after April 1, 2007 in Hong Kong and in any year commencing on or after January 1, 2007 in the PRC, such withholding tax rate may be lowered to 5% if a Hong Kong enterprise is deemed the beneficial owner of any dividend paid by a PRC subsidiary by PRC tax authorities and holds at least 25% of the equity interest in that particular PRC subsidiary at all times within the 12-month period immediately before distribution of the dividends. Furthermore, according to the *Circular on Several Questions regarding the "beneficial owner" in Tax Treaties*, which was issued by the STA on February 3, 2018 and became effective on April 1, 2018, when determining an applicant's status as a "beneficial owner" regarding tax treatments in connection with dividends, interest or royalties in the tax treaties, several factors, including without limitation, whether the applicant is obligated to pay more than 50% of his or her income in twelve months to residents in other countries or regions, whether the business operated by the applicant constitutes actual business activities, and whether the country or region which is a counterparty to the tax treaty does not levy any tax, grants tax exemption on relevant income, or levies tax at an extremely low rate, will be taken into account. Such factors will be analyzed according to the actual circumstances of each specific case. This circular further provides that applicants who intend to prove his or her status as a "beneficial owner" shall submit relevant documents to the relevant tax bureau according to the *Announcement on Issuing the Measures for the Administration of Non-Resident Taxpayers' Enjoyment of the Treatment under Agreements* issued by the STA on October 14, 2019.

Value-Added Tax and Business Tax

Pursuant to Provisional Regulations of the People's Republic of China on Business Tax promulgated by the State Council on December 13, 1993 and annulled on November 19, 2017, any entity or individual conducting business in the service industry is generally required to pay a business tax at the rate of 5% on the revenues generated from providing such services. However, if the services provided are related to technology development and transfer, such business tax may be exempted subject to approval by the relevant tax authorities.

Whereas, pursuant to the *Provisional Regulations on Value-Added Tax* of the PRC and its implementation regulations, unless otherwise specified by relevant laws and regulations, any entity or individual engaged in the sales of goods, provision of processing, repairs and replacement services, sales of services, intangible assets and real properties, and importation of goods are generally required to pay a value-added tax, or VAT.

In November 2011, the MOF and the STA promulgated the *Pilot Plan for Imposition of Value-Added Tax to Replace Business Tax*. In March 2016, the MOF and the STA further promulgated the *Notice on Fully Promoting the Pilot Plan for Replacing Business Tax by Value-Added Tax*, which became effective on May 1, 2016. Pursuant to the pilot plan and relevant notices, VAT is generally imposed in the modern service industries, including the VATS, on a nationwide basis. VAT of a rate of 6% applies to revenue derived from the provision of some modern services. Unlike business tax, a taxpayer is allowed to offset the qualified input VAT paid on taxable purchases against the output VAT chargeable on the modern services provided.

In April 2018, the MOF and the STA jointly promulgated the *Circular of the Ministry of Finance and the State Administration of Taxation on Adjustment of Value-Added Tax Rates*, or Circular 32, according to which (i) for VAT taxable sales acts or importation of goods originally subject to value-added tax rates of 17% and 11%, respectively, such tax rates shall be adjusted to 16% and 10%, respectively; (ii) for purchase of agricultural products originally subject to deduction rate of 11%, such deduction rate shall be adjusted to 10%; (iii) for purchase of agricultural products for the purpose of production and sales or consigned processing of goods subject to tax rate of 16%, such tax shall be calculated at a deduction rate of 12%; (iv) for exported goods originally subject to tax rate of 17% and export tax refund rate of 17%, the export tax refund rate shall be adjusted to 16%; and (v) for exported goods and cross-border taxable acts originally subject to tax rate of 11% and export tax refund rate of 11%, the export tax refund rate shall be adjusted to 10%. Circular 32 became effective on May 1, 2018 and shall supersede existing provisions which are inconsistent with Circular 32.

In March 2019, the MOF, the STA and General Administration of Customs jointly promulgated the *Announcement on Policies for Deepening the VAT Reform*, or Circular 39, according to which (i) for VAT taxable sales acts or importation of goods originally subject to value-added tax rates of 16% and 10% respectively, such tax rates shall be adjusted to 13% and 9%, respectively; (ii) for purchase of agricultural products originally subject to deduction rate of 10%, such deduction rate shall be adjusted to 9%; (iii) for purchase of agricultural products for the purpose of production and sales or consigned processing of goods subject to tax rate of 13%, such tax shall be calculated at the deduction rate of 10%; (iv) for exported goods originally subject to tax rate of 16% and export tax refund rate of 16%, the export tax refund rate shall be adjusted to 13%; and (v) for exported goods and cross-border taxable acts originally subject to tax rate of 10% and export tax refund rate of 10%, the export tax refund rate shall be adjusted to 9%. Circular 39 became effective on April 1, 2019 and shall supersede existing provisions which are inconsistent with Circular 39.

Regulations Related to M&A and Overseas Listings

The M&A Rules, among other things, require that (i) PRC entities or individuals obtain MOFCOM approval before they establish or control a special purpose vehicle, or SPV, overseas, provided that they intend to use the SPV to acquire their equity interests in a PRC company at the consideration of newly issued share of the SPV, or Share Swap, and list their equity interests in the PRC company overseas by listing the SPV in an overseas market; (ii) the SPV obtains MOFCOM's approval before it acquires the equity interests held by the PRC entities or PRC individual in the PRC company by Share Swap; and (iii) the SPV obtains CSRC approval before it lists overseas.

In addition, the *Measures for the Security Review of Foreign Investment*, or the NSR Measures, was jointly issued by the NDRC and MOFCOM on December 19, 2020, and effective from January 18, 2021. The NSR Measures specify, among other things, provisions concerning the national security review mechanism on foreign investment, including the types of investments subject to review, review scopes and procedures. According to the NSR Measures, the national security review working mechanism, or the NSR Authority, is empowered to be responsible for overseeing, coordinating and guiding the national security review procedures, and all foreign investment in the defense-related sectors and the investment resulting in foreign investors' acquisition of the control of the PRC target in certain other important sectors (including important infrastructure and important information technology and internet products and services) are subject to national security review, while there is no further guidance on the exact coverage of such important sectors nor a clear definition of the "control", and the NSR Authority has a very broad discretion to interpret and determine in practice.

In order to regulate overseas securities offering and listing activities by domestic companies in direct or indirect form, on February 17, 2023, the CSRC released the New Regulations on Filing. Under New Regulations on Filing, a filing-based regulatory system will be applied to “indirect overseas offering and listing” of PRC domestic companies, which refers to such securities offering and listing in an overseas market made in the name of an offshore entity, but based on the underlying equity, assets, earnings or other similar rights of a domestic company which operates its main business domestically. According to the New Regulations on Filing, if the issuer meets the following conditions at the same time, its offering and listing will be deemed as an “indirect overseas offering and listing by a domestic company”: (i) the revenues, total profits, total assets or net assets of the Chinese operating entities in the most recent financial year accounts and any index accounts for more than 50% of the corresponding data in the issuer’s audited consolidated financial statements for the same period; (ii) the main parts of business activities are conducted in PRC or its principal place of business is located in PRC, or the majority of senior management in charge of business operation are Chinese citizens or have domicile in PRC. In case of an overseas initial public offering or listing, it shall file with the CSRC within three working days after submitting the application documents for issuance and listing abroad. However, listed companies are not required to apply for the filing immediately until they involved in matters required filings, such as follow-on financing activities. Pursuant to the newly promulgated New Regulations on Filing, as for companies seeking offering and listing with contractual arrangements, the CSRC will solicit opinions from relevant regulatory authorities and approve the filing of the offering and listing of such companies if they duly meet the compliance requirements. In addition, new PRC laws, rules and regulations may be introduced to impose additional requirements that may impose additional challenges to our corporate structure and VIE agreements. If we fail to timely complete the relevant filing procedures for our further offering, we may face sanctions by the CSRC or other PRC regulatory agencies, which may include fines and penalties on our operations in China, limitations on our operating privileges in China, restrictions on or prohibition of the payments or remittance of dividends by our PRC subsidiary in China, delay of or restriction on the repatriation of the proceeds from this offering into China, or other actions that could have a material and adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of our ADSs. The CSRC or other PRC regulatory authorities also may take actions requiring us, or circumstances may become advisable for us, to halt our offerings before settlement and delivery of the shares offered.

Hong Kong Regulations

While there is no specific regulatory approval required for companies, including foreign entities, to develop and operate data centers in Hong Kong, our business operations are subject to various regulations and rules promulgated by the Hong Kong government. The following is a brief summary of the Hong Kong laws and regulations that currently and materially affect our business.

This section does not purport to be a comprehensive summary of all present and proposed regulations and legislation relating to the industries in which we operate.

Laws and Regulations related to Town Planning and Land Use Rights of Data Centers

Generally, companies do not face restrictions on the purchase and ownership of land and buildings. Under Hong Kong’s Town Planning Ordinance (Chapter 131 of the Laws of Hong Kong), or the TPO, land in Hong Kong is zoned for different purposes under the Outline Zoning Plans, or the OZPs. Data centers may only be operated in certain areas under the OZPs including areas zoned as “Commercial”, “Industrial” and more. Permission may also be given from the Town Planning Board for certain other areas, including areas zoned as “Comprehensive Development Area” to be used as data centers.

In addition to the town planning restrictions under the TPO, the use of any specific land lot in Hong Kong is also subject to the land lease governing the lot on which the property stands and containing restrictions on the land use and other requirements maintained by, among others, the Lands Department, or LandsD.

Companies developing and operating data centers in Hong Kong may source potential land supply by either directly acquiring land from the Hong Kong government or to convert existing lands and properties by way of applying for either a lease modification or waiver on lease restrictions as part of the Hong Kong government’s initiative to provide concessionary measures to facilitate data center development.

The Practice Notes No.3/2012, No.3/2012A and No.3/2012B published by LandsD in 2016, or the PNs, introduced measures to incentivize the relevant land owners to apply for a lease modification or a land exchange for development of an industrial lot for high-tier data center use. According to the PNs, relevant owners or developers may submit an application for development of an industrial land lot for a high-tier data center use up to or less than the maximum permissible development intensity permitted under the relevant statutory town plan or, where the statutory town plan does not specify the maximum permissible development intensity, the Buildings Ordinance (Chapter 123 of the Laws of Hong Kong), or the BO. LandsD would assess the land premium payable by the owner, which will be an amount “equivalent to the difference between the value of the land under the current lease conditions and its value under the proposed modified lease conditions.” Furthermore, an administrative fee is also payable for LandsD to process the application.

Further, the PNs permit owners of industrial buildings located in certain areas under the OZPs apply for a waiver, at zero waiver fee, for changing the use of such part(s) of the industrial building as a data center if, as at the date of the submission of such application, the age of the industrial building is not less than 15 years. The granting of this type of waiver is subject to, among others, a number of salient terms (such as compliance with the BO).

Laws and Regulations related to the Building Design and Use

The Buildings Energy Efficiency Ordinance (Chapter 610 of the Laws of Hong Kong) under the purview of the Electrical and Mechanical Services Department governs the efficiency of the mechanical and electrical installations used in data centers, including the cooling equipment and standby generators.

The Building (Planning) Regulations (Chapter 123F of the Laws of Hong Kong) stipulates the requirements and control on the development intensity of buildings, including buildings used as data centers and the Buildings Department has issued various practice notes promulgating guidelines for sustainable building design, the policies on the calculations of gross floor area of buildings and energy efficiency of buildings with respect to, among others, data centers.

Laws and Regulations relating to Inland Revenue

Companies carrying out business in Hong Kong are subject to the profits tax regime under the Inland Revenue Ordinance (Chapter 112 of the Laws of Hong Kong), or the IRO. The IRO is an ordinance for the purposes of imposing taxes on property, earnings and profits in Hong Kong. The IRO provides, among others, that persons, which include corporations, partnerships, trustees and bodies of person, carrying on any trade, profession or business in Hong Kong are chargeable to tax on all profits (excluding profits from the sale of capital assets) arising in or derived from Hong Kong from such trade, profession or business.

As at December 31, 2022, the standard profits tax rate for corporations was at 8.25% on assessable profits up to HK\$2,000,000; and 16.5% on any part of assessable profits over HK\$2,000,000. The IRO also contains provisions relating to, among others, permissible deductions for outgoings and expenses, set-offs for losses and allowances for depreciation.

Laws and Regulations relating to Protection of Personal Data

The Personal Data (Privacy) Ordinance (Chapter 486 of the Laws of Hong Kong), or the PDPO, imposes a statutory duty on data users to comply with the requirements of the six data protection principles, or the Data Protection Principles, contained in Schedule 1 to the PDPO. The PDPO provides that a data user shall not do an act, or engage in a practice, that contravenes a Data Protection Principle unless the act or practice, as the case may be, is required or permitted under the PDPO.

The six Data Protection Principles are:

- Principle 1 – purpose and manner of collection of personal data;
- Principle 2 – accuracy and duration of retention of personal data;
- Principle 3 – use of personal data;
- Principle 4 – security of personal data;

- Principle 5 – information to be generally available; and
- Principle 6 – access to personal data.

Non-compliance with a Data Protection Principle may lead to a complaint to the Privacy Commissioner for Personal Data, or the Privacy Commissioner. The Privacy Commissioner may serve an enforcement notice to direct the data user to remedy the contravention and/or instigate prosecution actions. A data user who contravenes an enforcement notice commits an offense which may lead to a fine and imprisonment.

The PDPO also gives data subjects certain rights, inter alia:

- the right to be informed by a data user whether the data user holds personal data of which the individual is the data subject;
- if the data user holds such data, to be supplied with a copy of such data; and
- the right to request correction of any data they consider to be inaccurate.

The PDPO criminalizes, including but not limited to, the misuse or inappropriate use of personal data in direct marketing activities, non-compliance with a data access request and the unauthorized disclosure of personal data obtained without the relevant data user's consent. An individual who suffers damage, including injured feelings, by reason of a contravention of the PDPO in relation to his or her personal data may seek compensation from the data user concerned.

With respect to cross-border data transfer, the PDPO does not restrict the transfer of personal data outside of Hong Kong as at December 31, 2022 (while section 33 of the PDPO lists out certain restrictions on cross border personal data transfer, the section has, however, not been in force). In 2014, the Privacy Commissioner published its guidance on cross-border data transfer, with recommended good practices in cross-border data transfer. This was a guide for voluntary compliance.

Laws and Regulations relating to Employment

The relevant legislations that govern employment matters in Hong Kong include: (i) the Employment Ordinance (Chapter 57 of the Laws of Hong Kong); (ii) Minimum Wage Ordinance (Chapter 608 of the Laws of Hong Kong); (iii) Occupational Retirement Schemes Ordinance (Chapter 426 of the Laws of Hong Kong); (iv) Mandatory Provident Fund Schemes Ordinance (Chapter 485 of the Laws of Hong Kong); (v) Employees' Compensation Ordinance (Chapter 282 of the Laws of Hong Kong); and (vi) Occupational Safety and Health Ordinance (Chapter 509 of the Laws of Hong Kong).

According to the legislations above, although there is no specific requirement that employment contracts must be in written form, an employer is required to provide particulars of the terms of employment to the employee upon request. Wages should not be lower than the statutory minimum wage and shall be paid to the employees within seven days from the end of the relevant wage period. Employers also required to take out sufficient employees compensation insurance in respect of their liability to compensate employees for any injury or accident arising out of and in the course of employment. In addition, all employers are required to provide a safe and healthy work environment to all employees and put in place appropriate measures in the workplace. Violations of the relevant legislation may result in the imposition of fines or imprisonments and also claims from the employees.

Macau Laws and Regulations

Laws and regulations in relation to data centers

Lease regime

Under the Macau law, the act of letting out the physical space of the data center shall be categorized as "Leasing of Immovable Property" as governed by article 969 et seq of the Macau Civil Code, as approved by Decree Law no 39/99/M dated August 3, 1999.

The main obligations of the lessor are to (i) deliver the leased object to the lessee and (ii) ensure the enjoyment of the leased object by the lessee under its original purpose, without prejudice to the special provisions as agreed by the parties in the lease agreement which are not contrary against the compulsory provisions under the Macau law.

The agreement of the lease of immovable property in Macau must be made in written form and subject to signature notarization. The lack of the said compulsory form shall trigger the nullity of the agreement unless any party intentionally infringes such regulation for the purpose of taking it as an advantage in bad faith.

Moreover, even if a definite term is set forth, the expiration of lease agreement of immovable property is still subject to a termination notice serving to the other party in advance in a certain period before its expiry. If no termination notice in advance is served on time, the lease will be automatically renewed under the same terms and conditions but a term of one year will be extended if the original term is more than one year.

Furthermore, the lessor is not entitled to serve the termination notice to the lessee to terminate the lease upon its expiry if the lease has not lasted for three years (even if the term of the lease is less than three years).

The business of letting out physical space of the data center is not subject to any governmental license, permit or authorization in Macau.

Laws and Regulations in relation to Environment Protection and Pollution

The fundamentals of the legal regime of environmental protection law of Macau, which is applicable to every individual and corporate entity, are the Basic Law of Macau, Law no. 2/91/M dated March 11, 1991, or Law no. 2/91/M, which is also known as the environmental law, and series of international conventions in related fields applicable to Macau.

Article 119 of the Basic Law of Macau states that “The Macau Special Administrative Region shall carry out the protection of environment in accordance with law.” To implement this article together with the Law no. 2/91/M and other applicable international conventions, numbers of environmental legislations in form of law, decree law and administrative regulations have been enacted in various fields such as natural heritage protection, air, sea and sound pollution, hygiene of environment, chemical goods, etc.

As a general rule prescribed in the Law no. 2/91/M, any violation of the environmental legislations will subject to civil liability, administrative fine or criminal punishment depending on different violations and also administrative injunction is possible to be granted to cease environmental infringement.

According to article 8 paragraph 1 of the Law no. 2/91/M, everyone is entitled to air quality suiting basic health and well-being, whether in public spaces, residential areas, workplace and others. Moreover, the paragraph 3 of the said article of the Law no. 2/91/M stipulates that any installation, machine or means of transportation whose activity may affect the air quality must be equipped with a device or other means that can ensure compliance with legal emission limits under the penalty of being banned.

In what respects water quality, it is forbidden under article 23 paragraph 1 of the Law no. 2/91/M to discharge in marine jurisdictions any substances, liquid or solid residues that may, somehow, pollute the water, beaches, shoreline, as well as flora and fauna, such as oil products or oil containing mixtures, or other chemical substances set in applicable international agreements or conventions.

Furthermore, in Macau, there is a general rule prescribed in General Regulation of Public Place, as approved by Administrative Regulation no. 28/2004 dated August 16, 2004, that every work involved solid waste shall be arranged and conducted in order to avoid and reduce to the most extent the risk to public health and environmental damage. Under the said General Regulation of Public Place, drain water or any contaminated fluid or gas must not be released to public place.

Regarding noise pollution, it is restricted by the provisions as set out in Law no. 8/2014 dated August 25, 2014, or Law no. 8/2014, which is also known as the law for “Prevention and Control of Environmental Noise”, and its subordinate rule Chief Executive Dispatch no. 248/2014 dated September 1, 2014, or Chief Executive Dispatch no. 248/2014, which sets out the applicable acoustic standard in this aspect in order to replace the Decree Law no. 54/94/M dated November 14, 1994 and its subordinate rule Order no. 241/94/M dated November 14, 1994. Under the Law no. 8/2014, as supplemented by its subordinate rule Chief Executive Dispatch no. 248/2014, the installation and operation of new industrial, commercial or service units is not permitted, nor the expansion of existing units, when they may produce disturbing noise.

The regulatory authority in charge of environmental protection matters is the Macau Environmental Protection Bureau which has promulgated certain environmental protection guidelines in relation to different kind pollution in connection to construction site, such as renovation, demolition and noise. However, police authorities are also legally entitled to monitor the compliance of regulation.

Laws and Regulations in relation to Labor

The labor legal framework of Macau is regulated by Law no. 7/2008 dated August 18, 2008, or Law no. 7/2008, and the regime of hiring non-resident workers is governed by Law no. 21/2009 dated October 27, 2009, or Law no. 21/2009.

Pursuant to article 17 of Law no. 7/2008, employment of a local adult is not subject to written form and can be made by verbal contract. However, under the Macau labor laws, a fixed-term employment is an exceptional regime based on the temporary necessity of the enterprise subject to written contract in which the rationale of temporary necessity must be specified.

Furthermore, the remuneration of employees must be paid by the legal tender of Macau, i.e. the Macau Patacas.

In accordance with Law no. 21/2009, for the purpose to work in Macau, non-residents must obtain a valid work permit issued by the Macau Labor Bureau and register themselves as non-resident employees with the Immigration Department of the Macau Public Security Police Force.

The granting of work permit shall be filled to the Macau Labor Bureau by the employer with the reasons to hire foreign workers, instead of local resident, along with provision of supporting documents (e.g. vacancy registration with Macau Labor Bureau, contracts to prove the lack of manpower for the massive works).

Should the work permit be granted, the Macau Labor Bureau will set out the valid period of the work permit (the term of any labor contract pursuant to the work permit must not out of the valid period of the related work permit) and requirements for the validity of the work permit (e.g. determination of work site, undertaking to hire a certain number of local workers). If any of the validity requirements becomes violated, the related work permit may be revoked.

Tax Issues

Industrial Tax

Pursuant to the Regulation of Industrial Tax, as approved by Law No. 15/77/M dated December 31, 1977, all entities who exercise any commercial or industrial activities are subject to the Industrial Tax.

Industrial Tax is charged every year based on the fixed rates of the activities as stated in the General Table of Activities as annexed in the same Regulation of Industrial Tax. However, most of the items subject to Industrial Tax were waived by the Macau government in recent years by the budget legislation of each year.

Complementary Income Tax

The Complementary Income Tax shall be considered as profit tax in commercial or industrial activities which charges on the actual profit or estimated profit of the taxpayer pursuant to the article 4 of the Regulation of Complementary Income Tax, as approved by Law no. 21/78/M dated September 9, 1978.

Taxpayers of Complementary Income Tax are classified as either Group A or Group B.

Group A taxpayers are those entities (i) with capital not less than one million Macau Patacas (MOP\$1,000,000.00); or (ii) average taxable profits in three consecutive years of over five hundred thousand Macau Patacas (MOP500,000.00); or (iii) requesting to change to Group A from Group B by declaration. Besides the above, all other taxpayers are under Group B.

For the Group A taxpayer, the Complementary Income Tax is assessed based on its actual profit and each of the Group A taxpayers, along with a licensed accountant/auditor, is required to submit the following documents to the Macau Financial Bureau within April to June each year:

- Income declaration under the given tax form;
- Copy of the meeting minutes approving the accounts;
- Copies of consolidated balance sheet and profit and loss account in accordance with the Official Plan of Accounting;
- Worksheets due to adjustments and the trial balance;
- Depreciation schedule under the given tax form;
- Usage of reserve fund under the given tax form;
- Supporting documents of bad debts; and
- Technical report in relation to inventory value and the criteria of valuation, general administrative costs and other necessary information for determining the taxable profits.

A Group B taxpayer is not required to engage a licensed accountant/auditor nor submit the aforementioned mandatory documents that a Group A taxpayer is required to submit for tax reporting. However, a Group B taxpayer is still required to report its profit or deficit within February to March each year. The Macau Financial Bureau shall determine the estimated profit based on the type and performance of the industry that the taxpayer practices and other factors that the same authority thinks relevant, and shall issue the taxpayer an assessment letter in which the estimated profit and the tax amount will be stated on July of the respective year. Should the Group B taxpayer accept the estimated profit and pay the tax amount, the tax duties shall be complied with.

Singapore Regulations

Regulatory approvals for establishment of local subsidiaries developing and operating data centers generally

There is no specific regulatory approval required for foreign companies such as our company, to establish local subsidiaries to develop and operate data centers in Singapore. Singapore does not impose restrictions on the foreign development and operation of data centers.

Regulatory approvals, licenses and permits for the development and operation of data centers

Except for data center operators that deploy any telecommunication infrastructure or offer telecommunication services to third parties in the course of its data center operations, no specific telecommunication regulatory approvals are required for the development and operation of data centers in Singapore.

However, it is common for data center operators to provide bandwidth and connectivity services to their customers and cross-sell connectivity services. Our company would need to obtain the relevant telecommunication license(s) should we decide to do so.

There are no foreign equity limits imposed on telecommunication licensees in Singapore. Should our company be required to obtain the relevant telecommunication license(s), we do not foresee any issues arising from being a foreign investor, so long as we incorporate a local company or register as a local branch of a foreign company in Singapore to apply and hold the requisite telecommunication licence(s). In this regard, the Companies Act 1967 requires that every company incorporated in Singapore must have at least one (1) director who is ordinarily resident in Singapore.

Likewise, there are no requirements/restrictions on foreign investment in the relevant industries that our company conducts business in.

Regulatory requirements/restrictions on the purchase and ownership of land and buildings by foreign investors and their local subsidiaries

Generally, foreign investors and their local subsidiaries do not face restrictions on the purchase and ownership of land and buildings. Land in Singapore may be zoned for industrial, commercial or residential purposes. There are no restrictions for foreign individuals or entities to purchase and own commercial or industrial properties in Singapore. However, foreign investors would need to apply to the government for approval to purchase certain types of residential properties pursuant to the *Residential Property Act 1976*. Such a restriction is unlikely to be relevant to our company given that data centers are unlikely to occupy land zoned for residential purposes.

Regulatory requirements/restrictions on land use rights and constructions

Typically, data centers in Singapore occupy land managed and administered by *Jurong Town Corporation*, or JTC. JTC is a statutory board under the Ministry of Trade and Industry that spearheads industrial development in Singapore. Principally, JTC administers such data centers as a landlord/lessor through leases with tenures of approximately 30 years.

JTC leases typically provide that the lessee is to commence business operations within 6-12 months from the completion of development of the property. Furthermore, the lessee is normally obliged to conduct continuous operations of the property only for an authorized use throughout the lease term. Any disposal of interests (including assignment and disposal) under the JTC leases would also require the consent of JTC. The lessee is also required to construct the building within a building period, typically within 3 to 5 years, if the lessee is allocated land directly from JTC.

In view of policy intents of recent times, there may be sustainability requirements imposed by JTC and other regulatory bodies. In 2019, the Singapore government sought to manage the growth of data centers by imposing a moratorium on new data center projects. This moratorium has since been lifted subject to certain prescribed environmental standards and restrictions. Relevant government authorities have launched a pilot *Data Centre – Call for Application Exercise*, or data center-CFA, that will “facilitate the building of new data center capacity and allow for the calibrated and sustainable growth of data centers in Singapore”. Under the data center-CFA, there are several key evaluation requirements, namely (1) Sustainability: Best-in-class Resource Efficiency and Decarbonization; (2) Strategic: Strengthening Singapore as a regional and/or international connectivity hub; and (3) Economic: Broader contributions to Singapore’s economic objectives.

Given the stated reasons for the moratorium, it is anticipated that any future data center projects approved by the Singapore government must meet substantial sustainability requirements.

Regulatory requirements/restrictions pertaining to construction

Under the *Planning Act 1998*, planning permission from the *Urban Redevelopment Authority* or URA is required for any development or building project in Singapore. The owner or developer of industrial land has to appoint a Qualified Person, or QP (such as registered architects, registered surveyors and/or professional engineers) to prepare plans and submit a development application to URA via the CORENET eSS (COstruction and Real Estate NETwork e-Submission System). The Master Plan, a statutory land use plan available on the URA website, sets out land use zoning and the gross plot ratio for each (potential) development site, and forms the basis of consideration of possible approval of any development works.

Under the *Building Control Act 1989*, major building works and building plans would require consent from the Building and Construction Authority. Depending on the specific development, regulatory approval from various other technical government departments would be required.

There are various associated regulatory requirements which governs the process of and licensing of all aspects of the construction. These include work health and safety (construction) regulations, noise control regulations, and environmental public health regulations.

Before a constructed building can be occupied in Singapore, a Temporary Occupation Permit, or TOP, or Certificate of Statutory Completion, or CSC, is needed to be applied for. TOP can be applied for when certain requisites are complied with, while CSC can be applied for only when all requirements are complied with and for the building to be occupied on a permanent basis.

Regulatory requirements/restrictions on cross-border data transfer and privacy protection applicable to data center operators

The Personal Data Protection Act 2012, or PDPA, is the primary data protection legislation in Singapore, and it is administered and enforced by the regulator for data protection, the Personal Data Protection Commission, or PDPC.

Every organization (including data center operators) will be required to comply with the PDPA to the extent it carries out any collection, use or disclosure of personal data in Singapore.

There is no requirement for data to be hosted, stored, or processed in Singapore, or any cross-border prohibition for the transfer of data out of Singapore. However, the transfer of personal data out of Singapore is permitted subject to compliance with certain conditions.

The PDPC may give an organisation such directions as it thinks fit to ensure the organisation's compliance with the PDPA, including for the organisation to (a) stop collecting, using or disclosing personal data in contravention of the PDPA; and/or (b) destroy personal data collected in contravention of the PDPA.

The PDPC also has the power to impose financial penalties on organizations that are found to have intentionally or negligently breached the data protection obligations under the PDPA of (a) up to S\$1 million, or (b) 10% of the organisation's annual turnover in Singapore (on organizations with an annual turnover in Singapore exceeding \$10 million), whichever is higher.

Malaysia Regulations

The following is a summary of the material laws and regulations or requirements that affect our business activities in Malaysia or the rights of our shareholders to receive dividends and other distributions from us.

Regulations on Telecommunications Business

The *Communications and Multimedia Act 1998*, or CMA, together with the *Communications and Multimedia (Licensing) Regulations 2000*, or CMA Licensing Regulations, are the primary legislative instruments that regulate the licensing regime of the communications and multimedia industry in Malaysia, which is under the regulatory purview of the Malaysian Communications and Multimedia Commission, or MCMC.

MCMC had issued the *Advisory Notice on Cloud Service* on 15 October 2021, followed by the *Information Paper on Regulating Cloud Services* on 17 December 2021, both of which came into force on 1 April 2022, to provide that the licensing requirement under the Applications Service Providers Class, or ASP (C), license will be applicable to the provision of cloud services to end users in Malaysia under certain circumstances in the form of Infrastructure-as-a-Service (IaaS) or Platform-as-a-Service (PaaS). Where there is provision of any form of connectivity services over than cloud services, a Network Facilities Provider Individual (NFP(I)) and/or Network Service Provider Individual (NSP(I)) license will be required as well.

Regulations on Foreign Investment Restrictions

In the telecommunications sector, foreign equity restriction requirements apply for individual licenses (e.g. NFP(I) and/or NSP(I) licenses), where foreign entities may own up to 49% of the equity, while the remaining 51% must be held by Malaysians, of which at least 30% must be held by *Bumiputera*, i.e., Malay and local indigenous people in Malaysia.

Regulations on Dealings with Land

The *National Land Code* requires that all land dealings be registered in order to confer title or interest on the new proprietor or interest holder. In order to conduct certain dealings in relation to any land in Malaysia as a foreign entity, we need to obtain State Authority Consent pursuant to the *National Land Code*. The *Guideline on the Acquisition of Properties*, which is effective since 1 March 2014, further prescribes the permitted properties which may be acquired by foreign interests as well as procedures on the acquisition of properties by foreign interests.

Regulations on Development of Land and Construction of Buildings

The *Town and Country Planning Act 1976* requires any person intending to commence, undertake or carry out any development, to obtain a planning permission from the local planning authority.

The *Lembaga Pembangunan Industri Pembinaan Malaysia Act 1994*, or the *Construction Industry Development Board Act 1994*, facilitates the registration and accreditation of contractors that are carrying out construction works.

The *Street, Drainage and Building Act 1974* requires that a certificate of completion and compliance be issued by a local authority before occupation of a building.

Regulations on Business Licenses and Employment Related Registrations

The *Local Government Act 1976* empowers every local authority to grant a license or permit for any trade, occupation or premises and such license shall be subject to such conditions and restrictions as the local authority may prescribe.

The *Companies Act 2016* provides for the registration, administration and dissolution of companies and corporations, and allows foreign companies to elect whether to incorporate a local Malaysian company or establish a local branch office in Malaysia.

The *Income Tax Act 1967* requires local companies to register for an income tax reference number with the Inland Revenue Board of Malaysia upon commencing business in respect of itself as a taxable person and as an employer.

As an employer, we will also be required to register with and make the relevant contributions to the Employment Provident Fund, the Social Security Organisation, the Human Resources Development Fund, and the Employment Insurance System under SOCSO, pursuant to the *Employees Provident Fund Act 1991*, the *Employees' Social Security Act 1969*, the *Employment Insurance System Act 2017*, and the *Pembangunan Sumber Manusia Berhad Act 2001*, or the *Human Resources Development Corporation Act 2001*.

Regulations on Operations and Facilities

The *Fire Services Act 1988* governs the protection of persons and property from fire risks or emergencies, where every designated premises under the *Fire Services (Designated Premises) Order 1998* shall require a fire certificate issued by the Director General of Fire and Rescue.

The *Occupational Safety and Health Act 1994* imposes a duty on employers to ensure, so far as is practicable, the safety, health, and welfare at work of their employees.

The *Factories and Machinery Act 1967* regulates the registration and inspection of machineries. Pursuant to the *Factories and Machinery (Notification, Certificate of Fitness and Inspection) Regulations 1970*, the owner of every steam boiler, unfired pressure vessel or hoisting machine (e.g. lifts) is required to have a valid certificate of fitness in respect of the same.

The *Environmental Quality Act 1974* establishes standards for controlling air emissions, industrial effluents, sewage and wastes. For the purpose of establishing a data centre in Malaysia, we will appoint qualified persons to conduct an environmental impact assessment and to submit a report thereof.

The *Electricity Supply Act 1990*, or ESA, provides for the regulation of the electricity supply industry, the supply of electricity at reasonable prices, the licensing of any electrical installation, the control of any electrical installation, plant and equipment with respect to matters relating to the safety of persons and the efficient use of electricity and for purposes connected therewith.

The *Water Services Industry Act 2006* was enacted on 10 July 2006 to regulate water supply and water sewerage services in Peninsular Malaysia, including the requirement to obtain a license from the National Water Services Commission if we own or operate a water supply system or sewerage facilities or services, and comply with prescribed requirements governing the standards and prohibitions in respect of water supply and sewerage services.

Regulations on Cybersecurity

Apart from the telecommunications licensing regime, the CMA also regulates information security and network reliability and integrity in Malaysia. For example, it prohibits the use of network facilities or network services for the commission of any offence under Malaysian laws, prohibits use of equipment or devices in order to obtain unauthorized access to any network services and prohibits interception of any communications unless with lawful authority.

On 18 December 2015, MCMC registered and issued the *Technical Code on Specification for Green Data Centers*, which is the voluntary industry code developed by the technical standards forum of the industry, in order to provide the minimum requirements and best practices for green data centers to improve the energy efficiency of data centers and reduce the carbon footprint of the industry. On 15 October 2018, MCMC had also registered and issued the *Technical Code on Information and Network Security – Cloud Service Provider Selection*, which sets out guidelines applicable to all organizations in general and provides the selection criteria for cloud service providers. Compliance with these Technical Codes are not mandatory, unless specifically directed by MCMC.

The *Personal Data Protection Act 2010*, or PDPA, is the main legislation governing the processing of personal data in Malaysia. If we obtain a license under the CMA, we will then proceed to register as a data user under the PDPA, pursuant to the *Personal Data Protection (Class of Data Users) Order 2013* which provides that a data user which belongs to any of the classes of data users (one of which includes being a licensee under the CMA), is required to obtain a certificate of registration under the PDPA.

The *Computer Crimes Act 1997* provides for offences relating to the misuse of computers and criminalizes the act of gaining unauthorized access into computers or networks, spreading of malicious codes, such as viruses, worms and Trojan horses, unauthorized modification of any program or data on a computer as well as wrongful communication of any means of access to a computer to an unauthorized person.

In cases where computer or Internet-related crime activities are involved, but do not specifically fall within the ambit of any of the previous mentioned statutes, such as online fraud, cheating, theft, criminal defamation, intimidation, gambling and pornography, such offences may be charged under the *Penal Code*, which is the primary legislation dealing with criminal offences in Malaysia.

Indonesia Regulations

Regulatory approvals, licenses and permits for the development and operation of data centers

General licenses

Under Regulation 5/2021, Business Identification Number (Nomor Induk Berusaha, or NIB) is required for all Klasifikasi Baku Lapangan Usaha Indonesia, or KBLI. KBLI refers to the Indonesian Business Sector Classification under the Business Line Regulation. KBLI is a list of business activity classifications, organized by 'KBLI numbers/codes'. The codes describe the scope of the business activities that can be undertaken. Every company in Indonesia is required to secure general licenses as set out below.

1. NIB or Business Identification Number

NIB is a 13-digit number that serves as a proof of registration of a business actor to carry out business activities and/or activities in certain line of business. The NIB is issued by the Online Single Submission, or OSS Body. The NIB is also valid as the following licenses or approvals, among others: an Import Identification Number (Angka Pengenal Import or API) and a customs access rights.

2. NPWP or Taxpayer Identification Number

Under DG Tax Regulation 21/2019, NPWP is required for all KBLIs. NPWP is the identification number given to taxable entities as an identifier of the taxable entity in executing its rights and obligations pertaining to taxes.

Operational Licenses

In addition to the general licenses, companies in Indonesia must hold an Operational License. However, this will depend on the KBLI code in which the company's business activity is classified in. For data center companies in Indonesia, the typical KBLI codes and associated Operational Licenses are set out below.

1. For the colocation service, KBLI code 68111 (Self-owned or leased real estate)

This KBLI includes the activities of buying, selling, leasing and operating real estate, both privately owned and leased, such as apartment, residential, and non-residential buildings (such as exhibitions, private storage facilities, malls, shopping centers and others). This includes land sale activities, the development of buildings to be privately operated (for leasing spaces in the building), the distribution of real estate to be plots of land without developing the land.

The risk level for an Indonesian company with foreign shareholding (or also called PMA company) conducting the business under the KBLI code 68111 is classified as medium-low. Accordingly, the required Operational License for this is an unverified Standard Certificate.

2. For the telecom connectivity service, KBLI code 61922 (Data communication system services)

This KBLI includes the data communication system service activities that can be used for sending voice, images, data, information, and packages. This service is provided with a guarantee of continuity, quality, and safety. Based on Regulation 5/2021, a PMA company conducting business under this KBLI code 61922 will be considered a high-risk business. Therefore, such company will be required to obtain an Operational License in the form of a Telecommunication Service License from the Ministry of Communication and Information Technology.

Regulatory requirements/restrictions on the purchase and ownership of land and buildings by foreign investors and their local subsidiaries

In general, Indonesian law recognizes several underlying land titles. The following are the two most common forms of recognizing land ownership for the purposes of developing and operating a data center.

1. Foreign entity with local representatives

Indonesian law stipulates that a foreign entity having a representative office in Indonesia may be granted a Right to Use (Hak Pakai) parcels of land for a maximum of 30 years, and this can be extended for another 20 years and renewed for an additional period of 30 years.

2. Foreign investment company

Pursuant to the Investment Law (as amended), foreign investment is an investing activity to conduct business in Indonesia by using foreign capital (fully or partially). A PMA company can be established for that purpose and can own land via a Right to Build (Hak Guna Bangunan, or HGB). The HGB is granted for a maximum period of 30 years which can be extended for a maximum period of 20 years and further renewed for an additional period of 30 years.

Regulatory approvals/restrictions on electricity and water services for data centers

1. Electricity Supply

Public electricity supply is mainly provided by PT PLN (Persero), or PLN, a state-owned entity tasked to generate, transmit and supply electricity for the entire of Indonesia. The exception for this “monopoly” is electricity supplied to industrial parks which is commonly provided by private companies having a cooperation with the industrial park operator. To become PLN’s customer, the business entity will have to enter into a power purchase agreement, or PPA, with PLN in accordance with the Minister of Energy and Mineral Resources (MEMR) Regulation No. 28 of 2016 (as amended from time to time). Further, the customer will be required to pay a connection fee and subscription security deposit as a requirement for PLN to be able to supply electricity as prescribed under the PPA. The PPA will also govern other technical terms, including but not limited to, the construction and handover of the electrical installation which will be used to supply such electricity.

2. Water Supply

Law 17/2019 mandates that water resources must be controlled by the state and used for the utmost prosperity of the community. Therefore, individuals, community groups or business entities may not possess or control water resources, and such control remains with the central and regional governments whereby commercialization of water must be undertaken through the drinking water supply system (sistem penyelenggaraan air minum, or SPAM) framework operated by the state-owned company, or BUMN, or its regional counterpart, BUMD.

However, GR 122/2015 permits private entities to enter into a joint-cooperation with the relevant BUMN and/or BUMD to develop its for its own use a drinking water supply system (sistem penyelenggaraan air minum untuk memenuhi kebutuhan sendiri, or Own-use SPAM) for areas outside BUMN and BUMD’s service coverage. The cooperation between BUMN/ BUMD and private entity can be carried out either by way of business-to-business (B2B) or public-private partnership (PPP) schemes.

Regulatory requirements/restrictions on cross-border data transfer and privacy protection applicable to data center operators

Indonesia passed the data protection law, or PDP Law on 17 October 2022 and it will be Indonesia’s first principal personal data protection legislation that will offer a new regime of personal data protection rules in Indonesia. The existing laws and regulations with provisions on personal data protection (which are all governed in a sector-specific manner) will still apply, provided that they do not contradict the provisions under the PDP Law.

Under the PDP Law, a cross-border data transfer is allowed by a controller of personal data, or Controller, a party that determines the means and purposes of personal data processing activities. The PDP Law requires that a cross-border data transfer can only be done after the Controllers:

- (a) have ensured that the destination country where the recipient is domiciled at has personal data protection rules applied at the same level or higher level than that of Indonesia; or
- (b) if (a) is not satisfied, the Controller must ensure that there are proper and binding personal data protection safeguards (e.g. data transfer/data sharing agreements or binding corporate rules) in place for the transfer; or
- (c) if (a) and (b) are not satisfied, the Controller must obtain the consent of the relevant data subject (i.e. that he/she consents to the cross-border personal data transfer even though point (a) and (b) are unable to be fulfilled).

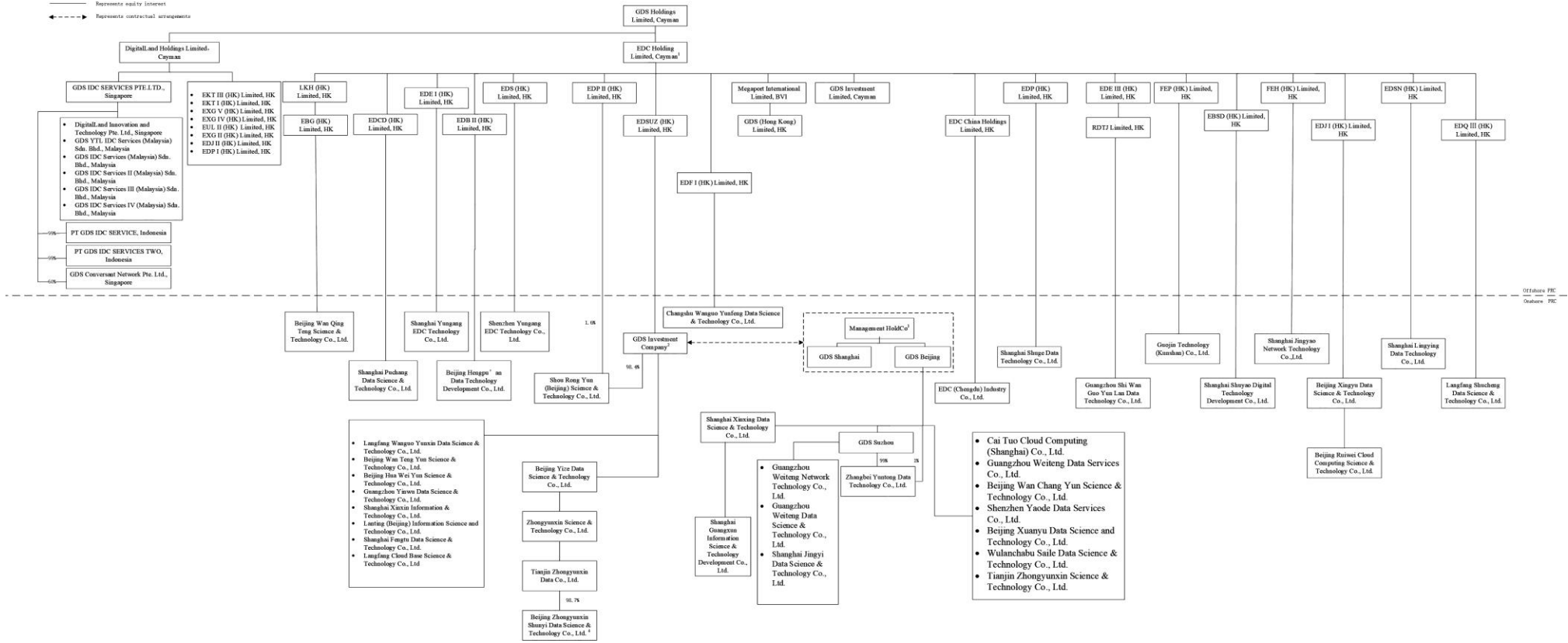
There is generally no restriction for companies in Indonesia to transfer data overseas, although overseas data transfer is restricted in certain sectors. These sectors include the healthcare, banking/financial services, and telecommunications sectors. Data center companies (particularly that only focus on providing colocation services) are not subject to the above sector-specific requirements. Accordingly, if an Indonesian company operates its data center services without a telecommunication license, then it will be allowed to transfer data overseas.

C. Organizational Structure

Our Corporate Structure

The diagram below summarizes our corporate structure and identifies our significant subsidiaries, consolidated VIEs and their significant subsidiaries as of December 31, 2022. The relationships among each of GDS Shanghai, GDS Beijing, Management HoldCo and GDS Investment Company as illustrated in the diagram below are governed by contractual arrangements and do not constitute equity ownership.

— Represents equity interest
 ← - - - - - Represents contractual arrangements



- (1) EDC Holding Limited has 61 direct and indirect subsidiaries incorporated in Hong Kong and 17 direct and indirect subsidiaries incorporated in the British Virgin Islands, Malaysia, Macau, Cayman and Singapore, respectively.
- (2) GDS Investment Company directly and indirectly holds equity interests of 68 subsidiaries in China.
- (3) Management HoldCo is held as to 20% by five management personnel designated by our board of directors namely, Yilin Chen (senior vice president, product and service and Southeast Asia business), Yan Liang (senior vice president, design, operation and delivery), Kejing Zhang (senior vice president, sales), Andy Wenfeng Li (general counsel, compliance officer, and company secretary) and Qi Wang (senior vice president, cloud and network business), respectively. Management HoldCo is controlled by our Company through a series of contractual arrangements.
- (4) Tianjin Zhongyunxin Data Co., Ltd., or Zhongyunxin Data, currently holds a 98.728% equity interests in Beijing Zhongyunxin Shunyi Data Science & Technology Co., Ltd., or Beijing Zhongyunxin, and the rest equity interests in Beijing Zhongyunxin will be transferred to Zhongyunxin Data from a third party subject to the satisfaction of certain conditions under relevant transaction documents.
- (5) Jiangsu Wan Guo Xing Tu Data Services Co., Ltd. or Jiangsu Wan Guo Xing Tu, effectively controls a project company, Nantong Wanguo Yunzhen Data Science & Technology Co., Ltd. or Nantong Yunzhen, to operate the B-O-T data centers in Nantong, China through a series of contractual arrangements among Jiangsu Wan Guo Xing Tu, Nantong Yunzhen's shareholder, Shanghai Xingchang Enterprise Management Company Limited or Shanghai Xingchang, and Shanghai Xingchang's shareholders.

To comply with the PRC regulations regarding foreign investment in VATs described above, and foreign exchange control, our preferred approach to structuring our data center operations and investments in China is to have VIEs and their subsidiaries which hold VATS licenses and provide services to customers and data center companies established as wholly foreign owned enterprises under the PRC Law which hold the data center property interests and assets.

In addition, for our data centers in China, in order to comply with PRC regulatory requirements, particularly those with respect to company registration and tax filing, as well as local government requirements, and to facilitate the onshore financing of our data centers by financial institutions in the PRC which is generally provided on an individual data center basis, we generally establish one wholly foreign owned enterprise at the district where the data center is located to hold the property interests and assets for such data center. In a small number of cases, we establish one wholly foreign owned enterprise to hold the property interests and assets for two to three data centers located at the same or adjacent premises. Furthermore, in order to provide flexibility for obtaining offshore financing for our data centers, which usually requires the pledge of the shares of the holding companies of data centers as collateral, we usually establish Hong Kong holding companies to separately hold the equity interest of the wholly foreign owned enterprises.

Contractual Arrangements with Affiliated Consolidated Entities

Due to PRC regulations that limit foreign equity ownership of entities providing VATS to less than 50%, we, similar to other entities with foreign-incorporated holding company structures operating in our industry in China, conduct a substantial part of our operations in China through contractual arrangements with the consolidated VIEs that are incorporated and 100% owned by PRC citizens or by PRC entities owned and/or controlled by PRC citizens.

As a result of these contractual arrangements, we control Management HoldCo, GDS Shanghai, GDS Beijing and 36 direct and indirect subsidiaries of GDS Beijing as of December 31, 2022, and have consolidated the financial information of these entities in our consolidated financial statements in accordance with U.S. GAAP.

Contractual Arrangements among GDS Investment Company, Management HoldCo, GDS Beijing and GDS Shanghai

The currently effective contractual arrangements by and among our wholly-owned PRC subsidiary, the consolidated VIEs, and the consolidated VIEs' shareholders include (i) certain equity interest pledge agreements, shareholder voting rights proxy agreement, exclusive call option agreements and certain loan agreements, which provide us with effective control over the consolidated VIEs; (ii) certain exclusive technology license and service agreements and intellectual property rights license agreement, which allow us to receive substantially all of the benefits generated from the operations of the consolidated VIEs and their subsidiaries. These contractual arrangements allow us to:

- exercise effective control over these consolidated VIEs;
- receive substantially all of the economic benefits of these consolidated VIEs and their subsidiaries; and
- have an exclusive option to purchase all or part of the equity interests in Management HoldCo, GDS Beijing and GDS Shanghai when and to the extent permitted by PRC law.

As a result of our contractual arrangements with the consolidated VIEs and their shareholders, we are the primary beneficiary of Management HoldCo, GDS Shanghai, GDS Beijing and its subsidiaries, and, therefore, have consolidated their financial results in our consolidated financial statements in accordance with U.S. GAAP.

These contractual arrangements may not be as effective as direct ownership in providing us with control over the consolidated VIEs. If the consolidated VIEs or their shareholders fail to perform their respective obligations under these contractual arrangements, our recourse to the assets held by the consolidated VIEs 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 regarding the interpretation and enforcement of the relevant laws and regulations. The enforceability of the agreements under the contractual arrangements has not been tested in a court of law. Furthermore, in connection with litigation, arbitration or other judicial or dispute resolution proceedings, assets under the name of any record holder of equity interest in the consolidated VIEs, 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.

For the years ended December 31, 2020, 2021 and 2022, the VIEs and their subsidiaries contributed 95.0%, 96.1% and 96.1%, respectively, of our total net revenue.

Currently, there are five individual management shareholders, each holding a 20% equity interest in Management HoldCo, namely Yilin Chen (senior vice president, product and service and Southeast Asia business), Yan Liang (senior vice president, design, operation and delivery), Kejing Zhang (senior vice president, sales), Andy Wenfeng Li (general counsel, compliance officer, and company secretary) and Qi Wang (senior vice president, cloud and network business). In conjunction with the transfer of ownership, we have, through GDS Investment Company, entered into a set of contractual arrangements with Management HoldCo, its shareholders, GDS Beijing and GDS Shanghai on substantially the same terms as those under the previous contractual arrangements with GDS Beijing and GDS Shanghai. We have also replaced the sole director of GDS Shanghai and certain subsidiaries of GDS Beijing with a board of three directors. Mr. Huang acts as the chairman of the board of directors of Management HoldCo, GDS Investment Company, GDS Beijing, and certain subsidiaries of GDS Beijing and GDS Shanghai, respectively. Other management members of us and board appointees serve as directors and officers of Management HoldCo, GDS Investment Company, GDS Beijing, and certain subsidiaries of GDS Beijing and GDS Shanghai.

We believe that this restructuring reduces risk by allocating ownership of the consolidated VIEs among a larger number of individual management shareholders, and strengthens corporate governance with the establishment of the boards of directors in the consolidated VIEs and their subsidiaries. We also believe that this restructuring creates a more stable ownership structure by avoiding reliance on a single or small number of natural persons, and by buffering the ownership of the consolidated VIEs with an additional layer of legal entities, creating an institutional structure that is tied to our management and culture.

The following is a summary of the currently effective contractual arrangements by and among GDS Investment Company, Management HoldCo, GDS Beijing, GDS Shanghai, and the shareholders of Management HoldCo, as applicable, that provide us with effective control of the consolidated VIEs and their respective subsidiaries and that enable us to receive substantially all of the economic benefits from their operations.

Agreements that Provide us with Effective Control over GDS Beijing, GDS Beijing's subsidiaries and GDS Shanghai

Equity Interest Pledge Agreements. Pursuant to the equity interest pledge agreements, Management HoldCo has pledged all of its equity interest in GDS Beijing and GDS Shanghai as a continuing first priority security interest, as applicable, to respectively guarantee GDS Beijing's, GDS Shanghai's and Management HoldCo's performance of their obligations under the relevant contractual arrangement, which include the exclusive technology license and service agreement, loan agreement, exclusive call option agreement, shareholder voting rights proxy agreement, and intellectual property rights license agreement. If GDS Beijing or GDS Shanghai or Management HoldCo breaches their contractual obligations under these agreements, GDS Investment Company, as pledgee, will be entitled to certain rights regarding the pledged equity interests, including receiving proceeds from the auction or sale of all or part of the pledged equity interests of GDS Beijing and GDS Shanghai in accordance with PRC law. Management HoldCo agrees that, during the term of the equity interest pledge agreements, it will not dispose of the pledged equity interests or create or allow creation of any encumbrance on the pledged equity interests without the prior written consent of GDS Investment Company. The equity interest pledge agreements remain effective until GDS Beijing and GDS Shanghai and Management HoldCo discharge all their obligations under the contractual arrangements. We have registered the equity pledge by both GDS Beijing and GDS Shanghai in favor of GDS Investment Company with the relevant office of the Administration for Market Regulation in accordance with the relevant PRC laws and regulations.

Shareholder Voting Rights Proxy Agreement. Pursuant to the shareholder voting rights proxy agreements, each of GDS Beijing, GDS Shanghai and Management HoldCo has irrevocably appointed the PRC citizen(s) as designated by GDS Investment Company to act as GDS Beijing's, GDS Shanghai's and Management HoldCo's exclusive attorney-in-fact to exercise all shareholder rights, including, but not limited to, voting on all matters of GDS Beijing, GDS Beijing's subsidiaries and GDS Shanghai requiring shareholder approval, and appointing directors and executive officers. GDS Investment Company is also entitled to change the appointment by designating another PRC citizen(s) to act as exclusive attorney-in-fact of GDS Beijing, GDS Shanghai and Management HoldCo with prior notice to Management HoldCo. Each shareholder voting rights proxy agreement will remain in force for so long as Management HoldCo remains a shareholder of GDS Beijing or GDS Shanghai, as applicable.

Agreements that Provide us with Effective Control over our Management HoldCo

Equity Interest Pledge Agreements. Pursuant to the equity interest pledge agreements, each shareholder of Management HoldCo has pledged all of his or her equity interest in Management HoldCo as a continuing first priority security interest, as applicable, to respectively guarantee Management HoldCo's and its shareholders' performance of their obligations under the relevant contractual arrangement, which include the exclusive technology license and service agreement, loan agreement, exclusive call option agreement, shareholder voting rights proxy agreement, and intellectual property rights license agreement. If Management HoldCo or any of its shareholders breaches their contractual obligations under these agreements, GDS Investment Company, as pledgee, will be entitled to certain rights regarding the pledged equity interests, including receiving proceeds from the auction or sale of all or part of the pledged equity interests of Management HoldCo in accordance with PRC law. Each of the shareholders of Management HoldCo agrees that, during the term of the equity interest pledge agreements, he or she will not dispose of the pledged equity interests or create or allow creation of any encumbrance on the pledged equity interests without the prior written consent of GDS Investment Company. The equity interest pledge agreements remain effective until Management HoldCo and its shareholders discharge all their obligations under the contractual arrangements. We have registered the equity pledge by Management HoldCo in favor of GDS Investment Company with the relevant office of the Administration for Market Regulation in accordance with the relevant PRC laws and regulations.

Shareholder Voting Rights Proxy Agreement. Pursuant to the shareholder voting rights proxy agreements, each of the shareholders of Management HoldCo and Management HoldCo has irrevocably appointed the PRC citizen(s) as designated by GDS Investment Company to act as such shareholder's and Management HoldCo's exclusive attorney-in-fact to exercise all shareholder rights, including, but not limited to, voting on all matters of Management HoldCo and its subsidiaries requiring shareholder approval, and appointing directors and executive officers. GDS Investment Company is also entitled to change the appointment by designating another PRC citizen(s) to act as exclusive attorney-in-fact of the shareholders of Management HoldCo and Management HoldCo with prior notice to such shareholders. Each shareholder voting rights proxy agreement will remain in force for so long as the shareholder remains a shareholder of Management HoldCo, as applicable.

Agreements that Allow us to Receive Economic Benefits from GDS Beijing and GDS Shanghai

Exclusive Technology License and Service Agreements. Under the exclusive technology license and service agreements, GDS Investment Company licenses certain technology to each of GDS Beijing and GDS Shanghai and GDS Investment Company has the exclusive right to provide GDS Beijing and GDS Shanghai with technical support, consulting services and other services. Without GDS Investment Company's prior written consent, each of GDS Beijing and GDS Shanghai agrees not to accept the same or any similar services provided by any third party. Each of GDS Beijing and GDS Shanghai agrees to pay service fees on a yearly basis and at an amount equivalent to all of its net profits as confirmed by GDS Investment Company. GDS Investment Company owns the intellectual property rights arising out of its performance of these agreements. In addition, each of GDS Beijing and GDS Shanghai has granted GDS Investment Company an exclusive right to purchase or to be licensed with any or all of the intellectual property rights of either GDS Beijing or GDS Shanghai at the lowest price permitted under PRC law. Unless otherwise agreed by the parties, these agreements will continue remaining effective.

Intellectual Property Rights License Agreement. Pursuant to an intellectual property rights license agreement between GDS Investment Company and each of GDS Beijing and GDS Shanghai, GDS Beijing and GDS Shanghai has granted GDS Investment Company an exclusive license to use for free any or all of the intellectual property rights owned by each of them from time to time, and without the parties' prior written consent, GDS Beijing and GDS Shanghai cannot take any actions, including without limitation to, transferring or licensing outside its ordinary course of business any intellectual property rights to any third parties, which may affect or undermine GDS Investment Company's use of the licensed intellectual property rights from GDS Beijing and GDS Shanghai. The parties have also agreed under the agreement that GDS Investment Company should own the new intellectual property rights developed by it regardless of whether such development is dependent on any of the intellectual property rights owned by GDS Beijing and GDS Shanghai. This agreement can only be early terminated by prior mutual consent of the parties and need to be renewed upon GDS Investment Company's unilateral request.

Agreements that Allow us to Receive Economic Benefits from our Management HoldCo

Exclusive Technology License and Service Agreements. Under the exclusive technology license and service agreements, GDS Investment Company licenses certain technology to Management HoldCo and GDS Investment Company has the exclusive right to provide Management HoldCo with technical support, consulting services and other services. Without GDS Investment Company's prior written consent, Management HoldCo agrees not to accept the same or any similar services provided by any third party. Management HoldCo agrees to pay service fees on a yearly basis and at an amount equivalent to all of its net profits as confirmed by GDS Investment Company. GDS Investment Company owns the intellectual property rights arising out of its performance of these agreements. In addition, Management HoldCo has granted GDS Investment Company an exclusive right to purchase or to be licensed with any or all of the intellectual property rights of Management HoldCo at the lowest price permitted under PRC law. Unless otherwise agreed by the parties, these agreements will continue remaining effective.

Intellectual Property Rights License Agreement. Pursuant to an intellectual property rights license agreement between GDS Investment Company and Management HoldCo, Management HoldCo has granted GDS Investment Company an exclusive license to use for free any or all of the intellectual property rights owned by Management HoldCo from time to time, and without the parties' prior written consent, Management HoldCo cannot take any actions, including without limitation to, transferring or licensing outside its ordinary course of business any intellectual property rights to any third parties, which may affect or undermine GDS Investment Company's use of the licensed intellectual property rights from Management HoldCo. The parties have also agreed under the agreement that GDS Investment Company should own the new intellectual property rights developed by it regardless of whether such development is dependent on any of the intellectual property rights owned by Management HoldCo. This agreement can only be early terminated by prior mutual consent of the parties and need to be renewed upon GDS Investment Company's unilateral request.

Agreements that Provide Us with the Option to Purchase the Equity Interest in GDS Beijing and GDS Shanghai

Exclusive Call Option Agreements. Pursuant to the exclusive call option agreements, Management HoldCo has irrevocably granted GDS Investment Company an exclusive option to purchase, or have its designated person or persons to purchase, at its discretion, to the extent permitted under PRC law, all or part of Management HoldCo's equity interests in GDS Beijing and GDS Shanghai. The purchase price should be equal to the minimum price required by PRC law or such other price as may be agreed by the parties in writing. Without GDS Investment Company's prior written consent, Management HoldCo has agreed that each of GDS Beijing and GDS Shanghai shall not amend its articles of association, increase or decrease the registered capital, sell or otherwise dispose of its assets or beneficial interest, create or allow any encumbrance on its assets or other beneficial interests, provide any loans, distribute dividends to the shareholders and etc. These agreements will remain effective until all equity interests of GDS Beijing and GDS Shanghai held by their shareholders have been transferred or assigned to GDS Investment Company or its designated person(s).

Loan Agreements. Pursuant to the loan agreements between GDS Investment Company and Management HoldCo, GDS Investment Company has agreed to extend loans in an aggregate amount of RMB310.1 million to Management HoldCo solely for the capitalization of GDS Beijing and GDS Shanghai. Pursuant to the loan agreements, GDS Investment Company has the right to require repayment of the loans upon delivery of 30 days' prior notice to Management HoldCo, and Management HoldCo can repay the loans by either sale of their equity interests in GDS Beijing and GDS Shanghai to GDS Investment Company or its designated person(s) pursuant to their respective exclusive call option agreements, or other methods as determined by GDS Investment Company pursuant to its articles of association and the applicable PRC laws and regulations.

Agreements that Provide Us with the Option to Purchase the Equity Interest in Management HoldCo

Exclusive Call Option Agreements. Pursuant to the exclusive call option agreements, each shareholder of Management HoldCo has irrevocably granted GDS Investment Company an exclusive option to purchase, or have its designated person or persons to purchase, at its discretion, to the extent permitted under PRC law, all or part of such shareholder's equity interests in Management HoldCo. The purchase price should be equal to the minimum price required by PRC law or such other price as may be agreed by the parties in writing. Without GDS Investment Company's prior written consent, the shareholders of Management HoldCo have agreed that Management HoldCo shall not amend its articles of association, increase or decrease the registered capital, sell or otherwise dispose of its assets or beneficial interest, create or allow any encumbrance on its assets or other beneficial interests, provide any loans, distribute dividends to the shareholders and etc. These agreements will remain effective until all equity interests of Management HoldCo held by its shareholders have been transferred or assigned to GDS Investment Company or its designated person(s).

Loan Agreements. Pursuant to the loan agreements between GDS Investment Company and the shareholders of Management HoldCo, GDS Investment Company has agreed to extend loans in an aggregate amount of RMB1 million to the shareholders of Management HoldCo solely for the capitalization of Management HoldCo. Pursuant to the loan agreements, GDS Investment Company has the right to require repayment of the loans upon delivery of 30 days' prior notice to the shareholders, and the shareholders can repay the loans by either sale of their equity interests in Management HoldCo to GDS Investment Company or its designated person(s) pursuant to their respective exclusive call option agreements, or other methods as determined by GDS Investment Company pursuant to its articles of association and the applicable PRC laws and regulations.

In the opinion of King & Wood Mallesons, our PRC counsel:

- the ownership structures of GDS Investment Company, Management HoldCo, GDS Shanghai and GDS Beijing, do not violate any of the applicable PRC laws or regulations currently in effect; and
- the contractual arrangements among GDS Investment Company, Management HoldCo, GDS Shanghai, GDS Beijing, and the shareholders of Management HoldCo, are governed by PRC law, and are currently valid, legally binding and enforceable in accordance with the applicable PRC laws or regulations currently in effect, and do not violate any of the applicable PRC laws or regulations currently in effect.

However, there are substantial uncertainties regarding the interpretation and application of current and future PRC laws, regulations and rules. The PRC regulatory authorities may in the future take a view that is contrary to the above opinion of our PRC counsel. If the PRC regulatory authorities find that the agreements that establish the structure for providing our IDC services do not comply with PRC government restrictions on foreign investment in IDC services, we could be subject to severe penalties, including being prohibited from continuing operations.

Subsidiaries of GDS Holdings Limited

An exhibit containing a list of our subsidiaries has been filed with this annual report.

D. Property, Plants and Equipment

Please refer to “B. Business Overview—Our Data Centers” for a discussion of our property, plants and equipment.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Unless otherwise stated, the discussion and analysis of our financial condition and results of operations in this section apply to our financial information as prepared in accordance with U.S. GAAP. You should read the following discussion and analysis of our financial position and results of operations in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results and the timing of selected events could 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” and elsewhere in this annual report.

Overview

We are a leading developer and operator of high-performance data centers in China. Our facilities are strategically located in primary economic hubs where demand for high-performance data center services is concentrated. Our data centers are designed and configured as high-performance data centers with large net floor area and power capacity, high power density and efficiency, and multiple redundancy across all critical systems. In China, we are carrier and cloud neutral, which enables our customers to access all the major PRC telecommunications networks, as well as the largest PRC and global public clouds which we host in many of our facilities. We offer colocation and managed services, including an innovative and unique managed cloud value proposition. We have a 22-year track record of service delivery, successfully fulfilling the requirements of some of the largest and most demanding customers for outsourced data center services in China. As of December 31, 2022, we had an aggregate net floor area of 515,787 sqm in service, 95.5% of which was committed by customers, and an aggregate net floor area of 192,713 sqm under construction, 71.5% of which was pre-committed by customers.

Our results of operations are largely determined by the degree to which our data center capacity is committed or pre-committed as well as its utilization. We had commitment rates for our area in service of 94.6%, 93.8% and 95.5% as of December 31, 2020, 2021 and 2022, respectively. We had utilization rates for our area in service of 70.3%, 65.5% and 71.8% as of December 31, 2020, 2021 and 2022, respectively. The difference between commitment rate and utilization rate is primarily attributable to customers who have not yet fully utilized all of the revenue-generating services for which they have committed.

We have experienced significant growth in recent years. Our net revenue grew from RMB5,739.0 million in 2020 to RMB7,818.7 million in 2021, representing an increase of 36.2%, and increased to RMB9,325.6 million (US\$1,352.1 million) in 2022, representing an increase of 19.3%. Our net revenues from colocation services were RMB4,710.9 million, RMB6,514.3 million and RMB7,943.3 million (US\$1,151.7 million) in 2020, 2021 and 2022, representing 82.1%, 83.3% and 85.2% of total net revenue over the same periods, respectively. Our net revenues from managed services and other services were RMB1,006.0 million, RMB1,300.1 million and RMB1,374.6 million (US\$199.3 million) in 2020, 2021 and 2022, representing 17.5%, 16.6% and 14.7% of total net revenue over the same periods, respectively. Our net revenue from IT equipment sales were RMB22.1 million, RMB4.3 million and RMB7.7 million (US\$1.1 million) in 2020, 2021 and 2022, representing 0.4%, 0.1% and 0.1% of total net revenue over the same periods, respectively. Our net loss increased from RMB669.2 million in 2020 to RMB1,191.2 million in 2021, and increased to RMB1,266.1 million (US\$183.6 million) in 2022. Our adjusted EBITDA increased from RMB2,680.6 million in 2020 to RMB3,703.4 million in 2021, and increased to RMB4,251.4 million (US\$616.4 million) in 2022. As of December 31, 2020, 2021 and 2022, our accumulated deficit was RMB2,723.6 million, RMB3,910.8 million and RMB5,179.7 million (US\$751.0 million), respectively.

Key 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 rapid growth in this market during recent years and any adverse changes in the data center services market in China may harm our business and results of operations. In addition, we believe that our results of operations are directly affected by the following key factors.

Ability to Source and Develop Data Centers

Our revenue growth depends on our ability to source and develop additional data centers. We endeavor to ensure continuous availability of data center capacity to satisfy customer demand by maintaining a supply of high-performance data centers in various stages of development—from developing a pipeline of sites, to identifying appropriate sites, to data centers under construction to available net floor areas in existing data centers. We expand our sourcing of new data center area by (i) acquiring or leasing property which we develop for use as data center facilities, whether through constructing on greenfield land, redeveloping brownfield sites, converting existing industrial buildings, or fitting out and equipping purpose-built building shells, (ii) leasing existing data center capacity from third-party wholesale providers, and (iii) acquiring high-performance data centers from other companies. Our ability to maintain a growing supply of data center assets directly affects our revenue growth potential.

If we are unable to obtain suitable land or buildings for new data centers or to do so at an acceptable cost to us or experience delays or increased costs during the data center design and construction development process which includes securing the power and relevant energy quota under the energy conservation review opinion, our ability to grow our revenue and improve our results of operations would be negatively affected. Additionally, if demand slows unexpectedly or we source and develop data centers too rapidly, the resulting overcapacity would adversely affect our results of operations.

Ability to Secure Commitments from Our Customers

We usually commence marketing new data center facilities before we commence construction by seeking strong indications of interest from customers. We aim to convert such indications of interest into legally-binding pre-commitment agreements for a substantial part of the capacity under development as early as possible in the construction cycle. Through securing such pre-commitments, we are able to reduce investment risk and optimize resource planning. We had pre-commitment rates of 77.4%, 61.3% and 71.5% as of December 31, 2020, 2021 and 2022, respectively. Once construction is complete, and the data center enters service, we re-categorize area pre-committed as area committed. We aim to maintain high levels of long-term commitment rates. We had commitment rates for our area in service of 94.6%, 93.8% and 95.5% as of December 31, 2020, 2021 and 2022, respectively. Our total area committed, as a leading indicator to our results of operations, increased from 438,100 sqm as of December 31, 2020 to 556,822 sqm as of December 31, 2021, and further to 630,716 sqm as of December 31, 2022.

Pricing Structure and Power Costs

Our results of operations will be affected by our ability to operate our data centers efficiently in terms of power consumption. Our data centers require significant levels of power supply to support their operations. Depending on the agreement, we agree with our customer to either charge them for actual power consumed or we factor it into a fixed price. Accordingly, the customer's actual power usage during the life of the agreement will affect its profitability to us. In October 2021, the NDRC announced a partial transition from fixed-rate to market rate mechanism for coal-fired power trading prices. As this reform is implemented, we may absorb higher operating expenses for our fixed price customer agreements. Optimal configuration of customers and power usage within each data center will affect our results of operations.

Utilization of Existing Capacity

Our ability to maximize profitability depends on attaining high utilization of data center facilities. A substantial majority of our cost of revenue and operating expenses are fixed in nature. Such costs increase with each new data center and entail additional power commitment costs, depreciation from new property plant and equipment, rental costs on leased facilities and land use rights, personnel costs, and start-up costs. By adopting a modular development approach, we aim to optimize resource utilization and maximize capital efficiency to improve profitability.

Cost Structure Depending on Data Center Tenure and Location

We hold our data centers through a mix of those that we own or lease. The leases typically range from three years for third-party data centers to twenty years for self-developed data centers, all with different renewal periods. The tenure of the leases and the periods during which the amount are fixed or capped under the leases will affect our cost structure in the future. In addition, if many of our data centers continue to be located close to central business districts, where rental costs are generally higher, our cost structure will also be affected.

Ability to Manage Our Development Costs

Our ability to maximize our returns depends on our ability to develop data centers on an economically feasible basis. We regularly monitor and review our equipment and construction costs related to our data center development capital expenditures to ensure we can optimize our cash outlay for capital expenditure. Our ability to manage an efficient supply chain will improve our cost of development and construction time. As part of our initiatives to improve the cost efficiency of our capital expenditure, we also participate in bulk purchasing programs for certain equipment with our strategic partners and major customers to leverage larger volume purchases to obtain a cost advantage.

Data Center Development and Financing Costs

Our returns depend on our ability to develop data centers at commercially acceptable terms. We have historically funded data center development through additional equity or debt financing. We expect to continue to fund future developments through debt financing or through the issuance of additional equity securities if necessary and when market conditions permit. Such additional financing may not be available, or may not be on commercially acceptable terms or may result in an increase to our financing costs. In addition, we may encounter development delays, excess development costs, or challenges in attracting or retaining customers to use our data center services. We also may not be able to secure suitable land or buildings for new data centers or at a cost or terms acceptable to us.

Ability to Identify and Acquire Other Business

We have grown our business through acquisitions in the past and intend to continue selectively pursuing strategic partnerships and acquisitions to expand our business. Our ability to sustain our growth and maintain our competitive position may be affected by our ability to identify, acquire and successfully integrate other businesses and, if necessary, to obtain satisfactory debt or equity financing to fund those acquisitions.

Key Performance Indicators

Our results of operations are largely determined by the amount of data center area in service, the degree to which data center capacity is committed or pre-committed as well as its utilization. Accordingly, we use the following key performance indicators as measures to evaluate our performance:

Area in service: the entire net floor area of data centers (or phases of data centers) which are ready for service.

Area under construction: the entire net floor area of data centers (or phases of data centers) which are actively under construction and have not yet reached the stage of being ready for service.

Area committed: that part of our area in service which is committed to customers pursuant to customer agreements remaining in effect.

Area pre-committed: that part of our area under construction which is pre-committed to customers pursuant to customer agreements remaining in effect.

Total area committed: the sum of area committed and area pre-committed.

Commitment rate: the ratio of area committed to area in service.

Pre-commitment rate: the ratio of area pre-committed to area under construction.

Area utilized: that part of our area in service that is committed to customers and revenue generating pursuant to the terms of customer agreements remaining in effect.

Utilization rate: the ratio of area utilized to area in service.

The following table sets forth our key performance indicators for our data center portfolio as of December 31, 2020, 2021 and 2022.

(Sqm, %)	As of December 31,		
	2020	2021	2022
Area in service	333,853	487,883	515,787
Area under construction	158,035	161,515	192,713
Area committed	315,794 ⁽¹⁾	457,838 ⁽¹⁾	492,832 ⁽¹⁾
Area pre-committed	122,306 ⁽¹⁾	98,983 ⁽¹⁾	137,884 ⁽¹⁾
Total area committed	438,100 ⁽¹⁾	556,822 ⁽¹⁾	630,716 ⁽¹⁾
Commitment rate	94.6%	93.8%	95.5%
Pre-commitment rate	77.4%	61.3%	71.5%
Area utilized	234,731	319,475	370,547
Utilization rate	70.3%	65.5%	71.8%

(1) Includes data center area for which we have entered into non-binding agreements or letters of intent with, or have received other confirmations from, certain customers.

Components of Results of Operations

The following table sets forth our net revenue, cost of revenue and gross profit, both in an absolute amount and as a percentage of net revenue, for the years indicated.

	Year Ended December 31,						
	2020		2021		2022		
	RMB	% of Net Revenue	RMB	% of Net Revenue	RMB	US\$	
	(in thousands, except for percentages)						
Net revenue							
Service revenue	5,716,868	99.6	7,814,404	99.9	9,317,891	1,350,967	99.9
IT equipment sales	22,104	0.4	4,277	0.1	7,740	1,122	0.1
Total	5,738,972	100.0	7,818,681	100.0	9,325,631	1,352,089	100.0
Cost of revenue	(4,188,521)	(73.0)	(6,039,252)	(77.2)	(7,389,774)	(1,071,417)	(79.2)
Gross profit	1,550,451	27.0	1,779,429	22.8	1,935,857	280,672	20.8

Net Revenue

We derive net revenue primarily from colocation services and, to a lesser extent, managed services, including managed hosting and managed cloud services. In addition, from time to time, we also sell IT equipment on a stand-alone basis or bundled in a managed service agreement to customers and provide consulting services. Substantially all of our service revenue is recognized on a recurring basis.

Our colocation services primarily comprise the provision of space, power and cooling to our customers for housing servers and related IT equipment. Our customers have several choices for hosting their networking, server and storage equipment. They can place the equipment in a shared or private space that can be customized to their requirements. We offer power options customized to a customer's individual power requirement.

Our managed services include managed hosting and managed cloud services. Our managed hosting services comprise a broad range of value-added services, covering each layer of the data center IT value chain. Our suite of managed hosting services includes technical services, network management services, data storage services, system security services, database services and server middleware services. Our suite of managed cloud services includes direct private connection to leading public clouds, an innovative service platform for managing hybrid cloud.

Our customer agreements have either a variable consideration or a fixed consideration.

Sales agreements with cloud service provider and large internet customers are typically deemed to have a variable consideration for revenue recognition purposes because the total amount payable over the life of the sales agreement is not a fixed amount. Such amount varies based on the actual amount of services they use during the move-in period and their actual power consumption, which is metered and billed separately. During the move-in period, customers have the right to use all of the services for which they have committed. They are billed for the amount of services they actually use, subject to a minimum billable amount as stated in such sales agreements. Such minimum billable amount typically steps up over time. From the end of the move-in period until the end of the sales agreement, customers are charged a fixed amount for the right to use all of the capacity for which they have committed, plus a usage-based charge for the actual amount of power which they consume. Revenue under such variable consideration agreements is recognized as services are rendered during the contract term, which means that revenue is recognized based on the amount of services and power which are billable. We do not charge customers or recognize any revenue for services which are pre-committed or for services which are committed but not yet billable under the terms of sales agreements as described above.

Sales agreements with our financial institution and large enterprise customers are typically deemed to have a fixed consideration for revenue recognition purposes because the total amount payable over the life of the sales agreement is a fixed amount. Sales agreements with fixed consideration include a stated amount of space, power, and other services which customers have a right to use. No separate charge is made for power consumed, unless consumption exceeds a specified maximum amount. Revenue under such fixed consideration agreements is recognized on a straight-line basis over the contract term.

We are subject to value-added tax, or VAT, at a rate of 6% on the IDC services we provide, 9% on leasing of immovable properties and 13% on IT equipment sales and power charges under the unbundled agreements, less any deductible VAT we have already paid or borne. We are also subject to surcharges on VAT payments in accordance with PRC law. During the periods presented, we were not subject to business tax on the services we provide. Revenue is recognized net of applicable VAT and related surcharges.

We consider our customers to be the end users of our services. We may enter into contracts directly with our customers or provide services to our customers through agreements with intermediate contracting parties. We have in the past derived, and believe that we will continue to derive, a significant portion of our total net revenue from a limited number of customers. We had two customers that generated 26.3% and 20.5% of our total net revenue, respectively, in 2020. We had two customers that generated 23.7% and 22.2% of our total net revenue, respectively, in 2021. We had two customers that generated 25.1% and 19.9% of our total net revenue, respectively, in 2022. No other customer accounted for 10% or more of our total net revenue during those periods. We expect our net revenue will continue to be highly dependent on a limited number of customers who account for a large percentage of our total area committed. As of December 31, 2022, we had two customers who accounted for 37.7% and 14.6%, respectively, of our total area committed.

Cost of Revenue

Our cost of revenue consists primarily of utility costs, depreciation of property and equipment, rental costs related to our leased data centers, labor costs and others. Utility costs refer primarily to the cost of power needed to carry out our data center services. Depreciation of property and equipment primarily relates to depreciation of data center property and equipment, such as assets owned or acquired under finance leases, leasehold improvements to data centers and other long-lived assets. Rental costs relate to the data center capacity we lease under operating lease and use in providing services to our customers. Labor costs refer to compensation and benefit expenses for our engineering and operations personnel. These costs are largely fixed costs. For utility costs, there is a portion that is fixed and a portion that is variable. The fixed portion relates to the amount of power capacity which is activated and committed by the power supplier for use by a given data center. The variable portion of the utility cost relates to the amount of power actually consumed, which is metered and is largely a function of the data center utilization rate. When a new data center comes into service, we mainly incur a level of fixed utility costs that are not directly correlated with net revenue.

We expect that our cost of revenue will continue to increase as our business expands and we expect that utility costs, depreciation and amortization and rental costs will continue to comprise the largest portion of our cost of revenue. In addition, in any given period, the increase in our cost of revenue may also outpace the growth of our net revenue depending on the timing of the development of our data centers, our ability to secure customer agreements and the utilization rate of our data centers during the period. While we strive to both secure customer commitments to our data center services so that the most data center capacity will be utilized as possible and also to minimize the time as to when our data center area becomes operational and the customer occupies that area, these timing differences may result in fluctuation of our cost of revenue as a percentage of our net revenue between periods.

Operating Expenses

Our operating expenses consist of selling and marketing expenses, general and administrative expenses, research and development expenses and impairment loss of long-lived assets. The following sets forth our selling and marketing expenses, general and administrative expenses, research and development expenses and impairment loss of long-lived assets, both in an absolute amount and as a percentage of net revenue, for the years indicated.

	Year Ended December 31,						
	2020		2021		2022		
	RMB	% of Net Revenue	RMB	% of Net Revenue	US\$	% of Net Revenue	
	(in thousands, except for percentages)						
Selling and marketing expenses	134,937	2.4	148,614	1.9	150,433	21,811	1.6
General and administrative expenses	702,524	12.2	1,021,950	13.1	1,185,080	171,820	12.7
Research and development expenses	40,049	0.7	39,343	0.5	35,806	5,191	0.4
Impairment loss of long-lived assets	—	—	—	—	12,759	1,850	0.2
Total operating expenses	<u>877,510</u>	<u>15.3</u>	<u>1,209,907</u>	<u>15.5</u>	<u>1,384,078</u>	<u>200,672</u>	<u>14.9</u>

Selling and Marketing Expenses

Our selling and marketing expenses consist primarily of compensation, including share-based compensation, and benefit expenses for our selling and marketing personnel, business development and promotion expenses and office and traveling expenses. As our business grows, we intend to increase the headcount of our selling and marketing staff and to continue to pursue aggressive branding and marketing campaigns and, as a result, our sales and marketing expenses are expected to increase.

General and Administrative Expenses

Our general and administrative expenses consist primarily of compensation, including share-based compensation, and benefit expenses for management and administrative personnel, start-up costs incurred prior to the operation of new data centers, depreciation and amortization, office and traveling expenses, professional fees and other fees. Depreciation relates primarily to our office equipment and facilities used by our management and staff in the administrative department. Start-up costs consist of costs incurred prior to commencement of operations of a new data center, including rental costs incurred pursuant to operating leases of buildings during the construction of leasehold improvements and other miscellaneous costs. Professional fees relate primarily to audit and legal expenses. We expect our general and administrative expenses to increase as we continue to increase our staff and office space as our business grows.

In addition, as a public company, we have incurred increasing legal, accounting and other expenses, including costs associated with public company reporting requirements. We have also incurred costs in order to comply with the Sarbanes-Oxley Act of 2002 and the related rules and regulations implemented by the SEC and Nasdaq. We expect that such compliance, together with the growth and expansion of our business, will cause our general and administrative expenses to increase.

Research and Development Expenses

Research and development expenses consist primarily of compensation and benefit expenses for our research and development personnel. As we continue to invest in our proprietary data center operating systems and innovative technologies to further scale our operations, we expect our research and development expenses to increase as we continue to increase our staff and expand our research and development center.

Share-Based Compensation

The table below shows the effect of the share-based compensation expenses on our cost of revenue and operating expense line items, both in an absolute amount and as a percentage of net revenues, for the years indicated.

	Year Ended December 31,							
	2020		2021		2022			
	RMB	% of Net Revenue	RMB	% of Net Revenue	RMB	US\$	% of Net Revenue	
			(in thousands, except for percentages)					
Cost of revenue	89,943	1.6	110,291	1.4	97,055	14,071	1.0	
Selling and marketing expenses	54,204	0.9	53,560	0.7	41,685	6,044	0.4	
General and administrative expenses	184,943	3.2	219,328	2.8	146,781	21,281	1.6	
Research and development expenses	4,596	0.1	8,096	0.1	5,294	768	0.1	
Total share-based compensation expenses	<u>333,686</u>	<u>5.8</u>	<u>391,275</u>	<u>5.0</u>	<u>290,815</u>	<u>42,164</u>	<u>3.1</u>	

We incurred less share-based compensation expenses in 2022 as compared to 2021 due to lower fair value share granted and some forfeiture of shares to employees, officers and directors. We expect to continue to grant share options, restricted shares and other share-based awards under our share incentive plans and incur further share-based compensation expenses in future periods.

See “Critical Accounting Policies and Estimates—Share-based Compensation” in this section for a description of how we account for the compensation cost from share-based payment transactions.

Taxation

Cayman Islands

We are an exempted company incorporated in the Cayman Islands and conduct our business primarily through our PRC subsidiaries in the PRC. Under the current laws of the Cayman Islands, we are not subject to tax on income or capital gains. In addition, upon payment of dividends by us to our shareholders, no Cayman Islands withholding tax will be imposed.

British Virgin Islands

Under the current laws of the British Virgin Islands, we are not subject to tax on income or capital gains. In addition, upon payments of dividends by us to our shareholders, no British Virgin Islands withholding tax will be imposed.

Hong Kong

GDS Holdings and our Hong Kong SAR entities are subject to the Hong Kong SAR profits tax at the rate of 16.5%. A two-tiered Profits Tax rates regime was introduced since year 2018 where the first HK\$2.0 million of assessable profits earned will be taxed at half the current tax rate (8.25%) whilst the remaining profits will continue to be taxed at 16.5%. There is an anti-fragmentation measure where each group will have to nominate only one entity in the group to benefit from the progressive rates.

The Inland Revenue (Amendment) (Taxation on Specified Foreign-sourced income) Bill 2022 (“the new FSIE regime”) has been enacted in Hong Kong on 14 December 2022 and will have effect from 1 January 2023 onwards. This is to address the European Union's inclusion of Hong Kong in the “grey list” in concern of any risk of double non-taxation arising from the tax exemption of offshore passive income for companies in Hong Kong without substantial economic substance. From 1 January 2023, offshore passive income (including interest income, dividend income or gain on disposal of equity interest (where applicable)), that is received or deemed to be received in Hong Kong (i.e., identical to the “received” concept in Singapore), would need to meet additional requirements, including, amongst others, the economic substance requirements (i.e. similar to offshore jurisdictions like Cayman Islands, BVI, etc.) in order to continue to be entitled to the offshore income tax exemption in Hong Kong. The Company will monitor the regulatory developments and continue to evaluate the impact on our financial statements, if any.

Singapore

Our subsidiaries in Singapore are subject to enterprise income tax on their taxable income in Singapore at a rate of 17%, except for GDS IDC Services Pte. Ltd. which was granted the Development and Expansion Incentive under the International Headquarters Award making it enjoy a concessionary enterprise income tax rate of 10% from March 1, 2022 to February 28, 2027 for its qualifying activities.

Malaysia

Our subsidiary in Malaysia is subject to enterprise income tax on its taxable income in Malaysia at a rate of 24%.

Indonesia

Our subsidiary in Indonesia is subject to enterprise income tax on its taxable income in Indonesia at a rate of 22%.

Macau

Our subsidiaries in Macau are subject to enterprise income tax on their taxable income in Macau at a rate of 12%.

PRC

Generally, our subsidiaries, VIEs and their subsidiaries in China are subject to enterprise income tax on their taxable income in China at a rate of 25%. Those entities that are recognized as “High and New Technology Enterprise” are entitled to enterprise income tax rate of 15% as long as the relevant requirements are satisfied. The enterprise income tax is calculated based on the entity’s global income as determined under PRC tax laws and accounting standards.

Dividends paid by our wholly foreign-owned subsidiaries in China to our intermediary holding company in Hong Kong will be subject to a withholding tax rate of 10%, unless the relevant Hong Kong entity satisfies all the requirements under the Arrangement between Mainland China and the Hong Kong for the Avoidance of Double Taxation and Prevention of Fiscal Evasion with Respect to Taxes on Income and receives approval from the relevant tax authority. If our Hong Kong subsidiary satisfies all the requirements under the tax arrangement and receives approval from the relevant tax authority, then the dividends paid to the Hong Kong subsidiary would be subject to withholding tax at the standard rate of 5%. Effective from November 1, 2015, the above mentioned approval requirement has been abolished, but a Hong Kong entity is still required to file an application package with the relevant tax authority, and settle overdue taxes if the preferential 5% tax rate is denied based on the subsequent review of the application package by the relevant tax authority. On October 14, 2019, STA Announcement 2019 No. 35, Measures for the Administration of Non-Resident Taxpayers’ Enjoyment of Treaty Benefits, was issued to simplify the procedures for claiming China tax treaty benefits by non-resident taxpayers.

If our holding company in the Cayman Islands or any of our subsidiaries outside of China were deemed to be a “resident enterprise” under the PRC Enterprise Income Tax Law, it would be subject to enterprise income tax on its worldwide income at a rate of 25%. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in the People’s Republic of China—We may be treated as a resident enterprise for PRC tax purposes under the PRC Enterprise Income Tax Law, and we may therefore be subject to PRC income tax on our global income.”

Effective from June 2014, all value-added telecommunication services, or VATS, provided in mainland China were subject to a VAT of 6% whereas basic telecommunication services were 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%. On March 20, 2019, the MOF, the STA and the General Administration of Customs jointly issued the Notice of Strengthening Reform of VAT Policies, or the Announcement No. 39, which became effective on April 1, 2019. Pursuant to the Announcement No. 39, the generally applicable VAT rates were simplified to 13%, 9%, 6%, and nil, among which the VAT rate on basic telecommunication services was further replaced by the rate of 9% and the VAT rate on VATS remained at 6%. 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 that it provides.

A. Results of Operations

The following table sets forth a summary of our consolidated results of operations for the years ended December 31, 2020, 2021 and 2022. This information should be read together with our audited consolidated financial statements as of December 31, 2021 and 2022 and for the years ended December 31, 2020, 2021 and 2022 and related notes included elsewhere in this annual report. The operating results in any period are not necessarily indicative of the results that may be expected for any future period.

	Year Ended December 31,						
	2020		2021		2022		
	RMB	%	RMB	%	RMB	US\$	
	(in thousands, except for percentages)						
Consolidated Statements of Operations Data:							
Net revenue	5,738,972	100.0	7,818,681	100.0	9,325,631	1,352,089	100.0
Cost of revenue	(4,188,521)	(73.0)	(6,039,252)	(77.2)	(7,389,774)	(1,071,417)	(79.2)
Gross profit	1,550,451	27.0	1,779,429	22.8	1,935,857	280,672	20.8
Operating expenses							
Selling and marketing expenses	(134,937)	(2.4)	(148,614)	(1.9)	(150,433)	(21,811)	(1.6)
General and administrative expenses	(702,524)	(12.2)	(1,021,950)	(13.1)	(1,185,080)	(171,820)	(12.7)
Research and development expenses	(40,049)	(0.7)	(39,343)	(0.5)	(35,806)	(5,191)	(0.4)
Impairment loss of long-lived assets	—	—	—	—	(12,759)	(1,850)	(0.1)
Income from operations	672,941	11.7	569,522	7.3	551,779	80,000	5.9
Other income (expenses)							
Interest income	29,011	0.5	50,445	0.6	42,460	6,156	0.5
Interest expenses	(1,316,506)	(22.9)	(1,654,737)	(21.1)	(1,887,887)	(273,718)	(20.3)
Foreign currency exchange (loss) gain, net	(21,038)	(0.4)	(7,644)	(0.1)	1,272	184	0.0
Government grants	27,050	0.5	88,209	1.1	95,581	13,858	1.0
Gain from purchase price adjustment	55,154	0.9	7,010	0.1	205,000	29,722	2.2
Others, net	4,952	0.1	(1,557)	(0.0)	1,912	277	0.1
Loss before income taxes	(548,436)	(9.6)	(948,752)	(12.1)	(989,883)	(143,521)	(10.6)
Income tax expenses	(120,778)	(2.1)	(242,461)	(3.1)	(276,235)	(40,050)	(3.0)
Net loss	(669,214)	(11.7)	(1,191,213)	(15.2)	(1,266,118)	(183,571)	(13.6)

Key Financial Metrics

We monitor the following key financial metrics to help us evaluate growth trends, establish budgets, measure the effectiveness of our business strategies and assess operational efficiencies:

	Year Ended December 31,		
	2020	2021	2022
Other Consolidated Financial Data:			
Gross margin ⁽¹⁾	27.0 %	22.8 %	20.8 %
Operating margin ⁽²⁾	11.7 %	7.3 %	5.9 %
Net margin ⁽³⁾	(11.7)%	(15.2)%	(13.6)%

(1) Gross profit as a percentage of net revenue.

(2) Income from operations as a percentage of net revenue.

(3) Net loss as a percentage of net revenue.

Non-GAAP Measures

In evaluating our business, we consider and use the following non-GAAP measures as supplemental measures to review and assess our operating performance:

	Year Ended December 31,			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
Non-GAAP Consolidated Financial Data:				
Adjusted EBITDA ⁽¹⁾	2,680,561	3,703,352	4,251,406	616,395
Adjusted EBITDA margin ⁽²⁾	46.7 %	47.4 %	45.6 %	45.6 %
Adjusted gross profit ⁽³⁾	3,071,744	4,166,388	4,773,007	692,020
Adjusted gross profit margin ⁽⁴⁾	53.5 %	53.3 %	51.2 %	51.2 %

(1) Adjusted EBITDA is defined as net income or net loss (computed in accordance with GAAP) excluding net interest expenses, incomes tax expenses (benefits), depreciation and amortization, operating lease cost relating to prepaid land use rights, accretion expenses for asset retirement costs, share-based compensation expenses, gain from purchase price adjustment and impairment loss of long-lived assets.

(2) Adjusted EBITDA margin is defined as adjusted EBITDA as a percentage of net revenue.

(3) Adjusted gross profit is defined as gross profit (computed in accordance with U.S. GAAP), excluding depreciation and amortization, operating lease cost relating to prepaid land use rights, accretion expenses for asset retirement costs and share-based compensation expenses allocated to cost of revenue.

(4) Adjusted gross profit margin is defined as adjusted gross profit as a percentage of net revenue.

Our management and board of directors use adjusted EBITDA, adjusted EBITDA margin, adjusted gross profit, and adjusted gross profit margin, which are non-GAAP financial measures, to evaluate our operating performance, establish budgets and develop operational goals for managing our business. We believe that the exclusion of the income and expenses eliminated in calculating adjusted EBITDA and adjusted gross profit can provide useful supplemental measures of our core operating performance. In particular, we believe that the use of adjusted EBITDA as a supplemental performance measure captures the trend in our operating performance by excluding from our operating results the impact of our capital structure (primarily interest expense), asset base charges (primarily depreciation and amortization, operating lease cost relating to prepaid land use rights, accretion expenses for asset retirement costs and impairment loss of long-lived assets), other non-cash expenses (primarily share-based compensation expenses), and other income and expenses which we believe are not reflective of our operating performance, whereas the use of adjusted gross profit as a supplemental performance measure captures the trend in gross profit performance of our data centers in service by excluding from our gross profit the impact of asset base charges (primarily depreciation and amortization, operating lease cost relating to prepaid land use rights and accretion expenses for asset retirement costs) and other non-cash expenses (primarily share-based compensation expenses) included in cost of revenue.

We note that depreciation and amortization is a fixed cost which commences as soon as each data center enters service. However, it usually takes several years for new data centers to reach high levels of utilization and profitability. The Company incurs significant depreciation and amortization costs for its early stage data center assets. Accordingly, gross profit, which is a measure of profitability after taking into account depreciation and amortization, does not accurately reflect the Company's core operating performance.

We also present these non-GAAP measures because we believe these non-GAAP measures are frequently used by analysts, investors and other interested parties as measures of the financial performance of companies in our industry.

These non-GAAP financial measures are not defined under U.S. GAAP and are not presented in accordance with U.S. GAAP. These non-GAAP financial measures have limitations as analytical tools, and when assessing our operating performance, cash flows or our liquidity, investors should not consider them in isolation, or as a substitute for net income (loss), cash flows provided by (used in) operating activities or other consolidated statements of operations and cash flow data prepared in accordance with U.S. GAAP. There are a number of limitations related to the use of these non-GAAP financial measures instead of their nearest GAAP equivalent. First, adjusted EBITDA, adjusted EBITDA margin, adjusted gross profit, and adjusted gross profit margin are not substitutes for gross profit, net income (loss), cash flows provided by (used in) operating activities or other consolidated statements of operation and cash flow data prepared in accordance with U.S. GAAP. Second, other companies may calculate these non-GAAP financial measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of these non-GAAP financial measures as tools for comparison. Finally, these non-GAAP financial measures do not reflect the impact of net interest expenses, incomes tax benefits (expenses), depreciation and amortization, operating lease cost relating to prepaid land use rights, accretion expenses for asset retirement costs, share-based compensation expenses, gain from purchase price adjustment and impairment loss of long-lived assets, each of which has been and may continue to be incurred in our business.

We mitigate these limitations by reconciling the non-GAAP financial measure to the most comparable U.S. GAAP performance measure, all of which should be considered when evaluating our performance.

The following table reconciles our adjusted EBITDA in the years presented to the most directly comparable financial measure calculated and presented in accordance with U.S. GAAP, which is net income or net loss:

	Year Ended December 31,			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
	<i>(in thousands, except for numbers of shares and per share data)</i>			
Net loss	(669,214)	(1,191,213)	(1,266,118)	(183,571)
Net interest expenses	1,287,495	1,604,292	1,845,427	267,562
Income tax expenses	120,778	242,461	276,235	40,050
Depreciation and amortization	1,638,474	2,616,898	3,189,074	462,372
Operating lease cost relating to prepaid land use rights	20,412	40,422	101,848	14,767
Accretion expenses for asset retirement costs	4,084	6,227	6,366	923
Share-based compensation expenses	333,686	391,275	290,815	42,164
Gain from purchase price adjustment	(55,154)	(7,010)	(205,000)	(29,722)
Impairment loss of long-lived assets	—	—	12,759	1,850
Adjusted EBITDA	2,680,561	3,703,352	4,251,406	616,395

The following table reconciles our adjusted gross profit in the years presented to the most directly comparable financial measure calculated and presented in accordance with U.S. GAAP, which is gross profit:

	Year Ended December 31,			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
	<i>(in thousands, except for numbers of shares and per share data)</i>			
Gross profit	1,550,451	1,779,429	1,935,857	280,672
Depreciation and amortization	1,425,906	2,265,181	2,722,785	394,766
Operating lease cost relating to prepaid land use rights	1,360	5,260	10,944	1,587
Accretion expenses for asset retirement costs	4,084	6,227	6,366	923
Share-based compensation expenses	89,943	110,291	97,055	14,072
Adjusted gross profit	3,071,744	4,166,388	4,773,007	692,020

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net Revenue

Our net revenue increased by 19.3% to RMB9,325.6 million (US\$1,352.1 million) in 2022 from RMB7,818.7 million in 2021. This increase was due to increases in service revenue of RMB1,503.5 million and IT equipment sales of RMB3.5 million, respectively. The increase in service revenue consisted of an increase in revenue from colocation services of RMB1,429.0 million and an increase in revenue from managed services and other services of RMB74.5 million. These increases in service revenue were mainly due to (i) an increase in area utilized from 319,475 sqm as of December 31, 2021 to 370,547 sqm as of December 31, 2022, as customers with commitments moved into the data center area, (ii) the signing of new service contracts by customers who commenced utilizing services during the period, (iii) the commencement of operations of new data centers since December 31, 2021 and (iv) the acquisitions in 2021 which generate revenue from acquired business in 2022.

Cost of Revenue

Our cost of revenue increased by 22.4% to RMB7,389.8 million (US\$1,071.4 million) in 2022 from RMB6,039.3 million in 2021. This increase was primarily due to an increase of 31.4% in utility costs to RMB2,789.6 million (US\$404.5 million) in 2022 from RMB2,122.6 million in 2021, and an increase of 20.2% in depreciation and amortization costs to RMB2,722.8 million (US\$394.8 million) in 2022 from RMB2,265.2 million in 2021. Increase in utility costs were largely a result of an increase in power tariff and new data center facilities. Increase in depreciation and amortization costs were largely a result of new data center facilities in service. In addition, the increase in cost of revenue was also due to (i) an increase of RMB73.4 million for personnel costs, (ii) an increase of RMB51.2 million for network cost and (iii) an increase of RMB101.3 million for other costs. Cost of revenue as percentage of net revenue increased to 79.2% in 2022 from 77.2% in 2021.

Operating Expenses

Our total operating expenses increased by 14.4% to RMB1,384.1 million (US\$200.7 million) in 2022 as compared to RMB1,209.9 million in 2021. The increase was primarily due to an increase in depreciation and amortization expenses of RMB114.6 million, personnel cost of RMB46.2 million, operating lease cost relating to prepaid land use rights of RMB55.7 million and offset by the decrease of share-based compensation expenses of RMB87.2 million. Our total operating expenses as a percentage of our net revenue decreased to 14.9% in 2022 from 15.5% in 2021.

Selling and Marketing Expenses. Our selling and marketing expenses increased by 1.2% to RMB150.4 million (US\$21.8 million) in 2022 from RMB148.6 million in 2021.

General and Administrative Expenses. Our general and administrative expenses increased by 16.0% to RMB1,185.1 million (US\$171.8 million) in 2022 from RMB1,022.0 million in 2021. This increase was primarily a result of (i) an increase in depreciation and amortization expenses of RMB113.8 million, (ii) an increase in operating lease cost relating to prepaid land use rights of RMB55.7 million, (iii) an increase in personnel cost of RMB36.2 million and (iv) an increase in taxes of RMB23.6 million, partially offset by a decrease of share-based compensation expenses of RMB72.5 million.

Research and Development Expenses. Our research and development expenses decreased by 9.0% to RMB35.8 million (US\$5.2 million) in 2022 from RMB39.3 million in 2021. This decrease was primarily attributable to the decrease of share-based compensation.

Impairment Loss of Long-Lived Assets. Impairment loss of long-lived assets of RMB12.8 million (US\$1.9 million) was provided in 2022 based on the excess of the carrying amount over the fair value of a data center.

Other Income (Expenses)

Interest Income. Our interest income decreased by 15.8% to RMB42.5 million (US\$6.2 million) in 2022 from RMB50.4 million in 2021 primarily a result of decrease cash balance.

Interest Expenses. Our interest expenses increased by 14.1% to RMB1,887.9 million (US\$273.7 million) in 2022 from RMB1,654.7 million in 2021. This increase was primarily a result of an increase of borrowings, finance lease and other financing obligations and convertible bonds payable.

Government Grants. Income from government grants increased by 8.4% to RMB95.6 million (US\$13.9 million) in 2022 from RMB88.2 million in 2021, primarily due to the additional deduction of input VAT.

Foreign Currency Exchange (Loss) Gain, net. Changes in currency rates resulted in a gain of RMB1.3 million (US\$0.2 million) in 2022 as compared to a loss of RMB7.6 million in 2021, primarily due to appreciation of the U.S. dollar relative to Renminbi.

Gain from Purchase Price Adjustment. Gain from purchase price adjustment was RMB205.0 million (US\$29.7 million) in 2022, which was arising from the reduction in consideration based on achievement of conditions during the year ended December 31, 2022 pursuant to a supplement agreement entered into between the seller and us in October 2021.

Income Tax Benefits (Expenses)

Income tax expenses were RMB276.2 million (US\$40.1 million) in 2022, compared to RMB242.5 million in 2021. Our income tax expenses are comprised primarily of current tax expense, mainly attributable to certain profitable subsidiaries in China, and partially offset by deferred tax impact. The deferred tax impact mainly includes reverse of valuation allowance as result of more profitable subsidiaries in China and the amortization of deferred tax liabilities arising from acquisitions.

Net Loss

As a result of the foregoing, net loss increased to RMB1,266.1 million (US\$183.6 million) in 2022 from RMB1,191.2 million in 2021.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

For a discussion of our results of operations for the fiscal year ended December 31, 2021 compared with the fiscal year ended December 31, 2020, see “Item 5. Operating and Financial Review and Prospects—A. Operating Results—Year Ended December 31, 2021 Compared to Year Ended December 31, 2020” in our annual report on Form 20-F for the fiscal year ended December 31, 2021, filed with the SEC on April 28, 2022.

Variable Interest Entity Financial Information

The following tables present the condensed consolidating schedule of financial performance, financial position and cash flows for our company, the non-VIE subsidiaries, and the VIEs and their subsidiaries for the years and as of the dates presented.

Selected Condensed Consolidated Statements of Operations Information

	Year Ended December 31, 2022				
	Our company ⁽⁴⁾	Non-VIE subsidiaries (1)(2)	VIEs and their subsidiaries (1)(3)	Consolidation adjustments ⁽⁵⁾	Consolidated Total
	(in thousands of RMB)				
Net revenue	13,852	6,729,191	9,232,419	(6,649,831)	9,325,631
Cost of revenue	(102,565)	(5,360,481)	(8,564,676)	6,637,948	(7,389,774)
Net (loss) income	(1,268,890)	(916,959)	223,925	695,806	(1,266,118)

	Year Ended December 31, 2021				
	Our company	Non-VIE subsidiaries (1)(2)	VIEs and their subsidiaries (1)(3)	Consolidation adjustments ⁽⁵⁾	Consolidated Total
	(in thousands of RMB)				
Net revenue	—	5,509,950	7,858,926	(5,550,195)	7,818,681
Cost of revenue	(116,151)	(4,183,067)	(7,277,551)	5,537,517	(6,039,252)
Net (loss) income	(1,187,218)	(766,614)	112,257	650,362	(1,191,213)

	Year Ended December 31, 2020				
	Our company	Non-VIE subsidiaries (1)(2)	VIEs and their subsidiaries (1)(3)	Consolidation adjustments ⁽⁵⁾	Consolidated Total
	(in thousands of RMB)				
Net revenue	—	3,432,737	5,469,066	(3,162,831)	5,738,972
Cost of revenue	(94,312)	(2,353,533)	(4,908,730)	3,168,054	(4,188,521)
Net (loss) income	(666,407)	(281,936)	129,254	149,875	(669,214)

- (1) The VIEs and their subsidiaries were contracting parties in IDC service agreements, while our non-VIE subsidiaries provided outsourcing and other services by charging service fees to the VIEs and their subsidiaries.
- (2) Net revenue of the non-VIE subsidiaries disclosed above comprises of the following items:
- net revenue for provision of services and sales of equipment to third parties of RMB285.2 million, RMB302.3 million and RMB366.8 million (US\$53.2 million) in 2020, 2021 and 2022, respectively;
 - net revenue for provision of outsourcing and other services to the VIEs and their subsidiaries of RMB3,076.4 million, RMB5,160.6 million and RMB6,336.9 million (US\$918.8 million) in 2020, 2021 and 2022, respectively; and
 - other sales, which mainly represented the equipment sales, to the VIEs and their subsidiaries, of RMB71.2 million, RMB47.0 million and RMB25.5 million (US\$3.7 million) in 2020, 2021 and 2022, respectively.
- (3) Net revenue of the VIEs disclosed above comprises of the following items:
- net revenue for provision of services and sales of equipment to third parties of RMB5,453.8 million, RMB7,516.3 million and RMB8,958.9 million (US\$1,298.9 million) in 2020, 2021 and 2022, respectively, which is the net revenue of VIEs and their subsidiaries disclosed in Note 2(a) to our consolidated financial statements;
 - net revenue for provision of construction services, research and development services and colocation and managed services to the non-VIE subsidiaries of RMB15.3 million, RMB342.6 million and RMB273.6 million (US\$39.7 million) in 2020, 2021 and 2022, respectively.
- (4) Net revenue of our company in the year ended December 31, 2022 represents the management service fee charged to the non-VIE subsidiaries.
- (5) To eliminate the above intra-group transactions and our company's equity in gain or loss of subsidiaries, the VIEs and their subsidiaries.

Selected Condensed Consolidated Balance Sheets Information

	As of December 31, 2022				
	Our Company	Non-VIE subsidiaries	VIEs and their subsidiaries	Consolidation adjustments	Consolidated Total
	(in thousands of RMB)				
Assets					
Current assets					
Cash	760,716	5,521,083	2,326,332	—	8,608,131
Accounts receivable, net of allowance for doubtful accounts	—	34,663	2,371,362	—	2,406,025
Other current assets	32,522	622,293	282,105	—	936,920
Total current assets excluding amounts due from the entities within the Group	793,238	6,178,039	4,979,799	—	11,951,076
Property and equipment, net ⁽¹⁾	—	44,527,860	2,441,858	(53,090)	46,916,628
Goodwill	—	7,076,505	—	—	7,076,505
Deferred tax assets ⁽¹⁾	—	184,969	38,348	5,682	228,999
Other non-current assets	184	8,120,000	518,981	1,581	8,640,746
Total assets excluding investments, loans and amounts due from the entities within the Group	793,422	66,087,373	7,978,986	(45,827)	74,813,954
Investments, loans and amounts due from the entities within the Group ⁽²⁾	30,891,361	5,973,081	1,418,045	(38,282,487)	—
Total assets	31,684,783	72,060,454	9,397,031	(38,328,314)	74,813,954
Liabilities, Mezzanine Equity and Equity					
Current liabilities					
Short-term borrowings and current portion of long-term borrowings	1,045,252	2,320,515	258,200	—	3,623,967
Convertible bonds payable, current	2,083,829	—	—	—	2,083,829
Accounts payable	1,188	2,598,364	493,332	—	3,092,884
Finance lease and other financing obligations, current	—	420,457	33,398	—	453,855
Other current liabilities	49,670	870,834	428,336	—	1,348,840
Total current third-party liabilities	3,179,939	6,210,170	1,213,266	—	10,603,375
Long-term borrowings, excluding current portion	—	22,796,671	721,387	—	23,518,058
Convertible bonds payable	4,294,985	—	—	—	4,294,985
Finance lease and other financing obligations, non-current	—	7,984,686	931,580	—	8,916,266
Other non-current liabilities	—	3,039,878	256,737	—	3,296,615
Total third-party liabilities	7,474,924	40,031,405	3,122,970	—	50,629,299
Amounts due to the entities within the Group ⁽²⁾	141,798	33,299,980	5,720,290	(39,162,068)	—
Total liabilities	7,616,722	73,331,385	8,843,260	(39,162,068)	50,629,299
Total mezzanine equity	1,047,012	—	—	—	1,047,012
Total equity	23,021,049	(1,270,931)	553,771	833,754	23,137,643
Total liabilities, mezzanine equity and equity	31,684,783	72,060,454	9,397,031	(38,328,314)	74,813,954

	As of December 31, 2021				
	Our Company	Non-VIE subsidiaries	VIEs and their subsidiaries	Consolidation adjustments	Consolidated Total
	(in thousands of RMB)				
Assets					
Current assets					
Cash	3,288,955	5,340,629	1,338,525	—	9,968,109
Accounts receivable, net of allowance for doubtful accounts	—	55,515	1,677,171	—	1,732,686
Other current assets	1,960,145	474,552	328,383	—	2,763,080
Total current assets excluding amounts due from the entities within the Group	5,249,100	5,870,696	3,344,079	—	14,463,875
Property and equipment, net ⁽¹⁾	—	38,004,637	2,671,567	(52,701)	40,623,503
Goodwill	—	7,076,505	—	—	7,076,505
Deferred tax assets ⁽¹⁾	—	146,783	32,949	6,764	186,496
Other non-current assets	777	8,634,199	645,507	1,581	9,282,064
Total assets excluding investments, loans and amounts due from the entities within the Group	5,249,877	59,732,820	6,694,102	(44,356)	71,632,443
Investments, loans and amounts due from the entities within the Group ⁽²⁾	25,260,616	4,655,577	1,595,878	(31,512,071)	—
Total assets	30,510,493	64,388,397	8,289,980	(31,556,427)	71,632,443
Liabilities, Mezzanine Equity and Equity					
Current liabilities					
Short-term borrowings and current portion of long-term borrowings	3,148,188	2,373,825	426,000	—	5,948,013
Accounts payable	899	3,470,382	430,518	—	3,901,799
Finance lease and other financing obligations, current	—	670,984	28,161	—	699,145
Other current liabilities	32,395	2,532,593	351,298	—	2,916,286
Total current third-party liabilities	3,181,482	9,047,784	1,235,977	—	13,465,243
Long-term borrowings, excluding current portion	—	17,384,745	899,769	—	18,284,514
Convertible bonds payable	1,895,846	—	—	—	1,895,846
Finance lease and other financing obligations, non-current	—	7,968,184	965,356	—	8,933,540
Other non-current liabilities	—	2,841,841	315,297	—	3,157,138
Total third-party liabilities	5,077,328	37,242,554	3,416,399	—	45,736,281
Amounts due to the entities within the Group ⁽²⁾	849	26,987,554	4,543,735	(31,532,138)	—
Total liabilities	5,078,177	64,230,108	7,960,134	(31,532,138)	45,736,281
Total mezzanine equity	958,480	404,673	—	—	1,363,153
Total equity	24,473,836	(246,384)	329,846	(24,289)	24,533,009
Total liabilities, mezzanine equity and equity	30,510,493	64,388,397	8,289,980	(31,556,427)	71,632,443

(1) The consolidation adjustments are to eliminate the unrealized profit primary for (a) sales of equipment from non-VIE subsidiaries to the VIEs and their subsidiaries and (b) the construction services provided by the VIEs and their subsidiaries to the non-VIE subsidiaries.

(2) Equity method has been used to account for our company's investments in the subsidiaries. The consolidation adjustments are to eliminate intra-group balances in respect of investment, loans and other amounts due from and due to the entities within the Group.

Selected Condensed Consolidated Cash Flows Information

	Year Ended December 31, 2022				
	Our company	Non-VIE subsidiaries	VIEs and their subsidiaries	Consolidation adjustments	Consolidated Total
	(in thousands of RMB)				
Net cash (used in) provided by operating activities ⁽¹⁾	(68,391)	1,398,869	1,533,548	(5,959)	2,858,067
Net cash used in investing activities ⁽¹⁾⁽²⁾	(6,312,513)	(11,137,047)	(143,796)	6,318,472	(11,274,884)
Net cash provided by (used in) financing activities ⁽²⁾	1,502,678	10,035,477	(369,324)	(6,312,513)	4,856,319

	Year Ended December 31, 2021				
	Our company	Non-VIE subsidiaries	VIEs and their subsidiaries	Consolidation adjustments	Consolidated Total
	(in thousands of RMB)				
Net cash (used in) provided by operating activities ⁽¹⁾	(83,019)	546,919	744,493	(7,030)	1,201,363
Net cash used in investing activities ⁽¹⁾⁽²⁾	(9,935,432)	(13,493,527)	(205,041)	9,942,462	(13,691,538)
Net cash provided by (used in) financing activities ⁽²⁾	3,100,066	15,515,622	(561,101)	(9,935,432)	8,119,155

	Year Ended December 31, 2020				
	Our company	Non-VIE subsidiaries	VIEs and their subsidiaries	Consolidation adjustments	Consolidated Total
	(in thousands of RMB)				
Net cash (used in) provided by operating activities ⁽¹⁾	(45,269)	(532,976)	899,132	—	320,887
Net cash used in investing activities ⁽¹⁾⁽²⁾	(4,940,005)	(9,099,263)	(278,744)	4,940,005	(9,378,007)
Net cash provided by (used in) financing activities ⁽²⁾	15,273,369	9,830,979	(20,682)	(4,940,005)	20,143,661

(1) The consolidation adjustments represent the elimination of intra-group payments from the non-VIE subsidiaries to one of the VIE's subsidiaries, for the construction services rendered.

(2) The consolidation adjustments are primarily to eliminate (a) our company's investment in, loans and advances to the non-VIE subsidiaries with (b) the capitals, advances and loans received by the non-VIE subsidiaries from our company.

B. Liquidity and Capital Resources

Our primary sources of liquidity have been net proceeds from operations, cash flow from short-term and long-term borrowings, issuance of debt and equity securities, including in our initial public offering, follow-on public offerings, private placement (including convertible preferred shares) and convertible bonds, which have historically been sufficient to meet our working capital and substantially all of our capital expenditure requirements. Historically, we also have had finance lease and other financing obligations. As of December 31, 2022, we had cash of RMB8,608.1 million (US\$1,248.1 million). In addition, as of December 31, 2022, total short-term debt was RMB6,161.7 million (US\$893.3 million), comprised of short-term borrowings and the current portion of long-term borrowings of RMB3,624.0 million (US\$525.4 million), the current portion of convertible bonds payable of RMB2,083.8 million (US\$302.1 million) and the current portion of finance lease and other financing obligations of RMB453.9 million (US\$65.8 million). As of the same date, total long-term debt was RMB36,729.3 million (US\$5,325.2 million), comprised of long-term borrowings (excluding current portion) of RMB23,518.1 million (US\$3,409.8 million), the non-current portion of finance lease and other financing obligations of RMB8,916.3 million (US\$1,292.7 million) and the non-current portion of convertible bonds payable of RMB4,295.0 million (US\$622.7 million). As of December 31, 2022, the unused amount of working capital and project financing credit was RMB10,730.5 million (US\$1,555.8 million).

Based on our current level of operations and available cash, we believe that we have sufficient liquidity to fund our current obligations, projected working capital requirements, debt service requirements and capital spending requirements at least for the next 12 months. However, we may require additional cash resources due to changing business conditions or other future developments, including any investments or acquisitions we may decide to selectively pursue. If our existing cash resources are insufficient to meet our requirements, we may seek to sell equity or equity-linked securities, debt securities, borrow from banks or dispose our assets. Subsequent to December 31, 2022, we had completed the private placement to certain investors of convertible senior notes due 2030, or the 2030 Notes, with net proceeds, after commission but before expenses, amounting to US\$572.8 million. We cannot assure you that financing will be available in the amounts we need or on terms acceptable to us, if at all. The sale of additional equity securities, including convertible debt securities, would result in additional dilution to our shareholders. The incurrence of indebtedness and issuance of debt securities would result in debt service obligations and could result in operating and financial covenants that restrict our operations and our ability to pay dividends to our shareholders. If we were unable to obtain additional equity or debt financing as required, our business, operations and prospects and our ability to maintain our desired level of revenue growth may suffer materially.

As a holding company with no material operations of our own, we are a corporation separate and apart from our subsidiaries and the consolidated VIEs and, therefore, provide for our own liquidity. We conduct our operations primarily through our PRC subsidiaries, the VIEs and their subsidiaries in China. As a result, our ability to pay dividends and to finance any debt we may incur depends upon dividends paid by our subsidiaries. If our PRC subsidiaries, or any newly formed PRC subsidiaries, incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our PRC subsidiaries are permitted to pay dividends to us only out of their respective retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under applicable PRC laws and regulations, our PRC subsidiaries are each required to set aside a portion of their after-tax profits each year to fund certain statutory reserves, and funds from such reserves may not be distributed to us as cash dividends except in the event of liquidation of such subsidiaries.

Our main sources of cash funding for the VIEs and their subsidiaries have included intercompany loans and cash advances from GDS Holdings, our subsidiaries and cash generated from operations. In the years ended December 31, 2020, 2021 and 2022, GDS Holdings and our subsidiaries did not provide any additional intercompany loans to the VIEs and their subsidiaries and the VIEs and their subsidiaries did not repay any existing intercompany loans to GDS Holdings and our subsidiaries. As of December 31, 2021 and 2022, the VIEs and their subsidiaries held cash and cash equivalents of RMB1,338.5 million and RMB2,326.3 million (US\$377.3 million), respectively.

In the years ended December 31, 2020, 2021 and 2022, our company, through the intermediate holding companies, made capital contribution or provided intercompany loans to the non-VIE subsidiaries of RMB4,940.0 million, RMB9,935.4 million and RMB6,312.5 million (US\$915.2 million), respectively.

PRC entities need to appropriate reserve funds of 10% before distributing earnings until such reserve reaches 50% of paid in capital. Except as otherwise disclosed elsewhere in this annual report, there was no restriction or limitation on our company's ability to receive earnings from our subsidiaries or to distribute them to U.S. investors during the years ended December 31, 2020, 2021 and 2022. Likewise, there was no restriction or limitation on the consolidated VIEs to settle obligations under the consolidated VIE contractual arrangements. As of December 31, 2022, certain subsidiaries, the VIEs and their subsidiaries had retained earnings of RMB2,031.0 million (US\$294.5 million) in aggregate. No dividend or distribution was made through our subsidiaries or consolidated VIEs to our company during the years ended December 31, 2020, 2021 and 2022.

The PRC government imposes controls on the convertibility of the Renminbi into foreign currencies and, in certain cases, the remittance of currency out of China. We receive substantially all of our revenues in Renminbi. Under our current corporate structure, our company in the Cayman Islands may rely on dividend payments from our PRC subsidiaries to fund any of our cash and financing requirements. Under China's existing foreign exchange regulations, our PRC subsidiaries are able to make payments of current accounts, such as dividends, to their offshore holding companies, in foreign currencies, without prior approval from SAFE, by complying with certain procedural requirements. However, approval from appropriate government authorities will be required where Renminbi is to be converted into foreign currency and remitted out of China to pay capital expenses such as the repayment of loans denominated in foreign currencies. There is no requirement imposed on investors to complete registration or obtain approval from appropriate government authorities before they can receive dividend payments from our company in the Cayman Islands. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in the People's Republic of China—Restrictions on currency exchange may limit our ability to utilize our net revenue effectively." These statutory limitations affect, and future covenant debt limitations might affect, our PRC subsidiaries' ability to pay dividends to us.

As of December 31, 2022, our cash and restricted cash were deposited in major financial institutions located in mainland China, Hong Kong, United States, Singapore, Malaysia, Macau and Indonesia. We currently believe that such limitations on payment in foreign currencies will not impact our ability to meet our ongoing short-term cash obligations although we cannot assure you that such limitations will not affect our ability in the future to meet our short-term cash obligations and to distribute dividends to our shareholders. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in the People’s Republic of China—We rely to a significant extent on dividends and other distributions on equity paid by our principal operating subsidiaries to fund offshore cash and financing requirements” and “—Statutory Reserves.”

We do not plan for our PRC subsidiaries to pay dividends in the foreseeable future and we intend for those subsidiaries to retain any future earnings for use in the operation and expansion of our business in China. Accordingly, our ability to pay dividends and finance debt will be affected by this current plan. In the future, we may take advantage of financing options available to us in connection with any dividend payments we may make or repayments of any offshore indebtedness we may incur. For example, we may fund dividend payments through offshore debt, whether unsecured or secured by the assets of our onshore consolidated entities. In order to service offshore debt, we may rely upon financing options through the capital markets, including issuances of equity or debt securities, the proceeds of which we may use to service offshore debt.

Pursuant to the PRC Enterprise Income Tax Law, a withholding tax rate of 10% currently applies to dividends paid by a PRC “resident enterprise” to a foreign enterprise investor, unless any such foreign investor’s jurisdiction of incorporation has a tax treaty with China that provides for preferential tax treatment. Accordingly, if in the future our PRC subsidiaries that are considered “resident enterprises” pay dividends to the Hong Kong subsidiary that holds such PRC subsidiary, any such dividend may be subject to a withholding tax of 10%. Such withholding tax rate may be lowered to 5% if a Hong Kong resident enterprise owns no less than 25% of a PRC enterprise. However, the 5% withholding tax rate does not automatically apply and certain requirements must be satisfied. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in the People’s Republic of China—We may not be able to obtain certain benefits under the relevant tax treaty on dividends paid by our PRC subsidiaries to us through our Hong Kong subsidiary.”

As a result of these laws, rules and regulations relating to statutory reserves, foreign exchange conversion and withholding taxes described above, our subsidiaries, the VIEs and their subsidiaries incorporated in China are restricted in their ability to transfer a portion of their respective net assets to their offshore holding companies as dividends, loans or advances. As of December 31, 2022, the restricted net assets were RMB24,955.7 million (US\$3,618.2 million), including those of the VIEs and their subsidiaries of RMB284.6 million (US\$41.3 million) and our subsidiaries of RMB24,671.1 million (US\$3,577.0 million), which mainly consisted of paid-in registered capital.

The following table sets forth a summary of our cash flows for the years indicated.

	For the Year Ended December 31,			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
	(in thousands)			
Net cash provided by operating activities	320,887	1,201,363	2,858,067	414,380
Net cash used in investing activities	(9,378,007)	(13,691,538)	(11,274,884)	(1,634,704)
Net cash provided by financing activities	20,143,661	8,119,155	4,856,318	704,101
Effect of exchange rate changes on cash and restricted cash	(566,874)	(95,542)	416,198	60,343
Net increase (decrease) in cash and restricted cash	10,519,667	(4,466,562)	(3,144,301)	(455,880)
Cash and restricted cash at beginning of year	5,973,262	16,492,929	12,026,367	1,743,659
Cash and restricted cash at end of year	16,492,929	12,026,367	8,882,066	1,287,779

Operating Activities

Cash provided by operating activities was RMB2,858.1 million (US\$414.4 million) in 2022, primarily due to a net loss of RMB1,266.1 million (US\$183.6 million), adjusted primarily for (i) depreciation and amortization of RMB3,189.1 million (US\$462.4 million), primarily relating to our data center property and equipment; (ii) share-based compensation expenses of RMB290.8 million (US\$42.2 million), (iii) amortization of debt issuance and commitment cost and debt discount of RMB154.9 million (US\$22.5 million), (iv) operating lease cost relating to prepaid land use rights of RMB101.8 million (US\$14.8 million), (v) deferred tax benefit of RMB99.2 million (US\$14.4 million), (vi) gain from purchase price adjustment of RMB205.0 million (US\$29.7 million) and (vii) changes in working capital. Adjustments for changes in working capital primarily consisted of (i) a decrease in VAT recoverable of RMB1,182.5 million (US\$171.4 million) mainly as a result of VAT refund, (ii) an increase in accounts receivable of RMB678.8 million (US\$98.4 million), (iii) an increase in accounts payable of RMB189.7 million (US\$27.5 million) and (iv) a decrease in accrued expenses and other payables of RMB123.5 million (US\$17.9 million).

Cash provided by operating activities was RMB1,201.4 million in 2021, primarily due to a net loss of RMB1,191.2 million, adjusted primary for (i) depreciation and amortization of RMB2,616.9 million, primarily relating to our data center property and equipment; (ii) share-based compensation expenses of RMB391.3 million, (iii) amortization of debt issuance and commitment cost and debt discount of RMB200.1 million, (iv) operating lease cost relating to prepaid land use rights of RMB40.4 million, (v) deferred tax benefits of RMB48.5 million, (vi) allowance for doubtful accounts of RMB10.1 million, (vii) gain from purchase price adjustment of RMB7.0 million, and (viii) changes in working capital. Adjustments for changes in working capital primarily consisted of (i) an increase in VAT recoverable of RMB631.6 million mainly as a result of the capital expenditures, (ii) a decrease of accrued expenses and other payables of RMB121.8 million and (iii) an increase in other current assets and other non-current assets of RMB55.5 million and RMB53.7 million, respectively, mainly due to the increase in rental and other deposits, partially offset by (iv) an increase in operating leases of RMB50.7 million.

Cash provided by operating activities was RMB320.9 million in 2020, primarily due to a net loss of RMB669.2 million, adjusted primary for (i) depreciation and amortization of RMB1,638.5 million, primarily relating to our data center property and equipment; (ii) share-based compensation expenses of RMB333.7 million, (iii) amortization of debt issuance cost and commitment cost and debt discount of RMB160.7 million, (iv) deferred tax benefits of RMB89.7 million, (v) gain from purchase price adjustment of RMB55.2 million, (vi) operating lease cost relating to prepaid land use rights of RMB20.4 million and (vii) changes in working capital. Adjustments for changes in working capital primarily consisted of (i) an increase in accounts receivable of RMB465.2 million due to increased revenue, (ii) an increase in VAT recoverable of RMB463.6 million mainly as a result of the capital expenditures, (iii) a decrease of accrued expenses and other payables of RMB139.9 million and (iv) the increase in prepaid expenses of RMB53.9 million for prepaid operating expenses, partially offset by (v) an increase in accounts payable of RMB119.2 million.

Investing Activities

Net cash used in investing activities was RMB11,274.9 million (US\$1,634.7 million) in 2022, which was primarily due to the payments for purchase of property and equipment and land use rights of RMB7,803.7 million (US\$1,131.4 million) for the development of our data centers, after deducting the proceeds from disposal of property and equipment, and payments for acquisitions and investments, net of refund of deposits for potential acquisitions, of RMB3,471.2 million (US\$503.3 million).

Net cash used in investing activities was RMB13,691.5 million in 2021, which was primarily due to the payments for purchase of property and equipment and land use rights of RMB9,699.1 million for the development of our data centers, after deducting the proceeds from disposal of property and equipment, and payments for acquisitions of RMB4,013.3 million, partially offset by the receipts from collection of loans acquired in our acquisitions of RMB20.9 million.

Net cash used in investing activities was RMB9,378.0 million in 2020, which was primarily due to the payments for purchase of property and equipment and land use rights of RMB8,020.6 million for the development of our data centers, including the deposit paid and net of the proceeds from disposal of property and equipment, and payments for acquisitions of RMB1,357.4 million.

Financing Activities

Net cash provided by financing activities was RMB4,856.3 million (US\$704.1 million) in 2022, which was primarily due to proceeds from borrowings of RMB11,889.2 million (US\$1,723.8 million), proceeds from issuance of convertible bonds of RMB3,917.0 million (US\$567.9 million), proceeds from other financing arrangements of RMB845.3 million (US\$122.6 million) and proceeds from sales of equity interests of subsidiaries of RMB69.8 million (US\$10.1 million), partially offset by repayment of short-term and long-term borrowings of RMB9,585.4 million (US\$1,389.8 million), payment under finance lease and other financing obligations of RMB1,138.5 million (US\$165.1 million), payment for acquisition of redeemable non-controlling interests of RMB593.8 million (US\$86.1 million), payment of deferred contingent consideration for acquisitions of RMB280.4 million (US\$40.7 million), payment of debt issuance cost of RMB109.4 million (US\$15.9 million), payment for purchase of property and equipment through vendor financing of RMB105.9 million (US\$15.4 million), and payment of redeemable preferred shares dividends of RMB51.6 million (US\$7.5 million).

Net cash provided by financing activities was RMB8,119.2 million in 2021, which was primarily due to proceeds from borrowings, net of issuance cost, of RMB16,035.2 million, capital contribution from non-controlling shareholders of RMB225.9 million and proceeds from other financing arrangements of RMB50.3 million, partially offset by repayment of short-term and long-term borrowings of RMB6,080.2 million, payment of deferred contingent consideration for acquisitions of RMB926.2 million, payment for purchase of property and equipment through vendor financing of RMB808.2 million, payment under finance lease and other financing obligations of RMB265.5 million, payment for acquisition of non-controlling interests of RMB65.1 million and payment of redeemable preferred shares dividends of RMB49.2 million.

Net cash provided by financing activities was RMB20,143.7 million in 2020, which was primarily due to proceeds from borrowings, net of issuance cost, of RMB7,982.8 million, net proceeds from issuance of ordinary shares of RMB15,974.5 million, proceeds from other financing arrangements of RMB1,079.4 million, capital contribution from redeemable non-controlling shareholder of RMB105.0 million and proceeds from exercise of stock options of RMB78.7 million, partially offset by repayment of short-term and long-term borrowings of RMB4,626.1 million, payment under finance lease and other financing obligations of RMB198.2 million, payment for purchase of property and equipment through vendor financing of RMB92.3 million, payment of redeemable preferred shares dividends of RMB65.5 million, payment of deferred contingent consideration for acquisitions of RMB48.7 million and payment of commitment cost of borrowings of RMB46.0 million.

Statutory Reserves

Under applicable PRC laws and regulations, foreign-invested enterprises in China are required to provide for certain statutory reserves, namely a general reserve, an enterprise expansion fund and a staff welfare and bonus fund. Pursuant to such laws and regulations, we may pay dividends only out of our after-tax profits, if any, determined in accordance with PRC accounting standards and regulations. Further, we are required to allocate at least 10% of our after-tax profits to fund the general reserve until such reserve has reached 50% of our registered capital. In addition, we may also set aside, at our or our Board's discretion, a portion of our after-tax profits to fund the employee welfare and bonus fund. These reserves may only be used for specific purposes and are not distributable to us in the form of loans, advances, or cash dividends.

As of December 31, 2020, 2021 and 2022, PRC entities had RMB55.3 million, RMB66.1 million and RMB146.9 million (US\$21.3 million), respectively, in their statutory reserves.

Capital Expenditures

We had capital expenditures, excluding payments related to acquisitions and investments and receipts from collection of loans, of RMB8,020.6 million, RMB9,699.1 million and RMB7,803.7 million (US\$1,131.4 million) in 2020, 2021 and 2022, respectively. Our capital expenditures were primarily for the purchase of equipment, prepaid land use rights reported in investing activities in the Consolidated Financial Statements and leasehold-improvement of data centers. Our capital expenditures have been primarily funded by net cash provided by financing activities.

Holding Company Structure

As a holding company with no material operations of our own, we are a corporation separate and apart from our subsidiaries and the VIEs and, therefore, provide for our own liquidity. We conduct our operations primarily through our PRC subsidiaries, the VIEs and their subsidiaries in China. As a result, our ability to pay dividends and to finance any debt we may incur depends upon dividends paid by our subsidiaries. If our PRC subsidiaries, or any newly formed PRC subsidiaries, incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our PRC subsidiaries are permitted to pay dividends to us only out of their respective retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under applicable PRC laws and regulations, our PRC subsidiaries are each required to set aside a portion of their after-tax profits each year to fund certain statutory reserves, and funds from such reserves may not be distributed to us as cash dividends except in the event of liquidation of such subsidiaries.

For the years ended December 31, 2020, 2021 and 2022, the VIEs and their subsidiaries contributed 95.0%, 96.1% and 96.1%, respectively, of our total net revenue.

Project Financing Structure

Our data center projects are financed with both equity and debt. We typically capitalize a portion of our data center project's funding requirement with proceeds raised from financing offshore that is injected into China as registered capital through each of our data center project-specific legal entities. Under SAFE and PRC regulations, registered capital for each legal entity can only be used for its own business use or project-designated purposes, which also follows under its registered business scope. Once the registered capital is injected into China, it is often difficult to remit the proceeds back offshore or to lend it to our other onshore subsidiaries. Thus, we inject registered capital only as needed throughout the development phase of the data center project to remain flexible with our offshore capital. Concurrently, we capitalize each data center project through onshore project-specific loan facilities from banking or other financial institutions in China to finance the remaining capital required in completing the data center project. Under this arrangement, each data center's estimated cash flows are matched and committed to service its own debt obligations during the term of its loan facilities.

In conjunction with the registered capital injected, we sometimes inject a portion of our offshore capital to our onshore project entities through shareholder's loans. In these instances, we utilize the shareholder's loans as a temporary bridge to capitalize our projects until project-specific loan facilities have been obtained. Once the project loans are in place, subject to the agreement by lending bank(s), the shareholder's loans are repaid back offshore.

Convertible Senior Notes due 2025

On June 5, 2018, we issued and sold convertible senior notes due in 2025, or the 2025 Notes, in an aggregate principal amount of US\$300 million, which bear interest at a rate of 2% per year, payable on June 1 and December 1 of each year, beginning on December 1, 2018. The 2025 Notes will mature on June 1, 2025, unless earlier redeemed, repurchased or converted in accordance with their terms. The 2025 Notes are subject to repurchase by us, at the option of the holders, on June 1, 2023 at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest. The 2025 Notes may be converted into our ADSs, at the option of the holders, at an initial conversion rate of 19.3865 of our ADSs per US\$1,000 principal amount of notes, or approximately 5,815,950 ADSs, representing 46,527,600 Class A ordinary shares, assuming conversion of the entire US\$300 million aggregate principal amount at the initial conversion rate.

Convertible Preferred Shares

In March 2019, Ping An Overseas Holdings made an investment in us, and we issued 150,000 Series A convertible preferred shares to an affiliate of Ping An Overseas Holdings for a total consideration of US\$150 million. Pursuant to the terms of the investment, during the first eight years from their issuance date, the convertible preferred shares accrue a minimum 5.0% per annum dividend, payable quarterly in arrears, in cash or in kind in the form of additional convertible preferred shares, at our option. As of the eighth anniversary of the issuance date, the convertible preferred shares accrue a 7.0% per annum minimum dividend, payable quarterly in arrears, in cash only, which dividend rate will further increase by 50 basis points per quarter thereafter for so long as any convertible preferred shares remain outstanding. The convertible preferred shares are convertible into 33,707,864 Class A ordinary shares at the option of their holder, at a conversion rate corresponding to a conversion price of US\$35.60 per ADSs, representing a premium of 13.3% to the volume weighted average price of our ADSs for the 30 trading days immediately preceding the date of signing the definitive agreement, subject to customary anti-dilution adjustments. Assuming conversion of all the Series A convertible preferred shares held by its affiliate, Ping An Overseas Holdings would have beneficially owned 2.3% of our Class A ordinary shares as of December 31, 2022. We have the right to trigger a mandatory conversion at our election, beginning on March 15, 2022, provided certain conditions are met, including our Class A ordinary shares achieving a specified price threshold of 150% of the conversion price for a specified period. Holders will not have any redemption right or put option over the convertible preferred shares, except upon (i) the occurrence of a change of control, or (ii) our ADSs ceasing to be listed for trading on any of the New York Stock Exchange, the Nasdaq Global Select Market or the Nasdaq. Assuming that either of the two foregoing events occurred on December 31, 2022 and that all holders exercised their redemption right to require our Company to purchase all of the convertible preferred shares, the total purchase price would have been RMB1.0 billion (US\$0.2 billion) and total cash would have been reduced by the same amount in the event of such redemption. After eight years, we will have certain rights in connection with the redemption of the convertible preference shares at 100% of their face value, plus accrued and unpaid dividends. In addition, Ping An Overseas Holdings has the right to designate one non-voting observer to attend any meetings of our board of directors, subject to maintaining its shareholding at or above a specified percentage threshold.

Convertible Senior Notes due 2029

On March 8, 2022 we issued and sold US\$620 million in aggregate principal amount of convertible senior notes due in 2029, or the 2029 Notes, to Sequoia China Infrastructure Fund I, STT GDC, and an Asian sovereign wealth fund with which we have a strategic relationship. The 2029 Notes bear interest at rate of 0.25% per year, payable on each March 8 and September 8, commencing on September 8, 2022. The 2029 Notes will mature on March 8, 2029, unless earlier redeemed, repurchased or converted in accordance with their terms. The 2029 Notes are subject to repurchase by us, at the option of the holders, on March 8, 2027 at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest. The 2029 Notes may be converted into our ADSs, at the initial conversion price of US\$50 per ADS, corresponding to an initial conversion rate of 20 ADSs (or 160 Class A ordinary shares) per US\$1,000 principal amount of the Notes, or approximately 12,400,000 ADSs, representing 99,200,000 Class A ordinary shares, assuming conversion of the entire US\$620 million aggregate principal amount at the initial conversion rate. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date.

Convertible Senior Notes due 2030

On January 20, 2023 we issued and sold US\$580 million in aggregate principal amount of convertible senior notes due in 2030, or the 2030 Notes, to various private equity funds and institutional investors, including a sovereign wealth fund. The 2030 Notes bear interest at rate of 4.50% per year, payable on each July 31 and January 31, commencing on July 31, 2023. The 2030 Notes will mature on January 31, 2030, unless earlier redeemed, repurchased or converted in accordance with their terms. The 2030 Notes are subject to repurchase by us, at the option of the holders, on January 31, 2028 at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest. The 2030 Notes may be converted into our ADSs, at the initial conversion price of US\$24.50 per ADS, corresponding to an initial conversion rate of 40.8163 ADSs per US\$1,000 principal amount of the Notes, or 23,673,454 ADSs, representing 189,387,632 Class A ordinary shares, assuming conversion of the entire US\$580 million aggregate principal amount at the initial conversion rate. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date.

Loans and borrowings

As of December 31, 2021 and 2022, we had short-term borrowings of RMB4,639.7 million with weighted average interest rate of 4.91%, and RMB1,652.2 million (US\$239.5 million) with weighted average interest rate of 7.94%, respectively, and long-term borrowings (including current portion) of RMB19,592.9 million with weighted average interest rate of 5.53%, and RMB25,489.8 million (US\$3,695.7 million) with weighted average interest rate of 5.44%, respectively, taking into consideration of debt issuance costs relating to the facilities.

Our company, through one or more of our subsidiaries, the VIEs and their subsidiaries entered into secured and unsecured loan agreements with various financial institutions for project development and working capital purpose with terms ranging from one to 15 years.

More specifically, the terms of these secured loan facility agreements generally include one or more of the following conditions. If any of the below conditions were to be triggered, we could be obligated to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule. See “Item 3. Key Information—D. Risk Factors—Risk Factors Relating to Our Business and Industry—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 prevent us from meeting our obligations under our indebtedness.”

The secured loan facilities can be divided into onshore project loan facilities and offshore project loan facilities (including Hong Kong and Malaysia).

Below are the terms and conditions for onshore project loan facilities:

- STT GDC (a) is not or ceases to, directly or indirectly, be the beneficial owner of at least 25% of the issued share capital of our company, or (b) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 25% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of our company, or (c) is not or ceases to be the single largest shareholder of our company;
- our company and GDS Investment Company are not or cease to be, directly or indirectly, the legal and beneficial owner of 100% of equity interests of, and have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control, GDS Investment Company (in the case of our company), GDS Beijing, GDS Suzhou and the relevant borrowing subsidiaries;
- Management HoldCo ceases to, directly or indirectly, own at least 100% of the equity interests of, and have the power to control, GDS Beijing or GDS Suzhou;
- GDS Beijing, GDS Suzhou and the relevant borrowing subsidiaries cease to, directly or indirectly, be the legal and beneficial owner of 100% of equity interests of, and have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control, their consolidated subsidiaries;
- GDS Holdings is not or ceases to be, directly or indirectly, the legal and beneficial owner of all equity interests held by it in the relevant borrowing subsidiaries, or have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control the relevant borrowing subsidiaries;
- there are changes in the shareholding structure of a principal operating subsidiary of ours, as defined in the relevant loan facility agreement; and
- the IDC license of GDS Beijing, the borrowing subsidiaries, other affiliated entities or the authorization by GDS Beijing to one such subsidiary to operate the data center business and provide IDC services under the auspices of the IDC license held by GDS Beijing, is cancelled or fails to be renewed on or before the expiry date.

Below are the terms and conditions for offshore project loan facilities:

- STT GDC (a) is not or ceases to, directly or indirectly, be the beneficial owner of at least 25% of the issued share capital of our company, or (b) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 25% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of our company, or (c) is not or ceases to be the single largest shareholder of our company
- GDS Holdings is not or ceases to be, directly or indirectly, the legal and beneficial owner of 100% of the issued share capital of, or have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control the relevant borrowing subsidiaries;
- GDS Holdings (a) is not or ceases to be, directly or indirectly, the single largest shareholder of, (b) is not or ceases to be, directly or indirectly, the beneficial owner of at least 40% of the issued share capital of, or (c) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 50.1% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of the relevant borrowing subsidiaries;
- GDS International is not or ceases to be, directly or indirectly, the beneficial owner of 100% of the issued share capital of the relevant borrowing subsidiaries; and
- There are changes in the shareholding structure of a principal operating subsidiary of GDS Holdings, as defined in the relevant loan facility agreement.

There are certain other events in the loan facility agreements the occurrence of which could obligate us to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule, including, among others, if our borrowing subsidiary fails to use the loan in accordance with the use of proceeds as provided in the loan facility agreement, the borrowing subsidiary violates or fails to perform any of its commitments under the loan facility agreement, or if we fail to maintain our shares listed on at least one of the following stock exchanges before the maturity date under the relevant loan facility agreement: (i) Nasdaq; or (ii) The Singapore Exchange Securities Trading Limited; or (iii) the Hong Kong Stock Exchange; or (iv) any other stock exchange acceptable to the lender. In addition, the terms of these loan agreements include financial covenants that limit certain financial ratios, such as the interest coverage ratio, gross leverage ratio and tangible net worth, during the relevant period, as defined in the agreements. The terms of these loan agreements also include cross default provisions which could be triggered if our company (i) fails to repay any financial indebtedness in an aggregate amount equivalent to or exceeding US\$4.5 million, or, in some cases, RMB50 million (US\$7.2 million), when due or within any originally applicable grace period; (ii) fails to repay any financial indebtedness or perform any of its obligations under any agreement which could have a material adverse effect on its performance of the loan facility agreements; (iii) fails to repay any financial indebtedness raised with any financial institution; or (iv) fails to perform any loan facility agreement with any financial institution which could result in immediate or accelerated repayment of the financial indebtedness or downgrading of the borrowing subsidiary by any credit rating agency administered by the PBOC in accordance with the regulations promulgated by PBOC governing loan market rating standards. As of December 31, 2022, our company was in compliance with all of the abovementioned covenants.

As of December 31, 2022, we had total working capital and project financing credit of RMB37,767.3 million (US\$5,475.7 million) from various financial institutions, of which the unused amount was RMB10,730.5 million (US\$1,555.8 million). As of December 31, 2022, we had drawn down RMB27,036.9 million (US\$3,920.0 million) under these loan facilities, of which RMB1,389.3 million (US\$201.4 million), net of debt issuance costs of RMB3.5 million (US\$0.5 million) was recorded in short-term loans and borrowings and RMB25,489.8 million (US\$3,695.7 million), net of debt issuance costs of RMB154.2 million (US\$22.4 million), was recorded in long-term loans and borrowings, respectively. Drawdowns from these credit facilities are subject to the approval of the relevant lending financial institution and are subject to the terms and conditions of each loan agreement.

Below is a summary of the abovementioned secured and unsecured loans and borrowings, which are in RMB, USD, HKD and MYR denominations:

RMB Loans

Purpose	Total Facility Amount as of December 31, 2022 (RMB (US\$) million)	Total Drawdown Amount as of December 31, 2022 ⁽³⁾ (RMB (US\$) million)
Data Centers ⁽¹⁾	32,104.8 (\$4,654.8)	23,635.1 (\$3,426.8)
Corporate ⁽²⁾	93.7 (\$13.6)	93.7 (\$13.6)

USD Loans

Purpose	Total Facility Amount as of December 31, 2022 (US\$ million)	Total Drawdown Amount as of December 31, 2022 ⁽³⁾ (US\$ million)
Data Centers ⁽¹⁾	35.0	35.0
Corporate ⁽²⁾	300.0	150.0

HKD Loans

Purpose	Total Facility Amount as of December 31, 2022 (HKD (US\$) million)	Drawdown Amount as of December 31, 2022 ⁽³⁾ (HKD (US\$) million)
Data Centers ⁽¹⁾	3,180.7 (\$412.0)	1,980.8 (\$256.5)

MYR Loans

Purpose	Total Facility Amount as of December 31, 2022 (MYR (US\$) million)	Drawdown Amount as of December 31, 2022 ⁽³⁾ (MYR (US\$) million)
Data Centers ⁽¹⁾	250.0 (\$57.2)	158.6 (\$36.3)

- (1) Refers to loans for which the use of proceeds is for development and acquisition of new data centers and related operating costs.
(2) Refer to loans for which the use of proceeds is for working capital and general corporate purposes.
(3) Drawdown amount does not deduct debt issuance costs of RMB157.8 million (US\$22.9 million) in total.

The following table sets forth our short-term and long-term borrowings as of December 31, 2022:

	Total	Payment due by period			More than 5 years
		Less than 1 year	1-3 years	3-5 years	
		(in thousands of RMB)			
Short-term borrowings ⁽¹⁾	1,392,782	1,392,782	—	—	—
Long-term borrowings ⁽¹⁾	25,644,068	2,001,680	6,203,271	7,506,422	9,932,695

- (1) Refers to loans from financial institutions for data center project financing, working capital and general corporate purposes. Does not include interests or debt issuance costs.

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

Sourcing and Development

See “Item 4. Information on the Company—B. Business Overview—Data Center Sourcing and Development.”

Intellectual Property

See “Item 4. Information on the Company—B. Business Overview—Technology and Intellectual Property.”

D. Trend Information

Please refer to “—A. Results of Operations” for a discussion of the most recent trends in our services, sales and marketing by the end of 2022. In addition, please refer to discussions included in such Item for a discussion of known trends, uncertainties, demands, commitments or events that we believe are reasonably likely to have a material effect on our net sales and operating revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information to be not necessarily indicative of our future operating results or financial condition.

E. Critical Accounting Policies and Estimates

We prepare our financial statements in conformity with U.S. GAAP, which requires us to make judgments, estimates and assumptions. We continually evaluate these estimates and assumptions based on the most recently available information, our own historical experience and various other assumptions that we believe to be reasonable under the circumstances. Since the use of estimates is an integral component of the financial reporting process, actual results could differ from our expectations as a result of changes in our estimates.

An accounting policy is considered critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time such estimate is made, and if different accounting estimates that reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur, could materially impact the consolidated financial statements. We believe that the following accounting policies involve a higher degree of judgment and complexity in their application and require us to make significant accounting estimates. The following descriptions of critical accounting policies, judgments and estimates should be read in conjunction with our consolidated financial statements and other disclosures included in this annual report.

Consolidation of VIEs

We account for entities qualifying as VIEs in accordance with Financial Accounting Standards Boards, or FASB, Accounting Standards Codification Topic 810, Consolidation, or ASC 810. Our operations are primarily conducted through the VIEs and their subsidiaries, to comply with relevant PRC laws and regulations, which prohibit foreign investment in companies that are engaged in data center-related businesses. Individuals acting as nominee equity holders hold the legal equity interests of Management HoldCo on our behalf. The equity holders of Management HoldCo are Yilin Chen (senior vice president, product and service and Southeast Asia business), Yan Liang (senior vice president, design, operation and delivery), Kejing Zhang (senior vice president, sales), Andy Wenfeng Li (general counsel, compliance officer, and company secretary) and Qi Wang (senior vice president, cloud and network business). Management HoldCo holds the legal equity interests of GDS Beijing and GDS Shanghai on our behalf.

A series of contractual arrangements, including equity interest pledge agreements, shareholder voting rights proxy agreements, exclusive technology license and service agreements, intellectual property rights license agreements, exclusive call option agreements and loan agreements, collectively referred to as “VIE Arrangements,” were entered among GDS Investment Company, GDS Beijing, GDS Shanghai and Management HoldCo, as well as among GDS Investment Company, Management HoldCo and the equity holders of Management HoldCo. Through these agreements, Management HoldCo and the equity holders of Management HoldCo have granted all their legal rights, including voting rights, dividends rights, and disposition rights, of their equity interests in Management HoldCo, GDS Beijing and GDS Shanghai to us. Accordingly, Management HoldCo and the equity holders of Management HoldCo do not have (i) rights to make decisions about the activities of Management HoldCo, GDS Beijing and GDS Shanghai or (ii) rights to receive the expected residual returns of Management HoldCo, GDS Beijing and GDS Shanghai.

Under the terms of the VIE Arrangements, we have (i) the right to receive service fees on a yearly basis at an amount equivalent to all of the net profits of Management HoldCo, GDS Beijing and GDS Shanghai under the exclusive technology license and service agreements when such services are provided; (ii) the right to receive all dividends declared by Management HoldCo, GDS Beijing and GDS Shanghai and the right to all undistributed earnings of Management HoldCo, GDS Beijing and GDS Shanghai; (iii) the right to receive the residual benefits of the Management HoldCo, GDS Beijing and GDS Shanghai through its exclusive option to acquire 100% of the equity interests in Management HoldCo, GDS Beijing and GDS Shanghai, to the extent permitted under PRC law; and (iv) the right to require the shareholders of Management HoldCo, GDS Beijing, GDS Beijing’s subsidiaries and GDS Shanghai to appoint the PRC citizen (s) as designated by us to act as such shareholder’s exclusive attorney-in-fact to exercise all shareholder rights, including, but not limited to, voting on all matters of Management HoldCo, GDS Beijing, GDS Beijing’s subsidiaries and GDS Shanghai requiring shareholder approval, disposing of all or part of the shareholder’s equity interest in Management HoldCo, GDS Beijing and GDS Shanghai, and appointing directors and executive officers.

In accordance with ASC 810, we have a controlling financial interest in Management HoldCo, GDS Beijing and GDS Shanghai because we have (i) the power to direct activities of Management HoldCo, GDS Beijing and GDS Shanghai that most significantly impact their economic performance; and (ii) the right to receive expected residual return of Management HoldCo, GDS Beijing and GDS Shanghai that could potentially be significant to Management HoldCo, GDS Beijing and GDS Shanghai.

The significant judgments used and assumptions made in our determination that we are the primary beneficiary of Management HoldCo, GDS Beijing and GDS Shanghai were the terms of the VIE Arrangements and our financial support to Management HoldCo, GDS Beijing and GDS Shanghai. Accordingly, we have included the financial statements of Management HoldCo, GDS Beijing and GDS Shanghai in our consolidated financial statements.

Our PRC legal counsel, based on its understanding of the relevant laws and regulations, is of the opinion that each of the contracts among our wholly-owned PRC subsidiaries, the consolidated VIEs and their shareholders is valid, legally binding and enforceable in accordance with its terms. However, there are substantial uncertainties regarding the interpretation and application of PRC laws and future PRC laws and regulations. Any changes in PRC laws and regulations that affect our ability to control our VIEs may preclude us from consolidating these companies in the future.

Revenue Recognition

We recognize revenue as we satisfy a performance obligation by transferring control over a good or service to a customer. For each performance obligation satisfied over time, we recognize revenue over time by measuring progress toward complete satisfaction of that performance obligation. If we do not satisfy a performance obligation over time, the performance obligation is satisfied at a point in time. Revenue is measured as the amount of consideration to which we expect to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

For contracts with customers that contain multiple performance obligations, we account for individual performance obligations separately if they are distinct or as a series of distinct obligations if the individual performance obligations meet the series criteria. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The transaction price is allocated to the separate performance obligation on a relative standalone selling price basis. The standalone selling price is determined based on overall pricing objectives, taking into consideration market conditions, geographic locations and other factors.

We derive revenue primarily from the delivery of colocation services and managed services, including managed hosting services and managed cloud services. The remainder of our revenue is from IT equipment sales that are either sold on a stand-alone basis or bundled in a managed hosting service contract arrangement and consulting services.

Contracts with customers for colocation services and managed services include (i) those provide for variable considerations that are primarily based on the usage of such services, and revenues on such contracts are recognized based on the agreed usage-based fees as the actual services are rendered throughout the contract term; and (ii) those provide for a fixed consideration over the contract service period, and revenues on such contracts are recognized on a straight-line basis over the term of the contract.

In certain colocation and managed hosting service contracts, we agree to charge customers for their actual power consumption. Relevant revenue is recognized based on actual power consumption during each period. In certain other colocation and managed hosting service contracts, we specify a fixed power consumption limit each month for customers. If a customer's actual power consumption is below the limit, no additional fee is charged, while if its actual power consumption is above the limit, we charge the customers additional power consumption fees calculated based on the portion of actual power consumption exceeding the limit, multiplied by a fixed unit price, which is determined based on market price and does not provide customers with rights to acquire additional goods or services. Accordingly, relevant revenue is recognized each month based on actual additional power consumption fees.

Our colocation service and managed service contracts with customers contain both lease and nonlease components. We elected to adopt the practical expedient which allows lessors to combine lease and non-lease components and account for them as one component if i) they have the same timing and pattern of transfer; and ii) the lease component, if accounted for separately, would be classified as an operating lease. We elected to apply the practical expedient on the contracts that meet the conditions. In addition, we have performed a qualitative analysis to determine that the non-lease component is the predominant component of our revenue stream as the customer would ascribe more value to the services provided rather than to the lease component. Therefore, the combined component is accounted for in accordance with the current revenue accounting guidance (“ASC 606”). For contracts that do not meet the conditions required to adopt the practical expedient, the lease component is accounted for in accordance with the current lease accounting guidance (“ASC 842”), which is immaterial for the years ended December 31, 2020, 2021 and 2022.

Revenue recognized for colocation or managed hosting and cloud services delivered prior to billing is recorded within accounts receivable. We generally bill the customer on a monthly or quarterly basis in arrears.

Cash received in advance from customers prior to the delivery of the colocation or managed hosting and cloud services is recorded as deferred revenue.

The sale of IT equipment is recognized when the customer obtains control of the equipment, which is typically when delivery has occurred, the customer accepts the equipment and we have no performance obligation after the delivery.

In certain managed service contracts, we sell and deliver IT equipment such as servers and computer terminals prior to the delivery of the services. Since sale of equipment can be distinguished and is separately identifiable from other promises in the contract and it is distinct within the context of the contract, the sale of equipment is considered a separate performance obligation. Accordingly, the contract consideration is allocated to the equipment and the managed services based on their relative standalone selling prices.

Sales of IT equipment is generally recognized on a gross basis as we are primarily responsible for fulfilling the contract, assume inventory risk and have discretion in establishing the price when selling to the customer.

To the extent we do not meet the criteria for recognizing revenue on a gross basis, we record the revenue on a net basis.

Consulting services are provided to customers for a fixed amount over the service period, usually less than one year. We recognize revenues from consulting services over the period when the services were provided, since customers simultaneously receive and consume the benefit of the services. We use the input method based on the pattern of service provided to the customers.

Leases

We are lessee in a number of non-cancellable operating leases and finance leases, primarily for data centers, lands, offices and other equipment. We adopted ASC 842, *Leases*, on January 1, 2019, using a modified retrospective method.

We determine if an arrangement is or contains a lease at its inception.

We recognize lease liabilities and right-of-use, or ROU, assets at lease commencement date. Lease liabilities are measured at the present value of unpaid lease payments at the lease commencement date and are subsequently measured at amortized cost using the effective-interest method. Since most of our leases do not provide an implicit rate, we use our own incremental borrowing rate in determining the present value of unpaid lease payments. The incremental borrowing rate was determined using a portfolio approach based on the rate of interest that we would have to borrow an amount equal to the lease payments on a collateralized basis over a similar term. The judgments used in the valuation of incremental borrowing rate of the leases are inherently subjective. Different assumptions or estimates could result in different accounting treatment for a lease.

Business Combinations and Goodwill

We account for our business combinations using the acquisition method of accounting in accordance with ASC Topic 805, *Business Combinations*.

The acquisition method of accounting requires us to estimate fair values of separately identifiable assets acquired and liabilities assumed. The consideration transferred in an acquisition is measured as the aggregate of the fair values at the date of exchange of the assets given, liabilities incurred, and equity instruments issued as well as the contingent considerations as of the acquisition date. The costs directly attributable to the acquisition are expensed as incurred. Identifiable assets, liabilities and contingent liabilities acquired or assumed are measured separately at their fair value as of the acquisition date, irrespective of the extent of any non-controlling interests.

The determination of fair values of the identifiable assets acquired, liabilities assumed and non-controlling interests is based on various assumptions and valuation methodologies requiring considerable judgment from management. The most significant variables in these valuations are discount rates, the number of years on which to base the cash flow projections, as well as the assumptions and estimates used to determine the cash inflows and outflows. We determine discount rates to be used based on the risk inherent in the related activity's current business model and industry comparisons.

Goodwill is an asset representing the future economic benefits arising from other assets acquired in the acquisition that are not individually identified and separately recognized.

Goodwill is not amortized but is tested for impairment annually or more frequently if events or changes in circumstances indicate that it might be impaired. Goodwill is tested for impairment at the reporting unit level on an annual basis and between annual tests if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying value. These events or circumstances could include a significant change in macroeconomic conditions, the industry and market considerations, cost factors, overall financial performance, other relevant entity-specific events, and events affecting a reporting unit and share price. Application of the goodwill impairment test requires judgment, including the identification of the reporting unit, assignment of assets and liabilities to the reporting unit, assignment of goodwill to the reporting unit, and determination of the fair value of each reporting unit.

We have the option to perform a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying value prior to performing the goodwill impairment test. If it is more-likely-than-not that the fair value of a reporting unit is greater than its carrying amount, the goodwill impairment test is not required. If the goodwill impairment test is required, the fair value of the reporting unit is compared with its carrying amount (including goodwill). If the fair value of the reporting unit is less than its carrying amount, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. In assessing the qualitative factors, we considered the impact of abovementioned events or circumstances. No impairment losses were recorded for goodwill for the years ended December 31, 2020, 2021 and 2022.

Impairment of Long-Lived Assets

Long-lived assets (primary including property and equipment, operating lease right-of-use assets and prepaid land use rights) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, we first compare undiscounted cash flows expected to be generated by that asset or asset group to its carrying amount. The undiscounted cash flows incorporated our best estimate of utilization rates of relevant data centers based on historical actual utilization rates and our business plans for those data centers which are approved by the board of directors. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. For purposes of impairment testing of long-lived assets, we have concluded that an individual data center is the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. In the year ended December 31, 2022, an impairment loss of RMB12.8 million (US\$1.9 million) was recognized. No impairment loss was recorded in the years ended December 31, 2020 and 2021.

Share-based Compensation

We adopted an equity incentive plan in July 2014, or the 2014 share incentive plan, for the granting of share options to key employees, directors and external consultants in exchange for their services. The total number of shares that may be issued under the 2014 share incentive plan is 29,240,000 ordinary shares.

We adopted a second equity incentive plan in August 2016, or the 2016 share incentive plan, for the granting of share options and other equity awards to key employees and directors in exchange for their services. The maximum aggregate number of shares which may be subject to equity awards under the 2016 share incentive plan is 56,707,560 shares, provided, however, that such maximum aggregate number of shares shall be automatically increased on the first day of each fiscal year (i.e., January 1 of each calendar year) during which the 2016 share incentive plan remains in effect to three percent (3%) of our then total issued and outstanding shares, if and whenever the shares which may be subject to equity awards under the 2016 share incentive plan accounts for less than one and half percent (1.5%) of our then total issued and outstanding shares.

Restricted shares to directors, officers and employees

In August 2020, August 2021 and August 2022, we granted 11,520,312, 11,929,608 and 21,488,048 non-vested restricted shares, respectively, to employees, officers and directors. The restricted share awards were granted subject to service and market conditions, or service and performance conditions, which are tied to our financial performance. For restricted shares granted, the value of the restricted shares was determined by the fair value of the restricted shares on the grant date, on which all criteria for establishing the grant dates were satisfied. The value of restricted shares subject to service conditions and market conditions attached is recognized as a compensation expense using the graded-vesting method. The value of restricted shares subject to performance conditions attached is recognized as a compensation expense using the graded-vesting method only when achievement of the performance conditions becomes probable. For restricted shares with market conditions, the probability to achieve market conditions is reflected in the grant date fair value.

A summary of the restricted share activity is as follows:

	Number of Shares
Unvested at January 1, 2020	33,357,296
Granted	11,710,848
Vested	(12,684,640)
Forfeited	(1,364,736)
Unvested at December 31, 2020	<u>31,018,768</u>
Granted	12,107,888
Vested	(12,632,104)
Forfeited	(1,563,832)
Unvested at December 31, 2021	<u>28,930,720</u>
Granted	21,948,320
Vested	(5,015,992)
Forfeited	(7,328,536)
Unvested at December 31, 2022	<u>38,534,512</u>

We recognized restricted share related share-based compensation expenses of RMB333.7 million, RMB391.3 million and RMB290.8 million (US\$42.2 million) for the years ended December 31, 2020, 2021 and 2022, respectively. As of December 31, 2022, total unrecognized compensation expense relating to the unvested shares was RMB348.9 million (US\$50.6 million). The expense is expected to be recognized over a weighted average period of 1.58 years using the graded-vesting attribution method. We did not capitalize any of the share-based compensation expenses as part of the cost of any asset for the years ended December 31, 2020, 2021 and 2022.

The fair value of the restricted shares granted is estimated on the date of grant using the Monte Carlo simulation model with the following assumptions used.

Grant date:	August 2020	August 2021	August 2022
Risk-free rate of return	0.14% ~ 0.19%	0.07% ~ 0.33%	2.82% ~ 2.98%
Volatility	59.23 %	49.271% - 50.295%	53.14% - 54.15%
Expected dividend yield	—	—	—
Share price at grant date	US\$10.1475 (RMB70.5)	US\$7.45 (RMB48.2)	US\$3.365 (RMB22.7)
Expected term	1~3 years	1~3 years	1~3 years

- (1) Volatility
Expected volatility is assumed based on our historical volatility in the period equal to the expected term of each grant.
- (2) Risk-free interest rate
Risk-free rate equal to the United States Government Treasury Yield Rates for a term equal to the remaining expected term.
- (3) Dividend yield
We estimated the dividend yield based on our expected dividend policy over the expected terms of the restricted shares.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and net operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for deferred tax assets for which it is more likely than not that the related tax benefits will not be realized. The evaluation is based on our estimates of the future taxable income. The future taxable income incorporates our best estimate of utilization rates of relevant data centers based on historical actual utilization rates and our business plans for those data centers which are approved by the board of directors. Such key assumptions are sensitive to variation, such that minor changes could have an impact on the evaluation of the realizability of the deferred tax assets. We recognize the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. We record interest related to unrecognized tax benefits in interest expense and penalties in general and administrative expenses.

Recently Issued Accounting Standards

In October 2021, the FASB issued ASU 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which requires that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, *Revenue from Contracts with Customers*. The ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted, and should be adopted prospectively to business combinations occurring on or after the effective date of the amendments. We adopted this standard in the first quarter of 2023, and the adoption of this standard did not have a significant impact on our consolidated financial statements.

In September 2022, the FASB issued ASU 2022-04, *Liabilities-Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*, which requires a buyer in a supplier finance program to disclose qualitative and quantitative information about its supplier finance programs. The ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, except for the amendment on rollforward information for the relevant obligations, which is effective for fiscal years beginning after December 15, 2023. Early adoption is permitted. The ASU should be applied retrospectively to each period in which a balance sheet is presented, except for the amendment on rollforward information, which should be applied prospectively. We adopted this standard, except for the amendment on rollforward information for the relevant obligations, in the first quarter of 2023, and the adoption of this standard did not have a significant impact on our consolidated financial statements. We will adopt the amendment on rollforward information for the relevant obligations in the first quarter of 2024 and do not expect the adoption to have a material impact on our consolidated financial statements.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth certain information relating to our directors, executive officers and senior management.

Name	Age	Position/Title
William Wei Huang [†]	55	Chairman and chief executive officer
Daniel Newman	62	Chief financial officer
Jamie Gee Choo Khoo	58	Chief operating officer
Sio Tat Hiang [†]	75	Vice-chairman
Satoshi Okada [‡]	64	Director
Bruno Lopez [†]	58	Director
Lee Choong Kwong [†]	66	Director
Lim Ah Doo [‡]	73	Independent director
Bin Yu ^{°°}	53	Independent director
Zulkifli Baharudin	63	Independent director
Chang Sun [‡]	66	Independent director
Gary J. Wojtaszek [‡]	57	Director
Judy Qing Ye	52	Independent director
Jonathan King	46	Member of the executive committee
Yilin Chen	52	(Senior vice president, product and service and Southeast Asia business)
Yan Liang	47	Senior vice president, design, operation and delivery
Kejing Zhang	40	Senior vice president, sales

[†] Designated as an STT GDC appointee.

[‡] Designated as a Class B director nominee and subject to Class B 20-vote-per-share voting.

^{°°} Designated as a director subject to Class B 20-vote-per-share voting.

We have received from each independent director an annual confirmation of his/her independence pursuant to the Hong Kong Listing Rules and we consider them as independent.

Mr. William Wei Huang is our founder, chairman of our board of directors and, since 2002, has served as our chief executive officer. From 2004 to 2020, Mr. Huang also served as a director of Haitong-Fortis Private Equity Fund Management Co., Ltd., a domestic private equity fund management company in China. Prior to founding our company, he served as a senior vice president of Shanghai Meining Computer Software Co., Ltd., which operates StockStar.com, a website primarily providing finance and securities related information and services in China.

Mr. Daniel Newman has served as the chief financial officer of GDS since September 2011. Prior to joining us in this capacity, Mr. Newman acted as an advisor to GDS from 2009 to 2011. From 2008 to 2009, Mr. Newman served as a managing director at Bank of America Merrill Lynch with responsibility for investment banking clients in the telecom, media, and technology sectors in Asia. From 2005 to 2007, Mr. Newman acted as an advisor in the chairman's office of Reliance Communications in Mumbai, India. From 2001 to 2005, Mr. Newman served as a managing director at Deutsche Bank with responsibility for investment banking clients in the telecom and media sectors in Asia. Mr. Newman previously worked as an investment banker at Salomon Brothers (and its successors) from 1997 to 2001 and at S.G. Warburg (and its successors) from 1983 to 1997 in London and Hong Kong. Mr. Newman received his bachelor's degree in history from Bristol University in the UK in 1983.

Ms. Jamie Gee Choo Khoo has served as the chief operating officer of GDS since January 2019. Ms. Khoo joined the GDS senior management team in 2014, serving as deputy chief financial officer. From 1996 to 2007, Ms. Khoo worked at ST Telemedia, holding various management roles in finance, accounting and treasury as well as having responsibility for designated overseas investment entities. Prior to joining ST Telemedia, she worked for ABB (China) Holdings Limited from 1994 to 1996, Ernst & Young (Singapore) in 1994 and Baker Hughes (Singapore) from 1989 to 1993, mainly in finance and consulting roles. Ms. Khoo graduated from the National University of Singapore with a bachelor's degree in accountancy and an MBA from the University of Hull. Ms. Khoo is a fellow member of the Institute of Singapore Chartered Accountants and a member of the Singapore Institute of Directors.

Mr. Sio Tat Hiang is vice-chairman of our board of directors and has been a director of our company since August 2014. Since 2020, Mr. Sio has been a director of ST Telemedia (the sole indirect shareholder of STT GDC), and STTC. From 2012 to 2020 Mr. Sio was a director of STT GDC, from 2017 to 2020, Mr. Sio was the chairman of the board of STT GDC and from 2017 to 2022 Mr Sio was Chairman on the Board of Virtus HoldCo Limited. In addition, Mr. Sio currently also sits on the Boards of U Mobile Sdn Bhd and STT Global Data Centers India Private Limited. He graduated with a bachelor's degree in business administration with honors from the National University of Singapore and attended the London Business School Senior Executive Programme.

Mr. Satoshi Okada has been a director of our company since June 2014. From 2000 to 2005, Mr. Okada had held various management positions within the Softbank Corp. group. Since 2008, he also serves as a director of *Alibaba.com* Japan, which is engaged in the Alibaba related business. Mr. Okada also serves as a director on the board of Baozun Inc., a Nasdaq-listed company since 2014 and *Alibaba.com* while it was a public company in Hong Kong from 2007 to 2012.

Mr. Bruno Lopez has been a director of our company since August 2014. Mr. Lopez is President and Group Chief Executive Officer of STT GDC—the data center business of Singapore Technologies Telemedia Pte Ltd, or ST Telemedia. He is responsible for the overall leadership, direction, growth and development of the STT GDC group. He is also concurrently Deputy Chief Executive Officer at ST Telemedia. Since joining ST Telemedia in 2014, Mr. Lopez has led STT GDC in its strategy to build a large portfolio of integrated data centers across a global platform in Singapore, UK, Thailand, India, Indonesia, South Korea, Japan, the Philippines and in China through GDS. He is a board member and the chairman of the executive committee in GDS as well as in all these other operational platforms owned by STT GDC. An industry veteran in the telecommunications and data center sectors with more than 25 years of experience, Mr. Lopez was the chief executive officer and executive director of Keppel Data Centers where he was instrumental in leading the company's growth and business expansion in Asia and Europe. From 2009 to 2014, he was also responsible for setting up Securus Data Property Fund, an investment fund focused on developing data center assets in the Asia-Pacific region, Europe and the Middle East, which was eventually merged with Keppel Data Centres' assets as part of the company's SGX listing. He received a bachelor's degree with honors from the National University of Singapore and a master's degree in human resource management from Rutgers University.

Mr. Lee Choong Kwong has been a director of our company since August 2014. From 2013 to 2017, Mr. Lee was ST Telemedia's executive vice president for China. He was responsible for China investments and business development. Mr. Lee brings with him more than 20 years of China business experience. He played a key role in ST Telemedia's investments in China. Mr. Lee received a bachelor's degree in electrical and electronic engineering from the National University of Singapore, and a UCLA-NUS Executive MBA degree.

Mr. Lim Ah Doo has served as our director since August 2014. Mr. Lim is currently the chairman and independent non-executive director of Olam Group Limited, formerly known as Olam International Limited, as well as an independent non-executive director of GP Industries Limited, Singapore Technologies Engineering Ltd (STE), STT Global Data Centers India Private Limited, or GDC India, Virtus Holdco Ltd (VHL) and U Mobile Sdn Bhd. He also chairs the audit committees of GP Industries, GDC India, VHL and U Mobile, and is also a member of the audit committee of STE. Mr. Lim currently serves as a non-executive director of ST Telemedia and STTC and also chairs the audit committees of ST Telemedia and STTC. From 2016 to 2020, Mr. Lim served as an independent non-executive director of STT GDC and also chaired the audit committee of STT GDC. During his 18-year distinguished banking career in Morgan Grenfell, Mr. Lim held several key positions including chairing Morgan Grenfell (Asia). From 2003 to 2007, he was president and then vice chairman of the RGM group, a leading global resource-based group and in 2008, he served as a deputy chairman of a member of RGM Group. Mr. Lim obtained a bachelor's degree in engineering with honors from the Queen Mary College, University of London, and an MBA from the Cranfield School of Management.

Ms. Bin Yu has served as our independent director since November 2016. She served as the chief financial officer for Lingochamp Information Technology (Shanghai) Co., Ltd., a company engaged in AI driven education from September 2017 to January 2020. Ms. Yu has served as an independent director of Zero2IPO Holdings Inc., a company committed to providing the industry with leading services for entrepreneurship and investment since December 2020, an independent director of Kuke Music Holding Limited, a leading provider of classical music licensing, subscription and smart education services in China since January 2021, an independent director of Baozun Inc., a Nasdaq-listed brand e-commerce solutions provider based in China since May 2015, and an independent director of iDreamSky Technology Holdings Limited, a leading mobile game publisher in China listed on the Hong Kong Stock Exchange since May 2018. From 2015 to May 2017, she served as the chief financial officer of Innolight Technology Corp. From 2013 to 2015, she served as a director and the chief financial officer of Star China Media Limited, a company engaged in the entertainment TV programs business. From 2012 to 2013, she was a senior vice president of Youku Tudou Inc., and had responsibility for the company's investments in content production, mergers and acquisitions and strategic investments. She previously served as the chief financial officer from 2012 to 2013, and the vice president of finance from 2010 to 2011, of Youku Tudou's predecessor, Tudou Holdings Limited. Prior to that, she worked at KPMG from 1999 to 2010 and was a senior manager of KPMG's Greater China region. Ms. Yu received a master's degree in accounting from the University of Toledo, and an EMBA from Tsinghua University and INSEAD, respectively. Ms. Yu is a Certified Public Accountant in the United States admitted by the Accountancy Board of Ohio.

Mr. Zulkifli Baharudin has served as our independent director since November 2016. Since 2011, he has been serving as the executive chairman of Indo-Trans Corporation, a logistics and supply chain company across Indo-China. Mr. Zulkifli has been the non-executive director on the Board of Virtus Holdco Limited and Omni Holdco, LLC since 2017 and 2018, respectively. Mr. Zulkifli has been serving as a director on the Board of Ang Mo Kio Thye Hua Kwan Hospital Ltd, Thye Hua Kwan Moral Charities Limited and Thye Hua Kwan Nursing Home Limited since 2012, 2011 and 2014, respectively. Mr. Zulkifli also serves as Singapore's Non-Resident Ambassador to the Republic of Kazakhstan and Uzbekistan. From 1997 to 2001, he also served as a nominated member of Parliament in Singapore. Mr. Zulkifli received his bachelor's degree in estate management from the National University of Singapore.

Mr. Chang Sun has served as our independent director since April 2017. Since 2017, Mr. Sun has been the managing partner/Chairman for China at TPG, a global alternative investment firm. Prior to joining TPG, he founded and was the chairman of Black Soil Group Ltd., an agriculture impact investing company. Prior to founding Black Soil in 2015, Mr. Sun was the chairman of Asia Pacific at Warburg Pincus, a global private equity firm, where he had served for 20 years. Mr. Sun also was the founder and current honorary chairman of the China Venture Capital and Private Equity Association and the founder and current executive vice chairman of the China Real Estate Developers and Investor's Association. He is also a board member of the Lauder Institute of the Wharton School and a board member of The China Entrepreneur Club. Mr. Sun earned a joint degree of MA/MBA from the Joseph Lauder Institute of International Management and the Wharton School of the University of Pennsylvania.

Mr. Gary J. Wojtaszek has served as our director since June 2018, and had been an observer of our board of directors since October 2017. Mr. Wojtaszek has extensive experience founding, growing, leading, and monetizing private and public companies of scale. He is the founder and CEO of RecNation, which designs, builds, and operates premium class facilities geared towards the needs of the recreational vehicle enthusiast. From August 2011 to February 2020, he served as President and Chief Executive Officer of CyrusOne, Inc., a real estate investment trust that builds and manages carrier-neutral hyperscale data centers globally. Prior to CONE, Mr. Wojtaszek served as chief financial officer and board member of Cincinnati Bell Inc., where he had responsibility for the data center business and oversaw CyrusOne's successful creation, spin-off, and IPO. Before joining Cincinnati Bell in July 2008, he was senior vice president, treasurer, and chief accounting officer for the Laureate Education Corporation from 2006 to 2008 helping with the leveraged buyout of the company to KKR. He worked at Agere Systems, the semiconductor and optical electronics communications division of Lucent Technologies, from 2001 to 2008, which was subsequently spun off through an IPO. While at Agere Systems, Mr. Wojtaszek worked in a number of senior finance positions, helping with the restructuring and repositioning of the company following the 2001 financial crisis. Mr. Wojtaszek started his career in the General Motors New York treasury group and joined Delphi Automotive Systems as the regional European treasurer in connection with the initial public offering and spin-off of Delphi Automotive Systems from General Motors. Mr. Wojtaszek currently serves on the Board of Talen Energy which is one of the largest power generation providers in the United States. He also is a board member of Quantum Loophole, developer of master planned data center communities in the U.S and Infra Tech Partners. Mr. Wojtaszek serves as an industry advisor to global investment firm, The Carlyle Group, Inc. and Actis, a leading global investor in sustainable infrastructure and sits on the boards of their portfolio companies NXTRA in India and Involta in the US as well as Southern Methodist University. He has a BA from Rutgers University and a MBA from Columbia University.

Ms. Judy Qing Ye has served as our independent director since October 2018. Ms. Judy Qing Ye is the managing partner for Yimei Capital, a global alternative investment firm and has over 20 years of experience in investment. Prior to founding Yimei Capital in 2011, Ms. Ye was the Asia Head of EM Alternatives (“EMA”), a global private equity firm from 2008 to 2010. Prior to EMA, Ms. Ye served as director of strategic investments at Hewlett-Packard Company from 2001 to 2008. In her earlier career, Ms. Ye worked as M&A project manager at PepsiCo, New York from 1997 to 1999. Ms. Ye is also the co-founder and managing partner of NE Social Impact Fund (NESIF), a dedicated social impact investing fund in China. Ms. Ye is also the council member of United Way Shanghai, a global non-profit charitable organization. She is also the President of the Wharton Club of Shanghai and the Director of the Union of Finance Alumni of Peking University (UFAPKU). Ms. Ye received her bachelor of economics degree from Peking University and earned her MA from Tufts University, MBA from the Wharton School at University of Pennsylvania.

Mr. Jonathan King has been a member of our executive committee since October 2016 and has been involved with our company since 2014, in his role as chief operating officer and head of investments of ST Telemedia’s data center business—STT GDC. In this role he is responsible for the performance of STT GDC’s existing platforms as well as leading its investment activities into new markets. From 2009 to 2014, Mr. King was the co-fund manager of Securus Data Property Fund, an investment fund focused on the acquisition and management of high-quality data center assets in the Asia-Pacific region and Europe. During that time, Mr. King played a key role in developing the portfolio of data centers that was eventually listed as Keppel DC REIT on the Singapore Exchange. Mr. King was an associate director with Macquarie Bank’s real estate group. He obtained a bachelor’s degree in engineering from the University of Sydney and a graduate diploma in finance and investment from the Financial Services Institute of Australasia.

Ms. Yilin Chen joined our company in 2008 and has served as our senior vice president for product and service business since March 2017 and as senior vice president for Southeast Asia business since October 2022. Prior to joining us, Ms. Chen held various roles in consulting, business planning and analysis, product and operations. Ms. Chen worked at HP China from 1995 to 2008, holding leadership roles related to IT solutions and service, outsourcing, business development and management. From 1992 to 1995, Ms. Chen worked at the East China Institute of Computer and Science. She graduated from Shanghai Science and Technology University with a bachelor’s degree in computer science.

Ms. Yan Liang joined our company in 2010 and has served as our senior vice president of operation and delivery since March 2014 with responsibility for establishing the operation governance system and management platform for data centers. Ms. Liang is currently also responsible for data center design and leads our company’s design team. Ms. Liang serves on the China Data Center Committee as vice chairman with responsibility for contributing to white papers for the operation and maintenance management technology of data centers and promoting maintenance and operation in data center industry. Prior to joining us in 2010, Ms. Liang served as a director of operations and business development with COSCO’s global data center business where she had responsibility for information system centralization, construction of large data centers, establishment and promotion of ITIL operation management systems and global disaster recovery from 1997 to 2010. Ms. Liang received a bachelor’s degree from Shanghai Tie Dao University and an MBA from Fudan University.

Mr. Kejing Zhang joined our company in 2015 as our senior vice president of sales, and is responsible for sales operations and management. Prior to joining us, Mr. Zhang was a director of wholesale business of China Unicom (Europe) Operations Limited from 2010 to 2014, with responsibility for sales and business development with telco carriers in European and African regions. Mr. Zhang majored in electronic engineering and received a Ph.D. from Queen Mary and Westfield College to the University of London.

Board Observer

In accordance with the Investor Rights Agreement entered into between Ping An Overseas Holdings and our company, we have agreed that an observer designated by Ping An Overseas Holdings may join meetings of our board of directors as an observer, subject to maintaining its shareholding at or above a specified percentage threshold. Mr. Hoi Tung, chairman and chief executive officer of China Ping An Insurance Overseas (Holdings) Limited, as well as a member of the Investment Committee of Ping An Insurance (Group) of China, was designated by Ping An Overseas Holdings after the completion of its investment to join meetings of our board of directors as an observer.

Mr. Hoi Tung is currently the Chairman and CEO of China Ping An Insurance Overseas (Holdings) Limited. From 2014 to 2016, Mr. Tung was the Chairman of Investment Committee of Ping An Insurance (Group) of China, Ltd. From 2004 to 2014, Mr. Tung was the Chairman and CEO of Ping An Trust Co. Ltd. Before joining Ping An, Mr. Tung was an executive director with Goldman Sachs (Asia) L.L.C., advising major financial institutions in the Asia Pacific region on restructuring, M&As and capital markets activities. Mr. Tung started his career as a management consultant with McKinsey & Co. He obtained a Master’s degree in Engineering Science with first honor from Oriel College, University of Oxford, and an MBA from INSEAD. Mr. Tung is a fellow of the Global Finance Leaders Fellowship at the Aspen Institute.

Board Diversity Matrix

Board Diversity Matrix (As of March 15, 2023)				
Country of Principal Executive Offices:	People’s Republic of China			
Foreign Private Issuer	Yes			
Disclosure Prohibited Under Home Country (i.e. People’s Republic of China) Law	No			
Total Number of Directors	11			
	Female	Male	Non-Binary	Did Not Disclose Gender
Part I: Gender Identity				
Directors	2	9	0	0
Part II: Demographic Background				
Underrepresented Individual in Home Country (i.e. People’s Republic of China) Jurisdiction	0			
LGBTQ+	0			
Did Not Disclose Demographic Background	0			

Our company is a foreign issuer and we have two female directors on our board of directors as of March 15, 2023. Accordingly, we meet the diversity objective under Nasdaq’s Board Diversity Rule as of March 15, 2023.

Weighted Voting Rights (WVR) Structure

Under our weighted voting rights structure, our share capital comprises Class A ordinary shares and Class B ordinary shares. Class A ordinary shares and Class B ordinary shares carry equal rights, generally rank pari passu with one another and are entitled to one vote per share at general meetings of shareholders, except for only the following matters at general meetings of shareholders, with respect to which Class B ordinary shares are entitled to 20 votes per share: (i) the election or removal of a simple majority, or six, of our directors; and (ii) any change to our Articles of Association that would adversely affect the rights of Class B shareholders. These rights are categorized as WVR structure, under the Hong Kong Listing Rules. As a result, we are deemed as a company with a WVR structure. For further information about the risks associated with our WVR structure, see “Item 3. Key Information — D. Risk Factors — Risks Related to Our Corporate Structure.”

As of March 15, 2023, the beneficiary of the WVR structure was Mr. Huang, the beneficial owner of the 55,590,336 Class B ordinary shares then issued and outstanding.

Subject to the provisions of our Articles of Association, our Class B ordinary shares may be converted into Class A ordinary shares at the option of the holder or automatically at the occurrence of an automatic conversion event. Such automatic conversion event refers to the first occurrence of (i) Mr. Huang having beneficial ownership in less than 5% of our issued share capital on an as converted basis; (ii) the consultation draft Foreign Investment Law of the People's Republic of China published by the MOFCOM on January 19, 2015, or the FIL, in the form implemented not requiring VIE entities operating the PRC business to be owned or controlled (as defined in the FIL as officially promulgated by the PRC legislator) by PRC nationals or entities (including without limitation the FIL as officially promulgated by the PRC legislator grandfathering then-existing VIE Entities in the PRC); (iii) PRC law no longer requiring the conduct of the PRC business to be owned or controlled by PRC nationals or entities; (iv) the promulgation of the FIL as it relates to VIE entities is abandoned by the PRC legislator; or (v) the relevant authorities in the PRC having approved the VIE structure without the need for the VIE entities to be owned or controlled by PRC nationals or entities. Subject to the provisions of our Articles of Association, if the Class B ordinary shares are automatically converted into Class A ordinary shares, the WVR structure will thereby be terminated.

Each Class B ordinary share is convertible into one Class A ordinary share at any time by the holder thereof, and will automatically convert into Class A ordinary shares under certain circumstances. Upon the conversion of all the issued and outstanding Class B ordinary shares into Class A ordinary shares, the company will issue 55,590,336 Class A ordinary shares. Any Class A ordinary shares which Mr. Huang directly or indirectly acquire may be converted into Class B ordinary shares.

Article 86(4) of our Articles of Association provides that for so long as Mr. Huang continues to have beneficial ownership in not less than five per cent. (5%) of the then issued share capital of our company on an as converted basis, the holders of the Class B Ordinary Shares shall have the right to nominate five (5) directors (one of which is intended to be Mr. Huang) for appointment as directors. Such directors shall be elected by resolutions of the members (with the Class B ordinary shares having twenty (20) votes per Class B ordinary share in respect of such resolutions).

Upon either (i) the automatic conversion of the Class B ordinary shares, or (ii) the conversion of such of the Class B ordinary shares that results in Mr. Huang ceasing to have beneficial ownership in not less than five per cent. (5%) but continuing to have beneficial ownership in not less than two per cent. (2%) of the then issued share capital of our company on an as converted basis, (a) the nomination and appointment rights under the above provisions shall cease and terminate; (b) any directors (other than William Wei Huang) appointed pursuant to the above provisions shall retire from office by rotation at the appropriate annual general meeting of members in accordance with the terms of their appointment, and (c) at the relevant annual general meeting, their replacement as a director shall be nominated by the Nominating and Corporate Governance Committee and shall be elected by resolutions of the members (with the Class B ordinary shares having one (1) vote per Class B ordinary share in respect of such resolutions); and (d) Mr. Huang shall continue to have the right to appoint and remove one (1) director (which is intended to be Mr. Huang).

Upon Mr. Huang having beneficial ownership in less than two per cent. (2%) of the then issued share capital of our company on an as converted basis, (a) Mr. Huang's above appointment right shall cease and terminate, (b) any director appointed pursuant to such right shall retire from office by rotation at the appropriate annual general meeting of members in accordance with the terms of their appointment, and (c) at the relevant annual general meeting, their replacement as a director shall be nominated by the Nominating and Corporate Governance Committee and shall be elected by resolutions of the members (with the Class B ordinary shares having one (1) vote per Class B ordinary share in respect of such resolutions).

In addition, a quorum required for a meeting of shareholders consists of at least two shareholders present in person or by proxy or by duly authorized representative, representing not less than one-third in nominal value of the total issued voting shares in our company, save that for any general meeting requisitioned by one or more shareholders holding at the date of deposit of the requisition not less than 10% of the voting rights in our company, two shareholders entitled to vote and present in person or by proxy or by duly authorized representative, representing not less than 10% of the aggregate voting power in our company throughout the meeting shall form a quorum.

B. Compensation

For the year ended December 31, 2022, we and our subsidiaries paid aggregate compensation of approximately US\$8.1 million to our directors and executive officers as a group, of which, US\$6.1 million was settled in cash and US\$2.0 million was settled in restricted shares issued under our 2016 share incentive plan. We did not pay any other cash compensation or benefits in kind to our directors and executive officers. We set aside an aggregate of US\$0.1 million for pensions, retirement or other benefits for our directors and executive officers in 2022.

For information regarding options granted to our directors and executive officers, see “—Share Incentive Plans.”

Share Incentive Plan

2016 Share Incentive Plan

Our second equity incentive plan adopted in 2016, or the 2016 share incentive plan, provides for the grant of share options, share appreciation rights, restricted share units, restricted shares or other share-based awards, which we refer to collectively as equity awards. We believe that the 2016 share incentive plan will aid us in recruiting, retaining and motivating key employees and directors of outstanding ability through the granting of equity awards.

The maximum aggregate number of shares which may be subject to equity awards under the 2016 share incentive plan is 56,707,560 shares, provided, however, that the maximum number of unallocated ordinary shares which may be issuable pursuant to awards under the 2016 share incentive plan shall be automatically increased on the first day of each fiscal year (i.e., January 1 of each calendar year) during which the 2016 share incentive plan remains in effect to three percent (3%) of our then total issued and outstanding ordinary shares, if and whenever the unallocated ordinary shares which may be subject to equity awards under the 2016 share incentive plan accounts for less than one and half percent (1.5%) of our then total issued and outstanding ordinary shares, provided further that solely for the fiscal year 2020, the increase of the unallocated ordinary shares which may be issuable pursuant to awards under the plan was given effect as of the date of the approval by the shareholders at the annual general meeting on August 6, 2020 (but calculated based on the total issued and outstanding ordinary shares of the Company as of January 1, 2020). In August 2020, the maximum number of unallocated shares which may be issuable pursuant to awards under the 2016 share incentive plan was automatically increased by 32,592,288 to 3.0% of the then total issued and outstanding ordinary shares, which was 1,216,432,715. In January 2022, the maximum number of unallocated shares which may be issuable pursuant to awards under the 2016 share incentive plan was automatically increased by 29,252,600 to 3.0% of the then total issued and outstanding ordinary shares, which was 1,495,180,395.

Administration

The 2016 share incentive plan is administered by our board of directors (only with respect to equity awards granted on the date of the completion of our initial public offering), the remuneration committee, or any subcommittee thereof to whom the board or the remuneration committee shall delegate the authority to grant or amend equity awards. The plan administrator is authorized to interpret the plan, to establish, amend and rescind any rules and regulations relating to the plan, and to make any other determinations that it deems necessary or desirable for the administration of the plan, as well as determine the provisions, terms and conditions of each award consistent with the provisions of the plan.

Change in Control

In the event of a change in control (as defined below), if determined by the plan administrator in an award agreement or otherwise, any outstanding equity awards that are non-exercisable or otherwise unvested or subject to lapse restrictions, will automatically be deemed exercisable or otherwise vested or no longer subject to lapse restrictions, as the case may be, immediately prior to such change in control. The plan administrator may also, in its sole discretion, decide to cancel such equity awards for fair value, provide for the issuance of substitute awards that will substantially preserve the otherwise applicable terms of any affected awards previously granted or provide that affected share options or share appreciation rights will be exercisable for a period of at least 15 days prior to the change in control and terminated upon the change in control if not previously exercised. A “change in control” under the 2016 share incentive plan is generally defined as (i) the sale of all or substantially all of our assets to any person or group (other than certain permitted holders), unless the primary purpose of the sale is to create a holding entity for us that will be directly or indirectly owned in substantially the same proportions by the same persons that held our shares immediately prior to the consummation of such sale, or (ii) one or more related transactions whereby any person or group (other than certain permitted holders) becomes the beneficial owner of more than 50% of the total voting power of our voting shares and controls the composition of a majority of our board of directors, unless the primary purpose of such transaction or transactions, as applicable, is to create a holding entity for us that will be directly or indirectly owned in substantially the same proportions by the same persons that held our shares immediately prior to the consummation of such transaction.

Term

Unless terminated earlier, the 2016 share incentive plan will continue in effect for a term of ten years from the date of its adoption.

Award Agreements

Generally, equity awards granted under the 2016 share incentive plan are evidenced by an award agreement providing for the number of ordinary shares subject to the award, and the terms and conditions of the award, which must be consistent with the 2016 share incentive plan.

Vesting Schedule

The plan administrator determines the vesting schedule of each equity award granted under the 2016 share incentive plan, which vesting schedule will be set forth in the award agreement for such equity award.

Amendment and Termination of Plan

Our board of directors may at any time amend, alter or discontinue the 2016 share incentive plan, subject to certain exceptions.

Granted Restricted Shares

In August 2020, August 2021 and August 2022, we granted 11,520,312, 11,929,608 and 21,488,048 non-vested restricted shares to employees, officers and directors, respectively. The restricted share awards were granted subject to service and market conditions, or service and performance conditions, which are tied to our financial performance.

In March, June, July and October 2020 we issued a total of 190,536 restricted shares to directors pursuant to equity awards under the 2016 share incentive plan. In January, June, July and October 2021, we issued a total of 178,280 restricted shares to directors pursuant to equity awards under the 2016 share incentive plan. In January, September and October 2022, we issued a total of 460,272 restricted shares to directors pursuant to equity awards under the 2016 share incentive plan. These restricted shares were fully vested upon the date of grant and were granted to our directors in lieu of cash to settle a portion of remuneration for their services previously rendered.

Mr. Huang informed our company that certain variable pre-paid forward sale contract transactions in respect of 42,457,504 ordinary shares beneficially owned by him, which transactions he originally entered into between May 2020 and June 2022, would expire between March 2023 and December 2023. If Mr. Huang chooses to settle these transactions by transferring ownership of the 42,457,504 ordinary shares to the counterparties, his beneficial ownership interest in our total issued share capital would decrease to below 5%, which would trigger an automatic conversion event, unless the 5% threshold contained in our Articles of Association is reduced or he otherwise acquires beneficial ownership of additional shares to keep his beneficial ownership at or above 5% or such other threshold if so reduced. See “Item 3. Key Information—D. Risk Factors—Risks Relating to Our Business and Industry—If Mr. Huang’s beneficial ownership in our company falls below 5%, our dual-class share structure will terminate and a change of control would be triggered under certain of our material commercial and loan agreements, and our business development, financial condition and future prospects may be materially and adversely affected.” On March 30, 2023, Mr. Huang acquired beneficial ownership of an additional 3,888,000 of our ordinary shares, representing 0.25% of our total issued share capital through the accelerated vesting of certain restricted share units previously granted to him under our 2016 share incentive plan. The Compensation Committee and our board of directors approved this accelerated vesting as a temporary measure to provide Mr. Huang with the flexibility of settling part of the aforementioned variable pre-paid forward sale contract transactions with other of his shareholdings without triggering an automatic conversion event that would otherwise result in the termination of the dual-class shareholding structure and the occurrence of the change of control implications. The ordinary shares Mr. Huang received upon the accelerated vesting of the foregoing restricted share units are subject to a lock-up (including a prohibition on pledges or derivative transactions) as well as a claw-back arrangement with us, pending a longer-term solution to the issues surrounding the potential change in control trigger.

The table below summarizes, as of March 15, 2023, the restricted shares we have granted to our directors and executive officers:

Name	Position	Numbers of Restricted Shares	Grant Date
William Wei Huang	Chairman and chief executive officer	*	August 13, 2020, August 2, 2021 and August 1, 2022.
Daniel Newman	Chief financial officer	*	August 13, 2020, August 2, 2021 and August 1, 2022.
Jamie Gee Choo Khoo	Chief operating officer	*	August 13, 2020, August 2, 2021 and August 1, 2022.
Sio Tat Hiang	Vice-chairman	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Satoshi Okada	Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Bruno Lopez	Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Lee Choong Kwong	Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Lim Ah Doo	Independent Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Bin Yu	Independent Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Zulkifli Baharudin	Independent Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021,

<u>Name</u>	<u>Position</u>	<u>Numbers of Restricted Shares</u>	<u>Grant Date</u>
			October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Chang Sun	Independent Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Judy Qing Ye	Independent Director	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Gary J. Wojtaszek	Director	*	June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Jonathan King	Member of the executive committee	*	March 19, 2020, June 1, 2020, July 1, 2020, October 1, 2020, January 1, 2021, June 1, 2021, July 1, 2021, October 1, 2021, January 1, 2022, September 1, 2022 and October 3, 2022.
Yilin Chen	Senior vice president, product and service and Southeast Asia business	*	August 13, 2020, August 2, 2021 and August 1, 2022.
Yan Liang	Senior vice president, design, operation and delivery	*	August 13, 2020, August 2, 2021 and August 1, 2022.
Kejing Zhang	Senior vice president, sales	*	August 13, 2020, August 2, 2021 and August 1, 2022.

* Less than 1% of our outstanding ordinary shares assuming conversion of all restricted shares into ordinary shares.

As of March 15, 2023, individuals other than our directors and executive officers as a group held a total of 25,139,272 restricted shares of our company, subject to various vesting schedules and conditions.

C. Board Practices

Duties of Directors

Under Cayman Islands law, our directors have a fiduciary duty to act honestly in good faith with a view to our best interests. Our directors also have a duty to exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to us, our directors must ensure compliance with our Amended and Restated Memorandum and Articles of Association. A shareholder has the right to seek damages if a duty owed by our directors is breached.

The functions and powers of our board of directors include, among others:

- conducting and managing the business of our company;
- representing our company in contracts and deals;
- appointing attorneys for our company;
- select senior management such as managing directors and executive directors;
- providing employee benefits and pension;

- managing our company’s finance and bank accounts;
- exercising the borrowing powers of our company and mortgaging the property of our company; and
- exercising any other powers conferred by the shareholders’ meetings or under our Amended and Restated Memorandum and Articles of Association.

Appointment, Nomination and Terms of Directors

Pursuant to our Articles of Association, our board of directors are classified into three classes of directors designated as Class I, Class II and Class III, each generally serving a three-year term unless earlier removed and except as described below. The Class I directors consist of Gary J. Wojtaszek, Satoshi Okada and Bruno Lopez; the Class II directors consist of Lee Chong Kwong, Lim Ah Doo, Chang Sun, and Judy Qing Ye; and the Class III directors consist of William Wei Huang, Sio Tat Hiang, Bin Yu and Zulkifli Baharudin.

Class I directors initially retired from office by rotation and were up for re-election or re-appointment one year after the completion of our initial public offering. Class II directors initially retired from office by rotation and were up for re-election or re-appointment two years after the completion of our initial public offering. Class III directors initially retired from office by rotation and were up for re-election three years after the completion of our initial public offering.

Our board currently consists of eleven (11) directors. Unless otherwise determined by us in a general meeting, our board will consist of not less than two (2) directors. There is no maximum number of directors unless otherwise determined by our shareholders in a general meeting, provided, however, that for so long as STT GDC has the right to appoint one or more directors to our board of directors, any change in the total number of directors on our board shall require the prior approval of the director or directors appointed by STT GDC.

Our Articles of Association provide that for so long as STT GDC beneficially owns: not less than 25% of our issued and outstanding share capital, they may appoint three directors to our board of directors, including our vice-chairman; less than 25%, but not less than 15%, of our issued and outstanding share capital, they may appoint two directors to our board of directors, including our vice-chairman; and less than 15%, but not less than 8%, of our issued and outstanding share capital, they may appoint one director to our board of directors, including our vice-chairman, none of which appointments will be subject to a vote by our shareholders. In addition, the above rights of STT GDC may not be amended without the approval of STT GDC. Where STT GDC beneficially owns: less than 25%, but 15% or more, of our issued and outstanding share capital, then of the directors appointed by STT GDC, only two may remain in office, and the other director, who shall be determined by STT GDC, or failing which shall be the director whose term is due to expire soonest, shall retire at the expiry of his/her term; less than 15%, but 8% or more, of our issued and outstanding share capital, then of the directors appointed by STT GDC, only one may remain in office, and the other directors, who shall be determined by STT GDC, or failing which shall be the directors whose terms are due to expire soonest, shall retire at the expiry of their respective terms; less than 8% of our issued and outstanding share capital, then the directors appointed by STT GDC may not remain in office and all shall retire at the expiry of their respective terms. Any director appointed by STT GDC who retires pursuant to the foregoing sentence may, in the sole discretion of our nominating and corporate governance committee, be re-nominated and subject to re-election at the next general meeting of our shareholders.

Our Articles of Association further provide that for so long as there are Class B ordinary shares outstanding: (i) the Class B shareholders shall be entitled to nominate five of our directors (and such Class B shareholders shall have 20 votes per share with respect to the resolutions approving the appointment or removal of such directors); and (ii) the nominating and corporate governance committee shall nominate one director, which shall satisfy the requirements for an “independent director” within the meaning of the Nasdaq Stock Market Rules including the requirements for audit committee independence. As of and after such time as there ceases to be any Class B ordinary shares outstanding, all of the directors nominated by Class B shareholders shall retire from office at the expiry of their respective terms, and, if re-nominated, be subject to re-election at a subsequent general meeting of shareholders. Prior to such time, if any of the directors nominated by or subject to election by Class B shareholders at 20 votes per share (i) is not elected or (ii) ceases to be a director, then the Class B shareholders may appoint an interim replacement for each such director. Any person so appointed shall hold office until the next general meeting of our shareholders and be subject to re-nomination and re-election at such meeting.

Subject to the abovementioned appointment rights, we may nominate, and shareholders may by ordinary resolution elect (with Class A ordinary shares and Class B ordinary shares each being entitled to one vote per share), any person to be a director to fill a casual vacancy on our board.

Board Committees

Our board of directors has established an audit committee, a compensation committee, a nominating and corporate governance committee and an executive committee. As a foreign private issuer, we are permitted to follow home country corporate governance practices under Nasdaq Stock Market Rules.

Audit Committee

Our audit committee consists of Lim Ah Doo, Bin Yu and Zulkifli Baharudin. Lim Ah Doo is the chairman of our audit committee. All members satisfy the criteria of an audit committee financial expert as set forth under the applicable rules of the SEC and satisfy the requirements for an “independent director” within the meaning of Nasdaq Stock Market Rules and meet the criteria for independence set forth in Rule 10A-3 of the U.S. Exchange Act. Our audit committee consists solely of independent directors.

The audit committee oversees our accounting and financial reporting processes and the audits of our financial statements. Our audit committee is responsible for, among other things:

- selecting the independent auditor;
- pre-approving auditing and non-auditing services permitted to be performed by the independent auditor;
- annually reviewing the independent auditor’s report describing the auditing firm’s internal quality control procedures, any material issues raised by the most recent internal quality control review, or peer review, of the independent auditors and all relationships between the independent auditor and our company;
- reviewing with the independent auditor any audit problems or difficulties and management’s response;
- reviewing and, if material, approving all related person transactions on an ongoing basis;
- reviewing and discussing the annual audited financial statements with management and the independent auditor;
- reviewing and discussing with management and the independent auditors about major issues regarding accounting principles and financial statement presentations;
- reviewing reports prepared by management or the independent auditors relating to significant financial reporting issues and judgments;
- discussing earnings press releases with management, as well as financial information and earnings guidance provided to analysts and rating agencies;
- reviewing with management and the independent auditors the effect of regulatory and accounting initiatives, as well as off-balance sheet structures, on our financial statements;
- discussing policies with respect to risk assessment and risk management with management, internal auditors and the independent auditor;
- timely reviewing reports from the independent auditor regarding all critical accounting policies and practices to be used by our company, all alternative treatments of financial information within U.S. GAAP that have been discussed with management and all other material written communications between the independent auditor and management;

- establishing procedures for the receipt, retention and treatment of complaints received from our employees regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;
- annually reviewing and reassessing the adequacy of our audit committee charter;
- such other matters that are specifically delegated to our audit committee by our board of directors from time to time;
- performing, at least annually, an evaluation of the performance of the audit committee; and
- reporting regularly to the full board of directors.

An ethics committee has been established in early 2017 under the audit committee to handle the FCPA compliance-related matters on a routine basis. The members of the ethics committee include our chief executive officer, chief financial officer, vice president of internal control, general counsel, compliance officer and other members appointed by the audit committee.

Compensation Committee

Our compensation committee consists of Sio Tat Hiang, William Wei Huang and Zulkifli Baharudin. Sio Tat Hiang is the chairman of our compensation committee. Zulkifli Baharudin satisfies the requirements for an “independent director” within the meaning of Nasdaq Stock Market Rules.

Our compensation committee is responsible for, among other things:

- reviewing, evaluating and, if necessary, revising corporate goals and objectives with respect to the compensation of the chief executive officer;
- reviewing and making recommendations to the board of directors regarding the compensation of our directors;
- reviewing, approving or making recommendations to the board of directors with respect to our incentive—compensation plan and equity-based compensation plans;
- administering our equity-based compensation plans in accordance with the terms thereof; and
- such other matters that are specifically delegated to the compensation committee by our board of directors from time to time.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of William Wei Huang, Sio Tat Hiang and Zulkifli Baharudin. William Wei Huang is the chairman of our nominating and corporate governance committee. Zulkifli Baharudin satisfies the requirements for an “independent director” within the meaning of Nasdaq Stock Market Rules.

The nominating and corporate governance committee is generally responsible for reviewing, evaluating and, if necessary, revising our corporate governance guidelines, reviewing and evaluating any instance of deviation from our corporate governance guidelines, as well as issuing and reviewing nominations of persons to be appointed as certain of our directors as described herein and of our officers. The nominating and corporate governance committee shall have the right to nominate three directors, all of whom shall satisfy the requirements for an “independent director” within the meaning of the Nasdaq Stock Market Rules including the requirements for audit committee independence. If any of the directors nominated by the nominating and corporate governance committee (i) is not elected or (ii) ceases to be a director, then nominating and corporate governance committee or the Class B ordinary shareholders, as applicable, may appoint an interim replacement for such director. Any person so appointed shall hold office until the next general meeting of our shareholders. These three directors shall be subject to election at general meetings of shareholders as described under “—Appointment, Nomination and Terms of Directors.”

In November 2019, the nominating and corporate governance committee approved the establishment of the long-term succession planning review committee as its subcommittee, initially consisting of Zulkifli Baharudin, Judy Qing Ye, Bruno Lopez and Sio Tat Hiang. The authority and responsibility of the long-term succession planning review committee are to conduct a periodic review and assessment of succession policies for the CEO and other senior management members of our company and to make related recommendations to the nominating and corporate governance committee and the board of directors.

In November 2021, the nominating and corporate governance committee approved the establishment of the sustainability committee as its subcommittee, initially consisting of the Company’s Chief Financial Officer, Chief Operating Officer, General Counsel, Head of Resources and Energy and Head of Human Resources. The authority and responsibility of the sustainability committee are to develop ESG strategies, monitor the implementation of ESG strategies and conduct quarterly and annual ESG performance monitoring.

Executive Committee

Our executive committee consists of Bruno Lopez, William Wei Huang, Judy Qing Ye and Jonathan King. Bruno Lopez is the chairman of our executive committee.

The executive committee functions primarily as an advisory body to our board of directors to oversee the business of our group companies. The executive committee shall also provide consultation and recommendations to our board of directors on operating and strategic matters for any of our group companies, acting within authorities delegated to it by our board of directors. In addition, the executive committee shall have such other authority as may be delegated to it by our board of directors from time to time. Our executive committee is responsible for, among other things, advising, providing consultation and recommendations to our board of directors on:

- operational performance of any of our group companies;
- appropriate strategies for any of our group companies;
- strategic business and financing plans and annual budget of any of the group companies;
- acquisitions, dispositions, investments and other potential growth and expansion opportunities for any of our group companies;
- capital structure and financing strategy of our group companies, including but not limited to any debt, equity or equity-linked financing transactions, as well as any issuance, repurchase, conversion or redemption of any equity interests or debt of any of our group companies;
- any material litigation or other legal or administrative proceedings to which any of our group companies is a party;
- entry into any material contracts exceeding the approval authority of our chief executive officer or its equivalent, the chief financial officer, and all the other executive officers of any of our group companies;

- the approval of the incurrence of debt above certain thresholds;
- reporting regularly to our board of directors; and
- any other responsibilities as are delegated to the executive committee by our board of directors from time to time.

Corporate Governance

Our board of directors has adopted a code of business conduct, which is applicable to all of our directors, officers and employees. We have made our code of business conduct publicly available on our website.

In addition, our board of directors has adopted a set of corporate governance guidelines. The guidelines reflect certain guiding principles with respect to our board's structure, procedures and committees. The guidelines are not intended to change or interpret any law, or our amended and restated memorandum and articles of association.

Remuneration and Borrowing

The directors may determine remuneration to be paid to the directors. The compensation committee will assist the directors in reviewing and approving the compensation structure for the directors. The directors may exercise all the powers of our company to borrow money, mortgage or charge its undertaking, property and uncalled capital and issue debentures or other securities whether outright or as security for any debt obligations of our company or of any third party.

Qualification

There is no requirement for our directors to own any shares in our company in order for them to qualify as a director.

Employment Agreements

We have entered into employment agreements with each of our executive officers. We may terminate their employment for cause at any time without remuneration for certain acts, such as a material breach of our company's employment principles, policies or rules, a material failure to perform his or her duties or misappropriation or embezzlement or a criminal conviction. We may also terminate any executive officer's employment without cause or due to a change of control event involving our company by giving written notice. In such cases, an executive officer is entitled to severance payments and benefits. An executive officer may terminate his or her employment at any time by giving written notice, in which case the executive officer will not be entitled to any severance payments or benefits.

Our executive officers have also agreed not to engage in any activities that compete with us or to directly or indirectly solicit the services of any of our employees, for a certain period after the termination of employment. Each executive officer has agreed to hold in strict confidence any trade secrets of our company, including technical secrets, marketing information, management information, legal information, third-party business secrets and other kinds of confidential information. Each executive officer also agrees to perform his or her confidentiality obligation and protect our company's trade secrets in a way consistent with the policies, rules and practices of our company. Breach of the above confidentiality obligations would be deemed as material breach of our company's employment policies and we are entitled to seek legal remedies.

D. Employees

See "Item 4. Information on the Company—B. Business Overview—Employees."

E. Share Ownership

The following table sets forth information as of March 15, 2023 with respect to the beneficial ownership of our ordinary shares by:

- each of our directors and executive officers; and

- each person known to us to own beneficially 5.0% or more of our ordinary shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to, or the power to receive the economic benefit of ownership of, the securities. 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, including through the exercise of any option 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. The percentages are calculated excluding the 57,232,624 Class A ordinary shares that are issued and held by JPMorgan Chase Bank, N.A., as depositary, and reserved for future delivery upon exercise or vesting of share awards granted under our share incentive plans.

The total number of ordinary shares outstanding as of March 15, 2023 is 1,524,432,991, comprising 1,468,842,655 Class A ordinary shares (including 57,232,624 Class A ordinary shares issued and held by JPMorgan Chase Bank, N.A., as depositary, which are reserved for future delivery upon exercise or vesting of share awards granted under our share incentive plans) and 55,590,336 Class B ordinary shares, but excludes ordinary shares issuable (i) under our share incentive plans that have not yet been issued, (ii) upon conversion of our convertible senior notes, and (iii) upon conversion of our convertible preferred shares.

	Class A ordinary shares		Class B ordinary shares		Percentage of aggregate voting power with Class A and Class B ordinary shares voting on a	
	Number	Percent	Number	Percent	1:20 Basis***	1:1 Basis
Directors and Executive Officers**:						
William Wei Huang ⁽¹⁾	30,337,504	2.1 %	85,927,840	100.0 %	44.6 %	5.6 %
Daniel Newman	*	*	—	—	*	*
Jamie Gee Choo Khoo	*	*	—	—	*	*
Sio Tat Hiang	*	*	—	—	*	*
Satoshi Okada	*	*	—	—	*	*
Bruno Lopez	*	*	—	—	*	*
Lee Choong Kwong	*	*	—	—	*	*
Lim Ah Doo	*	*	—	—	*	*
Bin Yu	*	*	—	—	*	*
Zulkifli Baharudin	*	*	—	—	*	*
Chang Sun	*	*	—	—	*	*
Gary J. Wojtaszek	*	*	—	—	*	*
Judy Qing Ye	*	*	—	—	*	*
Jonathan King	*	*	—	—	*	*
Yilin Chen	*	*	—	—	*	*
Yan Liang	*	*	—	—	*	*
Kejing Zhang	*	*	—	—	*	*
Directors and Executive Officers as a Group ⁽²⁾	46,666,743	3.3 %	85,927,840	100.0 %	44.9 %	6.2 %
Principal Shareholders:						
STT GDC ⁽³⁾	493,288,484	34.6 %	—	—	18.7 %	31.8 %
GIC ⁽⁴⁾	202,939,884	13.0 %	—	—	2.1 %	3.6 %

* Beneficially owns less than 1% of our outstanding shares.

** The business address for our directors and executive officers is at F4/F5, Building C, Sunland International, No. 999 Zhouhai Road, Pudong, Shanghai 200137, People's Republic of China.

*** For each person or group included in this column, the percentage of total voting power represents voting power based on all ordinary shares beneficially owned by such person or group. With respect to (i) the election or removal of a simple majority of our directors and (ii) any change to our Articles of Association that would adversely affect the rights of the holders of Class B ordinary shares, at general meetings of our shareholders, each Class A ordinary share is entitled to one vote per share, and each Class B ordinary share is entitled to 20 votes per share. With respect to any other matters at general meetings of our shareholders, each Class A ordinary share is entitled to one vote, and each Class B ordinary share is entitled to one vote, voting together as a combined class. Class B ordinary shares are convertible into Class A ordinary shares. The voting power percentages are calculated including the 33,707,864 votes to which the holders of the 150,000 Series A convertible preferred shares are entitled, but excluding ordinary shares issuable upon (x) conversion of our convertible senior notes, (y) the exercise or vesting of share awards granted under our Share Incentive Plans, and the 57,232,624 Class A ordinary shares issued and held by JPMorgan Chase Bank, N.A., as depositary, which are reserved for future delivery upon the exercise or vesting of share awards granted under our share incentive plans. The holders of the Series A convertible preferred shares are entitled to a number of votes per convertible preferred share equal to the number of Class A ordinary shares into which each such convertible preferred share is then convertible. Since the 150,000 Series A convertible preferred shares are convertible into 33,707,864 Class A ordinary shares, the affiliates of Ping An Overseas are entitled to 33,707,864 votes on all matters at general meetings of our shareholders, voting together with the holders of ordinary shares as a single class.

- (1) The number of ordinary shares beneficially owned is as of March 15, 2023, and consists of 30,337,504 Class A ordinary shares and 55,590,336 Class B ordinary shares, including: (i) 28,000,000 Class B ordinary shares held by EDC Group Limited, (ii) 27,590,336 Class B ordinary shares held by GDS Enterprises Limited, (iii) 3,557,188 ADSs representing 28,457,504 Class A ordinary shares beneficially owned by Mr. Huang, and (iv) 1,880,000 Class A ordinary shares in the form of 235,000 ADSs underlying restricted share units that will vest within 60 days after March 15, 2023 held by Mr. Huang. Such 30,337,504 Class A ordinary shares will convert into 30,337,504 Class B ordinary shares if directly held by Mr. Huang or an entity established or controlled by him. These 30,337,504 Class A ordinary shares are also reflected in Mr. Huang's beneficial ownership in the adjacent columns under "Class A ordinary shares." EDC Group Limited is a limited liability company established in the British Virgin Islands wholly owned by Solution Leisure Investment Limited. GDS Enterprises Limited is indirectly wholly owned by a trust of which Mr. Huang's family is a beneficiary. The registered address of EDC Group Limited and GDS Enterprises Limited is OMC Chambers, Wickhams Cay 1, Road Town, Tortola, British Virgin Islands. Mr. Huang informed our company that certain variable pre-paid forward sale contract transactions in respect of 42,457,504 ordinary shares beneficially owned by him, which transactions he originally entered into between May 2020 and June 2022, would expire between March 2023 and December 2023. If Mr. Huang chooses to settle these transactions by transferring ownership of the 42,457,504 ordinary shares to the counterparties, his beneficial ownership interest in our total issued share capital would decrease to below 5%, which would trigger an automatic conversion event, unless the 5% threshold contained in our Articles of Association is reduced or he otherwise acquires beneficial ownership of additional shares to keep his beneficial ownership at or above 5% or such other threshold if so reduced. See "Item 3. Key Information—D. Risk Factors—Risks Relating to Our Business and Industry—If Mr. Huang's beneficial ownership in our company falls below 5%, our dual-class share structure will terminate and a change of control would be triggered under certain of our material commercial and loan agreements, and our business development, financial condition and future prospects may be materially and adversely affected."
- (2) Represents ordinary shares beneficially held by all of our directors and executive officers as a group and ordinary shares (in the form of ADS) underlying restricted share units that will vest within 60 days after March 15, 2023 held by all of our directors and executive officers as a group.
- (3) The number of ordinary shares beneficially owned is as of February 20, 2022, as reported in Amendment No. 12 to Schedule 13D filed by ST Telemedia on February 22, 2022, after giving effect to the February 2022 Convertible Notes Offering as defined therein, and represents 477,288,484 Class A ordinary shares (directly or in the form of ADSs) owned by STT GDC. STT GDC is wholly-owned by STTC. STTC is wholly-owned by ST Telemedia. Each of STT GDC, STTC and ST Telemedia is a company organized under the laws of the Republic of Singapore. The address of the principal business office of STT GDC is 3 Temasek Avenue, #28-01, Centennial Tower, Singapore 039190. The address of the principal business office of each of ST Telemedia and STTC is 1 Temasek Avenue, #33-01, Millenia Tower, Singapore 039192. On November 14, 2017, STT GDC exercised its option to convert, and converted, the convertible bonds in a principal amount of US\$50.0 million due December 30, 2019 (the "Convertible Bonds") then held by it, together with interest accrued thereon of US\$4,513,889.00, into 32,540,515 Class A ordinary shares, at a conversion price of US\$1.675262 per Class A ordinary share pursuant to and in accordance with the terms and conditions of the Convertible Bonds. On January 30, 2018, we completed our public offering of 12,650,000 ADSs, comprising 8,225,000 ADSs offered by us and 4,425,000 ADSs offered by certain selling shareholders, at a public offering price of US\$26.00 per ADS (the "January 2018 Offering"). STT GDC purchased an aggregate of 3,009,857 ADSs in the January 2018 Offering at the public offering price. On March 19, 2019, we completed our public offering of 13,731,343 ADSs at a public offering price of US\$33.50 per ADS (the "March 2019 Offering"). STT GDC purchased an aggregate of 6,373,134 ADSs in the March 2019 Offering at the public offering price. On December 10, 2019, we completed our public offering of 6,318,680 ADSs at a public offering price of US\$45.50 per ADS (the "December 2019 Offering"). STT GDC purchased an aggregate of 2,274,725 ADSs in the December 2019 Offering at the public offering price. On June 26, 2020, we completed our private placement of 62,153,848 Class A ordinary shares, equivalent to approximately 7.8 million ADSs, to affiliates of Hillhouse Capital and STT GDC at a purchase price of US\$8.125 per share, equivalent to US\$65 per ADS (the "June 2020 Private Placement"). STT GDC purchased an aggregate of 12,923,080 Class A ordinary shares in the June 2020 Private Placement at the purchase price of \$8.125 per share. On November 2, 2020, we completed our Hong Kong public offering, which forms part of the global offering of 160,000,000 Class A ordinary shares at a public offering price of HK\$80.88 per Class A ordinary share (the "November 2020 Global Offering"). STT GDC purchased an aggregate of 40,244,800 Class A ordinary shares in the November 2020 Global Offering at the public offering price. On March 8, 2022, we completed our offering of unsecured 0.25% convertible senior notes due 2029 (the "February 2022 Convertible Notes Offering"). STT GDC subscribed for and purchased US\$100 million principal amount of the unsecured 0.25% convertible senior notes due 2029. The 493,288,484 Class A ordinary shares (directly or in the form of ADSs) owned by STT GDC include 16,000,000 Class A ordinary shares which STT GDC beneficially owns by virtue of holding US\$100 million principal amount of the unsecured 0.25% convertible senior notes due 2029.

- (4) The number of ordinary shares beneficially owned is as of January 11, 2023, as reported in the Schedule 13G filed by GIC on January 18, 2023, and represents (i) 52,467,712 Class A ordinary shares, represented by (a) 5,467,924 ADSs and (b) 15,795,968 Class A ordinary shares, and (ii) 150,472,172 Class A ordinary shares, represented by (a) 51,200,000 Class A ordinary shares that GIC has the right to acquire upon conversion of US\$170,000,000 principal amount of 0.25% Convertible Senior Notes due 2029 (“2029 Senior Notes”), (b) 97,959,183 Ordinary Shares that GIC has the right to acquire upon conversion of US\$300,000,000 principal amount of 4.5% Convertible Senior Notes due 2030 (“2030 Senior Notes”), and (c) 1,312,988 Ordinary Shares. GIC is a company organized under the laws of the Republic of Singapore. The address of the principal business office of GIC is 168 Robinson Road, #37-01 Capital Tower, Singapore 068912. Ceningan Investment Pte. Ltd. (“Ceningan”) shares the power to vote and the power to dispose of 125,159,184 Class A ordinary shares that Ceningan has the right to acquire upon conversion of (i) US\$170,000,000 principal amount 2029 Senior Notes; and (ii) US\$300,000,000 principal amount 2030 Senior Notes held directly by it with GIC Special Investments Private Limited (“GIC SI”) and GIC. GIC SI is wholly owned by GIC and is the private equity investment arm of GIC. GIC is a fund manager and only has two clients – the Government of Singapore (“GoS”) and the Monetary Authority of Singapore (“MAS”). Under the investment management agreement with GoS, GIC has been given the sole discretion to exercise the voting rights attached to, and the disposition of, any shares managed on behalf of GoS. As such, GIC has the sole power to vote and power to dispose of the 5,467,924 ADSs, and 15,795,968 Class A ordinary shares, beneficially owned by it. GIC shares power to vote and dispose of 1,312,988 Class A ordinary shares beneficially owned by it with MAS. GIC is wholly owned by the GoS and was set up with the sole purpose of managing Singapore’s foreign reserves. The GoS disclaims beneficial ownership of these shares.

In March 2019, Ping An Overseas Holdings made an investment in us, and we issued 150,000 Series A convertible preferred shares to an affiliate of Ping An Overseas Holdings for a total consideration of US\$150 million. Pursuant to the terms of the investment, during the first eight years from their issuance date, the convertible preferred shares accrue a minimum 5.0% per annum dividend, payable quarterly in arrears, in cash or in kind in the form of additional convertible preferred shares, at our option. As of the eighth anniversary of the issuance date, the convertible preferred shares accrue a 7.0% per annum minimum dividend, payable quarterly in arrears, in cash only, which dividend rate will further increase by 50 basis points per quarter thereafter for so long as any convertible preferred shares remain outstanding. The convertible preferred shares are convertible into our Class A ordinary shares at the option of their holder, at a conversion rate corresponding to a conversion price of US\$35.60 per ADSs, representing a premium of 13.3% to the volume weighted average price of our ADSs for the 30 trading days immediately preceding the date of signing the definitive agreement, subject to customary anti-dilution adjustments. We have the right to trigger a mandatory conversion at our election, beginning on March 15, 2022, provided certain conditions are met, including our Class A ordinary shares achieving a specified price threshold of 150% of the conversion price for a specified period. Holders will not have any redemption right or put option over the convertible preferred shares, except upon (i) the occurrence of a change of control, or (ii) our ADSs ceasing to be listed for trading on any of the New York Stock Exchange, the Nasdaq Global Select Market or the Nasdaq. After eight years, we will have certain rights in connection with the redemption of the convertible preference shares at 100% of their face value, plus accrued and unpaid dividends. In addition, Ping An Overseas Holdings has the right to designate one non-voting observer to attend any meetings of our board of directors, subject to maintaining its shareholding at or above a specified percentage threshold.

On March 8, 2022, we completed a private placement of US\$620 million in aggregate principal amount of 0.25% convertible senior notes due 2029 to Sequoia China Infrastructure Fund I, STT GDC, and an Asian sovereign wealth fund with which we have a strategic relationship. The notes will mature on March 8, 2029. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date. Upon conversion, we will cause to be delivered, for each US\$1,000 principal amount of converted notes, a number of ADSs or Class A ordinary shares calculated pursuant to the then effective conversion rate. The notes may be converted at an initial conversion rate of 20 ADSs (or 160 Class A ordinary shares) per US\$1,000 principal amount of notes (equivalent to an initial conversion price of approximately US\$50 per ADS), which rate is subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest.

On January 20, 2023 we completed a private placement of US\$580 million in aggregate principal amount of 4.50% convertible senior notes due in 2030 to various private equity funds and institutional investors, including a sovereign wealth fund. The notes will mature on January 31, 2030. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date. Upon conversion, we will cause to be delivered, for each US\$1,000 principal amount of converted notes, a number of ADSs or Class A ordinary shares calculated pursuant to the then effective conversion rate. The notes may be converted at an initial conversion rate of 40.8163 ADSs per US\$1,000 principal amount of notes (equivalent to an initial conversion price of approximately US\$24.50 per ADS), which rate is subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest.

Except as stated in the footnotes to the table above, we are not aware of any of our shareholders being affiliated with a registered broker-dealer or being in the business of underwriting securities.

Except as otherwise disclosed in this annual report, none of our existing shareholders has voting rights that differ from the voting rights of other shareholders. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

F. Disclosure of a Registrant’s Action to Recover Erroneously Awarded Compensation

Not applicable.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

See “Item 6. Directors, Senior Management and Employees—E. Share Ownership.”

B. Related Party Transactions

Transactions with Our Shareholders

One of our subsidiaries, GDS IDC Services Pte. Ltd., or GDS Singapore, entered into a master service agreement with STT Singapore DC Pte. Ltd., STT DEFU 2 Pte. Ltd. and cloud service providers, pursuant to which GDS Singapore will provide billing and payment collection services as well as other coordination and administration services. During the year ended December 31, 2020, we recognized agency commissions from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. of RMB0.6 million and RMB0.5 million, respectively. During the year ended December 31, 2021, we recognized agency commissions from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. of RMB0.5 million and RMB0.5 million, respectively. During the year ended December 31, 2022, we recognized agency commissions from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. of RMB0.6 million (US\$0.1 million) and RMB0.5 million (US\$0.1 million), respectively.

Transactions with Our Associate

On September 2, 2022, we subscribed convertible bonds of US\$400 thousand issued by OnePro Cloud Inc, the entity over which we have significant influence. The convertible bond has a term of 12 months with interest rate of 8% per annum and is convertible into Series A Preferred Shares of OnePro Cloud Inc. at the option of holders under certain conditions.

Contractual Arrangements with Affiliated Consolidated Entities and their Shareholders

See “Item 4. Information on the Company—C. Organizational Structure—Contractual Arrangements with Affiliated Consolidated Entities.”

Securities Issuances

The following is a summary of our securities issuances since January 1, 2020.

Ordinary Shares

In June 2020, we issued to affiliates of Hillhouse Capital and to STT GDC a total of 62,153,848 Class A ordinary shares, equivalent to approximately 7.8 million ADSs, at a price equivalent to US\$65 per ADS for a total consideration of US\$505 million. Hillhouse Capital subscribed US\$400 million and STT GDC subscribed US\$105 million.

On November 2, 2020, we completed our secondary listing on the Hong Kong Stock Exchange and public offering of 160,000,000 Class A ordinary shares, equivalent to 20,000,000 ADSs. On November 6, 2020, we announced that the underwriters had fully exercised their over-allotment option to purchase 24,000,000 additional Class A ordinary shares, equivalent to 3,000,000 ADSs, to cover over-allocations. We raised US\$1.9 billion in net proceeds to us after deducting underwriting discounts and commissions and other offering expenses.

Convertible Senior Notes

On March 8, 2022, we completed a private placement of US\$620 million in aggregate principal amount of 0.25% convertible senior notes due 2029 to Sequoia China Infrastructure Fund I, STT GDC, and an Asian sovereign wealth fund with which we have a strategic relationship. The notes will mature on March 8, 2029. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date. Upon conversion, we will cause to be delivered, for each US\$1,000 principal amount of converted notes, a number of ADSs or Class A ordinary shares calculated pursuant to the then effective conversion rate. The notes may be converted at an initial conversion rate of 20 ADSs (or 160 Class A ordinary shares) per US\$1,000 principal amount of notes (equivalent to an initial conversion price of approximately US\$50 per ADS), which rate is subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest.

On January 20, 2023 we completed a private placement of US\$580 million in aggregate principal amount of 4.50% convertible senior notes due in 2030 to various private equity funds and institutional investors, including a sovereign wealth fund. The notes will mature on January 31, 2030. Holders may convert their notes into our ADSs or Class A ordinary shares at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date. Upon conversion, we will cause to be delivered, for each US\$1,000 principal amount of converted notes, a number of ADSs or Class A ordinary shares calculated pursuant to the then effective conversion rate. The notes may be converted at an initial conversion rate of 40.8163 ADSs per US\$1,000 principal amount of notes (equivalent to an initial conversion price of approximately US\$24.50 per ADS), which rate is subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest.

Share Options and Restricted Shares

See “Item 6. Directors, Senior Management and Employees—B. Compensation—Share Incentive Plans.”

Members (Shareholders) Agreements

Pursuant to our amended members agreement entered into on May 19, 2016, we granted the holders of our registrable securities certain preferential rights, including registration rights, information and inspection rights, drag-along rights and pre-emptive rights. The amended members agreement also provides that our board of directors consists of nine directors, including (i) four directors appointed by STT GDC, (ii) two directors appointed by holders of 75% of our then outstanding preferred shares other than the Series C preferred shares, such holders voting together as a separate class on an as-converted basis, and (iii) three directors appointed by holders of a majority of our then outstanding ordinary shares, such holders voting as a separate class. The board composition arrangements under the amended members agreement will terminate immediately prior to the effectiveness of the registration statement of our initial public offering. In addition, pursuant to our amended voting agreement entered into on May 19, 2016, the holders of our registrable securities have agreed to exercise voting rights so as to maintain the composition of the board of directors as set forth in the amended members agreement and described above. The amended voting agreement terminated on the date of the closing of our initial public offering.

The drag-along rights terminated effective upon the closing of our initial public offering. The pre-emptive rights terminated immediately prior to the closing of our initial public offering. All registration rights terminated on the fifth anniversary of the consummation of our initial public offering.

On November 7, 2016, we entered into an information rights agreement with STT GDC, pursuant to which we granted certain information rights to STT GDC for so long as it has the right to appoint directors under our Articles of Association. A copy of the information rights agreement has been filed with this annual report.

Investor Rights Agreements

In June 2020, in connection with investments from Hillhouse Capital and STT GDC of US\$400 million and US\$105 million, respectively, we granted to Hillhouse Capital registration rights substantially similar to the registration rights granted to holders of our registrable securities pursuant to our amended members agreement described above. In June 2020, we also entered into a new investment rights agreement with STT GDC to grant to STT GDC (i) preemptive rights with respect to future private issuances of equity or equity-linked securities we conduct anytime in the eighteen months following Hillhouse Capital investment, whereby STT GDC has the right to subscribe for up to 35% of any such future offerings, as well as (ii) registration rights substantially identical to those provided to Hillhouse Capital. In June 2020, we also entered into an amendment of our investment rights agreement with Ping An Overseas Holdings to undertake to grant to Ping An Overseas Holdings registration rights substantially identical to those provided to Hillhouse Capital. Copies of these rights agreements and amendment have been filed with this annual report.

In August 2020, we entered into an amendment of our June 2020 investment rights agreement with STT GDC, or Amendment No. 1, to expand the scope of their preemptive rights, to the extent permissible by applicable law, to cover any future issuances of equity or equity-linked securities we conduct anytime in the eighteen months following June 26, 2020, whereby STT GDC has the right to subscribe for up to 35% of any such future offerings. A copy of this Amendment No. 1 has been filed with this annual report.

In February 2022, we entered into a second amendment of our June 2020 investment rights agreement with STT GDC, or Amendment No. 2, to (i) extend their preemptive rights to cover any allotment and issuance of equity or equity-linked securities we conduct anytime on or before June 25, 2023, whereby STT GDC has the right to subscribe for up to 35% of any such future offerings, and (ii) grant STT GDC certain registration rights until such time that their registrable securities can be sold pursuant to Rule 144 under the Securities Act without volume limitations. A copy of this Amendment No. 2 has been filed with this annual report.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

Please refer to Item 18 for a list of our annual consolidated financial statements filed as part of this annual report.

Legal Proceedings

See “Item 4. Information on the Company—B. Business Overview—Legal Proceedings.”

Dividend Policy and Distributions

Since our inception, except for the US\$50.8 million preference dividend paid to our preferred shareholders upon completion of our initial public offering, of which US\$11.4 million was paid in cash and US\$39.4 million was paid in the form of 31,490,164 Class A ordinary shares based on the initial public offering price of US\$10.00 per ADS and dividends on our preferred shares issued on March 19, 2019, we have not declared or paid any dividends on our shares. We do not have any present plan to pay any dividends on our Class A ordinary shares or ADSs in the foreseeable future. We intend to retain most, if not all, of our available funds and any future earnings to operate and expand our business.

The holder of our convertible preferred shares, i.e., an affiliate of Ping An Overseas Holdings, is entitled to receive cumulative preferred dividends which began to accrue and accumulate from the date the convertible preferred shares were issued, regardless of whether any funds of our company are legally available for the payment of such dividends. The cumulative preferred dividends generally accrue (i) during the first eight years from the issuance date, at a minimum rate of 5% per annum of a specified value for each convertible preferred share, payable quarterly in arrears, in cash or in kind in the form of additional convertible preferred shares, at our option, and (ii) as of the eighth anniversary of the issuance date, at a minimum rate of 7% per annum of a specified value for each convertible share, payable quarterly in arrears, in cash only, which rate shall be further increased by 50 basis points per quarter thereafter for so long as any convertible preferred shares remain outstanding.

Any future determination to pay dividends will be made at the discretion of our board of directors and may be based on a number of factors, including 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. If we pay any dividends, we will pay our ADS holders to the same extent as holders of our Class A ordinary shares, subject to the terms of the deposit agreement, including the fees and expenses payable thereunder. Cash dividends on our ordinary shares, if any, will be paid in U.S. dollars.

We are an exempted company incorporated in the Cayman Islands. In order for us to distribute any dividends to our shareholders and ADS holders, we may rely on dividends distributed by our PRC subsidiaries. Certain payments from our PRC subsidiaries to us may be subject to PRC withholding income tax. In addition, regulations in the PRC currently permit payment of dividends of a PRC company only out of accumulated distributable after-tax profits as determined in accordance with its articles of association and the accounting standards and regulations in China. Each of our PRC subsidiaries is required to set aside at least 10% of its after-tax profit based on PRC accounting standards every year to a statutory common reserve fund until the aggregate amount of such reserve fund reaches 50% of the registered capital of such subsidiary. Such statutory reserves are not distributable as loans, advances or cash dividends.

B. Significant Changes

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. Offer and Listing Details

Our ADSs have been listed on the Nasdaq since November 2, 2016 under the ticker symbol “GDS.” Each ADS represents eight of our Class A ordinary shares.

Our ordinary shares have been listed on the Hong Kong Stock Exchange since November 2, 2020 under the stock code “9698.”

B. Plan of Distribution

Not applicable.

C. Markets

Our ADSs have been trading on the Nasdaq since November 2, 2016 under the ticker symbol “GDS.” Each ADS represents eight of our Class A ordinary shares.

Our ordinary shares have been listed on the Hong Kong Stock Exchange since November 2, 2020 under the stock code “9698.”

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 incorporate by reference into this annual report the description of our amended and restated memorandum and articles contained in our Form 6-K report (File No. 001-37925), initially filed with the SEC on June 29, 2021. Our shareholders conditionally adopted our amended and restated memorandum of association by way of a special resolution passed on October 18, 2016. Our amended and restated memorandum of association became effective immediately upon the completion of the Company's initial public offering of Class A Ordinary Shares represented by ADS on the Nasdaq, on November 7, 2016. Our shareholders conditionally adopted our ninth amended and restated articles of association by way of a special resolution passed on June 29, 2021. Our ninth amended and restated articles of association became effective from June 29, 2021.

C. Material Contracts

In the past three fiscal years, we have not entered into any material contracts other than in the ordinary course of business or other than those described elsewhere in this annual report.

D. Exchange Controls

See "Item 4. Information on the Company—B. Business Overview—Regulatory Matters—People's Republic of China Regulations—Regulations Related to Foreign Currency Exchange and Dividend Distribution."

E. Taxation

Cayman Islands Taxation

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 or withholding tax applicable to us or to any holder of our ADSs and ordinary shares. There are no other taxes likely to be material to us levied by the Government of the Cayman Islands except for stamp duties which may be applicable on instruments executed in, or after execution brought within the jurisdiction of the Cayman Islands. No stamp duty is payable in the Cayman Islands on transfers of shares of Cayman Islands companies except those which hold interests in land in the Cayman Islands. The Cayman Islands is a party to a double tax treaty entered with the United Kingdom in 2010 but is otherwise not party to any double tax treaties. There are no exchange control regulations or currency restrictions in the Cayman Islands.

Pursuant to Section 6 of the Tax Concessions Act (1999 Revision) of the Cayman Islands, we have obtained an undertaking from the Governor-in-Council:

- (i) that no law which is enacted in the Cayman Islands imposing any tax to be levied on profits or income or gains or appreciation shall apply to us or our operations; and
- (ii) that the aforesaid tax or any tax in the nature of estate duty or inheritance tax shall not be payable on our shares, debentures or other obligations.

The undertaking for us is for a period of twenty years from December 19, 2006.

People's Republic of China Taxation

In March 2007, the National People's Congress of China enacted the Enterprise Income Tax Law, which became effective on January 1, 2008 and was amended on December 29, 2018. The Enterprise Income Tax Law provides that enterprises organized under the laws of jurisdictions outside China with their "de facto management bodies" located within China may be considered PRC resident enterprises and therefore subject to PRC enterprise income tax at the rate of 25% on their worldwide income. The Implementation Rules of the Enterprise Income Tax Law further defines the term "de facto management body" as the management body that exercises substantial and overall management and control over the business, personnel, accounts and properties of an enterprise. While we do not currently consider our company or any of our overseas subsidiaries to be a PRC resident enterprise, there is a risk that the PRC tax authorities may deem our company or any of our overseas subsidiaries as a PRC resident enterprise since a substantial majority of the members of our management team as well as the management team of some of our overseas subsidiaries are located in China, in which case we or the overseas subsidiaries, as the case may be, would be subject to the PRC enterprise income tax at the rate of 25% on worldwide income. If the PRC tax authorities determine that our Cayman Islands holding company is a "resident enterprise" for PRC enterprise income tax purposes, a number of unfavorable PRC tax consequences could follow. One example is a 10% withholding tax would be imposed on dividends we pay to our non-PRC enterprise shareholders and with respect to gains derived by our non-PRC enterprise shareholders from transferring our shares or ADSs. It is unclear whether, if we are considered a PRC resident enterprise, holders of our shares or ADSs would be able to claim the benefit of income tax treaties or agreements entered into between China and other countries or areas.

Hong Kong Taxation

Our subsidiaries incorporated in Hong Kong were subject to Hong Kong profits tax at a rate of 16.5% in the fiscal years ended December 31, 2020, 2021 and 2022. GDS Holdings was subject to Hong Kong profits tax at a rate of 16.5% in the fiscal years ended December 31, 2020, 2021 and 2022.

Our principal register of members is maintained by our Principal Share Registrar in the Cayman Islands, and our Hong Kong register of members is maintained by the Hong Kong Share Registrar in Hong Kong.

Dealings in our Class A ordinary shares registered on our Hong Kong share register are subject to Hong Kong stamp duty. The stamp duty is charged to each of the seller and purchaser at the rate of 0.13% of the consideration for, or (if greater) the value of, our Class A ordinary shares transferred. In other words, a total of 0.26% is currently payable on a typical sale and purchase transaction of our Class A ordinary shares. In addition, a fixed duty of HK\$5.00 is charged on each instrument of transfer (if required).

To facilitate ADS-Class A ordinary share conversion and trading between the Nasdaq and the Hong Kong Stock Exchange, we have moved a portion of our issued ordinary shares from our Cayman share register to our Hong Kong share register. It is unclear whether, as a matter of Hong Kong law, the trading or conversion of ADSs constitutes a sale or purchase of the underlying Hong Kong-registered ordinary shares that is subject to Hong Kong stamp duty. We advise investors to consult their own tax advisors on this matter. See "Item 3. Key Information — D. Risk Factors — Risks Related to Our ADSs and Class A Ordinary Shares — There is uncertainty as to whether Hong Kong stamp duty will apply to the trading or conversion of our ADSs."

Material United States Federal Income Tax Considerations

The following summary describes the material United States federal income tax consequences of the ownership and disposition of our ADSs and Class A ordinary shares. This summary is only applicable to ADSs and Class A ordinary shares held as capital assets by a United States Holder (as defined below).

As used herein, the term “United States Holder” means a beneficial owner of our ADSs or Class A ordinary shares that is for United States federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (i) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (ii) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

The discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended, or the Code, regulations, rulings and judicial decisions thereunder as of the date hereof, and the current income tax treaty between the United States and the PRC, or the Treaty. Such authorities may be replaced, revoked or modified so as to result in United States federal income tax consequences different from those discussed below. In addition, this summary assumes that the deposit agreement, and all other related agreements, will be performed in accordance with their terms.

This summary does not represent a detailed description of the United States federal income tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws, including if you are:

- a dealer in securities or currencies;
- a financial institution;
- a regulated investment company;
- a real estate investment trust;
- an insurance company;
- a tax-exempt organization;
- a person holding our ADSs or Class A ordinary shares as part of a hedging, integrated or conversion transaction, a constructive sale or a straddle;
- a trader in securities that has elected the mark-to-market method of accounting for your securities;
- a person liable for alternative minimum tax;
- a person who owns or is deemed to own 10% or more of our stock (by vote or value);
- a partnership or other pass-through entity for United States federal income tax purposes;

- a person required to accelerate the recognition of any item of gross income with respect to our ADSs or Class A ordinary shares as a result of such income being recognized on an applicable financial statement; or
- a person whose “functional currency” is not the U.S. dollar.

If a partnership (or other entity or arrangement treated as a partnership for United States federal income tax purposes) holds our ADSs or Class A ordinary shares, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our ADSs or Class A ordinary shares, you should consult your tax advisors.

This summary does not contain a detailed description of all the United States federal income tax consequences to you in light of your particular circumstances and does not address the Medicare tax on net investment income, United States federal estate and gift taxes or the effects of any state, local or non-United States tax laws. If you are considering the purchase of our ADSs or Class A ordinary shares, you should consult your own tax advisors concerning the United States federal income tax consequences to you in light of your particular situation as well as any consequences arising under other United States federal tax laws and the laws of any other taxing jurisdiction.

ADSs

If you hold ADSs, for United States federal income tax purposes, you generally will be treated as the owner of the underlying Class A ordinary shares that are represented by such ADSs. Accordingly, deposits or withdrawals of Class A ordinary shares for ADSs will not be subject to United States federal income tax.

Taxation of Dividends

Subject to the discussion under “—Passive Foreign Investment Company” below, the gross amount of any distributions (other than certain pro rata distributions of our shares) on the ADSs or Class A ordinary shares (including any amounts withheld to reflect PRC withholding taxes) will be taxable as dividends, to the extent paid out of our current or accumulated earnings and profits, as determined under United States federal income tax principles. Such income (including withheld taxes) will be includable in your gross income as ordinary income on the day actually or constructively received by you, in the case of the Class A ordinary shares, or by the depository, in the case of ADSs. Such dividends will not be eligible for the dividends received deduction generally allowed to corporations under the Code.

Subject to applicable limitations (including a minimum holding period requirement), dividends received by non-corporate United States Holders from a qualified foreign corporation may be treated as “qualified dividend income” that is subject to reduced rates of taxation. A foreign corporation is treated as a qualified foreign corporation with respect to dividends paid by that corporation on ordinary shares (or ADSs backed by such shares) that are readily tradable on an established securities market in the United States. Our ADSs are listed on the Nasdaq. United States Treasury Department guidance indicates that our ADSs are readily tradable on an established securities market in the United States. Thus, subject to the discussion under “—Passive Foreign Investment Company” below, we believe that dividends we pay on our ADSs will be eligible for the reduced tax rates. Since we do not expect that our Class A ordinary shares will be listed on an established securities market in the United States, we do not believe that dividends that we pay on our Class A ordinary shares that are not represented by ADSs will meet the conditions required for these reduced tax rates. There also can be no assurance that our ADSs will continue to be readily tradable on an established securities market in the United States in later years. Consequently, there can be no assurance that our ADSs will continue to be eligible for the reduced tax rates. A qualified foreign corporation also includes a foreign corporation that is eligible for the benefits of certain income tax treaties with the United States. In the event that we are deemed to be a PRC resident enterprise under the PRC tax law (see “—People’s Republic of China Taxation” above), we may be eligible for the benefits of the Treaty. In that case, dividends we pay on our Class A ordinary shares would be eligible for the reduced rates of taxation whether or not the shares are readily tradable on an established securities market in the United States, and whether or not the shares are represented by ADSs. You should consult your own tax advisors regarding the application of these rules given your particular circumstances.

Notwithstanding the foregoing, we will not be treated as a qualified foreign corporation, and non-corporate United States Holders will not be eligible for reduced rates of taxation, for any dividends that we pay if we are a passive foreign investment company, or PFIC, in the taxable year in which such dividends are paid or in the preceding taxable year (see “—Passive Foreign Investment Company” below).

In the event that we are deemed to be a PRC resident enterprise under the PRC tax law, you may be subject to PRC withholding taxes on dividends paid to you with respect to the ADSs or Class A ordinary shares. See “—People’s Republic of China Taxation.” In that case, subject to certain conditions and limitations (including a minimum holding period requirement), PRC withholding taxes on dividends may be treated as foreign taxes eligible for credit against your United States federal income tax liability. For purposes of calculating the foreign tax credit, dividends paid on the ADSs or Class A ordinary shares will be treated as foreign-source income and will generally constitute passive category income. However, recently issued Treasury regulations addressing foreign tax credits, or the Foreign Tax Credit Regulations, impose additional requirements for foreign taxes to be eligible for a foreign tax credit, and there can be no assurance that those requirements will be satisfied. In addition, if you are eligible for Treaty benefits, any PRC withholding taxes on dividends will not be creditable against your United States federal income tax liability to the extent withheld at a rate exceeding any applicable Treaty rate. Instead of claiming a foreign tax credit, you may be able to deduct PRC withholding taxes in computing your taxable income, subject to generally applicable limitations under United States law (including that a United States Holder is not eligible for a deduction for otherwise creditable foreign income taxes paid or accrued in a taxable year if such United States Holder claims a foreign tax credit for any foreign income taxes paid or accrued in the same taxable year). The rules governing the foreign tax credit and deductions for foreign taxes are complex. You are urged to consult your tax advisors regarding the availability of the foreign tax credit or a deduction under your particular circumstances.

To the extent that the amount of any distribution exceeds our current and accumulated earnings and profits, as determined under United States federal income tax principles, the distribution ordinarily would be treated, first, as a tax-free return of capital, causing a reduction in the adjusted basis of the ADSs or Class A ordinary shares (thereby increasing the amount of gain, or decreasing the amount of loss, to be recognized by you on a subsequent disposition of the ADSs or Class A ordinary shares), and, second, the balance in excess of adjusted basis ordinarily would be taxed as capital gain recognized on a sale or exchange. However, we do not expect to determine our earnings and profits in accordance with United States federal income tax principles. Therefore, you should expect that distributions will generally be reported to the Internal Revenue Service, or IRS, and taxed to you as dividends (as discussed above), even if they might ordinarily be treated as a tax-free return of capital or as capital gain.

Passive Foreign Investment Company

Based on the past and projected composition of our income and assets, and the valuation of our assets, including goodwill, we do not believe we were a PFIC for our taxable year ended December 31, 2022 and we do not expect to be a PFIC for our taxable year ending December 31, 2023 or in future taxable years, although there can be no assurance in this regard, since the determination of our PFIC status cannot be made until the end of a taxable year and depends significantly on the composition of our assets and income throughout the year.

In general, we will be a PFIC for any taxable year in which:

- at least 75% of our gross income is passive income, or
- at least 50% of the value (generally based on a quarterly average) of our assets is attributable to assets that produce or are held for the production of passive income.

For this purpose, passive income generally includes dividends, interest, royalties and rents (other than royalties and rents derived in the active conduct of a trade or business and not derived from a related person), as well as gains from the sale of assets (such as stock) that produce passive income, foreign currency gains, and certain other categories of income. In addition, cash and other assets readily convertible into cash are generally considered passive assets. If we own at least 25% (by value) of the stock of another corporation, we will be treated, for purposes of determining whether we are a PFIC, as owning our proportionate share of the other corporation’s assets and receiving our proportionate share of the other corporation’s income. However, it is not entirely clear how the contractual arrangements between us and the VIEs will be treated for purposes of the PFIC rules. For United States federal income tax purposes, we consider ourselves to own the stock of the VIEs. If it is determined, contrary to our view, that we do not own the stock of the VIEs for United States federal income tax purposes (for instance, because the relevant PRC authorities do not respect these arrangements), that would alter the composition of our income and assets for purposes of testing our PFIC status, and may cause us to be treated as a PFIC.

The determination of whether we are a PFIC is made annually. Accordingly, it is possible that we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition. The calculation of the value of our assets will be based, in part, on the quarterly market value of our ADSs, which is subject to change.

If we are a PFIC for any taxable year during which you hold our ADSs or Class A ordinary shares and you do not make a timely mark-to-market election, as described below, you will be subject to special—and generally very unfavorable—tax rules with respect to any “excess distribution” received and any gain realized from a sale or other disposition, including a pledge, of ADSs or Class A ordinary shares. Distributions received in a taxable year that are greater than 125% of the average annual distributions received during the shorter of the three preceding taxable years or your holding period for the ADSs or Class A ordinary shares will be treated as excess distributions. Under these special tax rules:

- the excess distribution or gain will be allocated ratably over your holding period for the ADSs or Class A ordinary shares,
- the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we were a PFIC, will be treated as ordinary income, and
- the amount allocated to each other year will be subject to tax at the highest tax rate in effect for that year for individuals or corporations, as applicable, and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

Although the determination of whether we are a PFIC is made annually, if we are a PFIC for any taxable year in which you hold our ADSs or Class A ordinary shares, you will generally be subject to the special tax rules described above for that year and for each subsequent year in which you hold the ADSs or Class A ordinary shares (even if we do not qualify as a PFIC in any subsequent years). However, if we cease to be a PFIC, you can avoid the continuing impact of the PFIC rules by making a special election to recognize gain as if your ADSs or Class A ordinary shares had been sold on the last day of the last taxable year during which we were a PFIC. You are urged to consult your own tax advisor about this election.

In certain circumstances, in lieu of being subject to the special tax rules discussed above, you may make a mark-to-market election with respect to your ADSs or Class A ordinary shares, provided such ADSs or Class A ordinary shares are treated as “marketable stock.” The ADSs or Class A ordinary shares generally will be treated as marketable stock if the ADSs or Class A ordinary shares are “regularly traded” on a “qualified exchange or other market” (within the meaning of the applicable Treasury regulations). Under current law, the mark-to-market election may be available to ADS holders as the ADSs are listed on the Nasdaq, which constitutes a qualified exchange, although there can be no assurance that the ADSs will be “regularly traded” for purposes of the mark-to-market election. The Class A ordinary shares are listed on the Hong Kong Stock Exchange, which must meet certain trading, listing, financial disclosure and other requirements to be treated as a qualified exchange for these purposes. There also can be no assurance that the Class A ordinary shares will be “regularly traded” for purposes of the mark-to-market election.

If you make an effective mark-to-market election, for each taxable year that we are a PFIC, you will include as ordinary income the excess of the fair market value of your ADSs or Class A ordinary shares at the end of the year over your adjusted basis in the ADSs or Class A ordinary shares. You will be entitled to deduct as an ordinary loss in each such year the excess of your adjusted basis in the ADSs or Class A ordinary shares over their fair market value at the end of the year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. If you make an effective mark-to-market election, any gain you recognize upon the sale or other disposition of your ADSs or Class A ordinary shares in a year that 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.

Your adjusted basis in the ADSs or Class A ordinary shares will be increased by the amount of any income inclusion and decreased by the amount of any deductions under the mark-to-market rules. If you make a mark-to-market election, it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the ADSs or Class A ordinary shares are no longer regularly traded on a qualified exchange or other market, or the IRS consents to the revocation of the election. You are urged to consult your tax advisor about the availability of the mark-to-market election, and whether making the election would be advisable in your particular circumstances.

A different election, known as the “qualified electing fund,” or “QEF” election, is generally available to holders of PFIC stock, but requires that the corporation provide the holders with a “PFIC Annual Information Statement” containing certain information necessary for the election, including the holder’s pro rata share of the corporation’s earnings and profits and net capital gain for each taxable year, computed according to United States federal income tax principles. We do not intend, however, to determine our earnings and profits or net capital gain under United States federal income tax principles, nor do we intend to provide United States Holders with a PFIC Annual Information Statement. Therefore, you should not expect to be eligible to make this election.

If we are a PFIC for any taxable year during which you hold our ADSs or Class A ordinary shares and any of our non-United States subsidiaries is also a PFIC, you will be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC for purposes of the application of these rules. You will not, however, be able to make the mark-to-market election described above in respect of any lower-tier PFIC. You are urged to consult your tax advisors about the application of the PFIC rules to any of our subsidiaries.

You will generally be required to file IRS Form 8621 if you hold our ADSs or Class A ordinary shares in any year in which we are classified as a PFIC. You are urged to consult your tax advisors concerning the United States federal income tax consequences of holding ADSs or Class A ordinary shares if we are considered a PFIC in any taxable year.

Taxation of Capital Gains

For United States federal income tax purposes, you will recognize taxable gain or loss on any sale, exchange or other taxable disposition of ADSs or Class A ordinary shares in an amount equal to the difference between the amount realized for the ADSs or Class A ordinary shares (net of any Hong Kong stamp duty imposed on such proceeds) and your adjusted basis in the ADSs or Class A ordinary shares (which should similarly take into account any Hong Kong stamp duty paid in connection with the acquisition of the ADSs or Class A ordinary shares), both as determined in U.S. dollars. Subject to the discussion under “—Passive Foreign Investment Company” above, such gain or loss will generally be capital gain or loss and will generally be long-term capital gain or loss if you have held the ADSs or Class A ordinary shares for more than one year. Long-term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Any gain or loss recognized by you will generally be treated as United States source gain or loss. However, if we are treated as a PRC resident enterprise for PRC tax purposes and PRC tax is imposed on any gain, and if you are eligible for the benefits of the Treaty, you may elect to treat such gain as PRC source gain under the Treaty. If you are not eligible for the benefits of the Treaty or you fail to make the election to treat any gain as PRC source, then you generally would not be able to use a foreign tax credit for any PRC tax imposed on the disposition of our ADSs or Class A ordinary shares unless such credit can be applied (subject to applicable limitations) against United States federal income tax due on other income derived from foreign sources in the same income category (generally, the passive category). However, pursuant to the Foreign Tax Credit Regulations, if you do not elect to treat any gain as PRC source gain under the Treaty, any PRC tax imposed on such gain would generally not be a foreign income tax eligible for a foreign tax credit (regardless of any other income that you may have that is derived from foreign sources). In such case, however, the non-creditable PRC tax may reduce the amount realized on the sale, exchange or other taxable disposition of the ADSs or Class A ordinary shares. You are urged to consult your tax advisors regarding the tax consequences if any PRC tax is imposed on gain on a disposition of our Class A ordinary shares or ADSs, including the availability of the foreign tax credit and the election to treat any gain as PRC source, under your particular circumstances.

Information Reporting and Backup Withholding

In general, information reporting will apply to dividends in respect of our ADSs or Class A ordinary shares and the proceeds from the sale, exchange or other disposition of our ADSs or Class A ordinary shares that are paid to you within the United States (and in certain cases, outside the United States), unless you establish that you are an exempt recipient such as a corporation. A backup withholding tax may apply to such payments if you fail to provide a taxpayer identification number or certification of exempt status and a certification that you are not subject to backup withholding or if you fail to report in full dividend and interest income.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is furnished to the IRS in a timely manner.

Certain United States Holders are required to report information relating to our ADSs or Class A ordinary shares, subject to certain exceptions (including an exception for ADSs or Class A ordinary shares held in accounts maintained by certain financial institutions), by attaching a complete IRS Form 8938, Statement of Specified Foreign Financial Assets, with their tax returns for each year in which they hold ADSs or Class A ordinary shares. Significant penalties can apply if you are required to file this form and you fail to do so. You are urged to consult your own tax advisor regarding this and other information reporting requirements relating to your ownership of the ADSs or Class A ordinary shares.

Singapore Taxation

Corporate Income tax

The tax residency of a company in Singapore is determined by where its control and management of its business decisions are made, typically the location of where a company's board of directors' meetings are made.

Singapore tax resident corporate taxpayers are taxed on income earned in Singapore or received in Singapore from foreign sources, unless exempted. Non-Singapore tax resident corporate taxpayers are only taxed on income earned in Singapore. The foreign-sourced income may be exempt from tax in Singapore if certain conditions are met or, if the foreign-sourced income is not tax exempt, foreign tax credit ("FTC") can be claimed.

The prevailing corporate income tax rate in Singapore is 17.0% with the first S\$200,000 of chargeable income of a company being partially exempt from tax using a tiered chargeable income system. New companies will also, subject to certain conditions and exceptions, be eligible for tax exemption for each of the company's first three (3) years of assessment under the same tiered chargeable income system.

Dividend Distributions

Singapore has a single tier corporate tax system, where the tax paid by a resident company on its profits is a final tax. Dividends paid to shareholders are exempt from Singapore income tax and there is no withholding tax on the dividend payments for both resident and non-resident shareholders. Foreign shareholders should consult their tax advisors to consider the tax laws and double taxation agreements of their respective countries of residence.

Capital Gains Tax

Singapore currently does not impose tax on capital gains. However, gains arising from the disposal of our ordinary shares may be taxable if such gains are considered revenue in nature or, pursuant to Section 10(1)(g) of the Singapore Income Tax Act ("SITA"), such gains constitute any form of gain or profits of any income nature.

Any gains from the disposal of our ordinary shares, if regarded as capital gains, are not taxable in Singapore unless the seller is regarded as having derived gains of an income nature in Singapore.

Section 13W of the SITA exempts gains derived by a divesting company from the disposal of ordinary shares during a continuous period of at least 24 months ending on the date immediately prior to the date of disposal of such shares, provided certain conditions are met. However, the exemption does not apply in certain scenarios, such as the disposal of shares by an insurer company or a partnership, limited partnership, or limited liability partnership with a company as a partner.

Shareholders who have adopted, or who are required to adopt, the Singapore Financial Reporting Standards (International) ("SFRS (I)") 9 (Financial Instruments) which replaces the existing SFRS (I) 1-39 (Financial Instruments – Recognition and Measurement) for accounting purposes may be required to recognise gains or losses in accordance with the provisions of SFRS (I) 9 regardless of any disposal of our ordinary shares being made. If so, the gain or loss on the ordinary shares may be taxed or allowed as a deduction for Singapore income tax purposes notwithstanding being unrealised.

Shareholders are advised to consult their accounting and tax advisers on the Singapore tax consequences on their subscription, purchase, holding and disposal of our ordinary shares.

Malaysia Taxation

Laws and Regulations relating to Inland Revenue

In Malaysia, the tax regime is primarily governed under the Income Tax Act 1967 (“**ITA**”).

Income accruing in or derived from Malaysia received by a resident company is subject to Malaysian income tax. This applies to chargeable income accruing in or derived from Malaysia from business profits, dividends, interests, rents, royalties, premiums and other income.

Foreign income derived from sources outside Malaysia and received in Malaysia by a resident company is exempted from Malaysian income tax unless it is carrying on the business of banking, insurance or air and sea transport undertakings which is taxed on its worldwide income regardless of whether the income is received in Malaysia.

Section 8 of the ITA provides that a company is resident in Malaysia for a particular year if at any time during that year the management and control of its business or of any one of its business is exercised in Malaysia. Generally, a company is considered resident in Malaysia if the meetings of its board of directors are held in Malaysia.

Tax Issues

Corporate Income Tax

Currently, the corporate income tax rate is 24% on every ringgit of the chargeable income.

However, a small and medium enterprise, i.e. a resident company incorporated in Malaysia which has a paid up capital in respect of ordinary shares of RM2.5 Million or less at the beginning of the basis period for a Year of Assessment (“**YA**”) and having gross business income of not more than RM50 Million for the basis period for a YA, subject to certain qualifications under the ITA, is taxed at the rate of 17% on the first RM600,000 of the chargeable income of the company, and 24% for every ringgit exceeding RM600,000 for YA 2022.

Withholding Tax

Certain payments to non-resident individual or company (known as the payee) may be subject to withholding tax. The rate of withholding tax, which may vary depending on the type of payment involved, the provisions in the ITA, and the relevant tax treaty, must be deducted from payments to non-resident persons and paid to the Inland Revenue Board of Malaysia (“**IRBM**”) within one (1) month of paying or crediting the amount to the payee.

Service Tax

Service tax is a consumption tax levied and charged on:

- (a) any taxable service (including digital services) provided in Malaysia by a registered person in carrying on his/its business;
- (b) any imported taxable services acquired by any person who carries on business in Malaysia; and
- (c) any digital services provided by a foreign registered person to a Malaysian consumer.

The rate of service tax shall be charged at the rate of 6%. In the case of provision of services for information technology, the value of the taxable service for the imposition of service tax is the actual price of services charged to the customers. Service tax shall be charged at the point of services are rendered.

Indonesia Taxation

Corporate income tax

Based on Law No. 7 of 1983 on Income Tax as last amended by Government Regulation No. 2 of 2022 on Job Creation (“**Income Tax Law**”), a corporation is considered as a tax resident if it is established or domiciled in Indonesia. A non-resident corporation conducting business activities in Indonesia through a permanent establishment would be subject to similar tax obligations of a resident corporation.

Resident corporations are generally subject to corporate income tax at a flat rate of 22% of its taxable profits. However, there are exceptions from this rate, such as:

- Qualified resident corporations that are listed at the Indonesian Stock Exchange are entitled to a reduced corporate income tax rate by 3%; therefore, the effective corporate income tax rate is 19%.
- Small-scale resident corporations with annual gross turnover up to IDR 50 billion are entitled to 50% corporate income tax rate reduction (therefore, their effective corporate income tax rate would be 11%) which is imposed proportionally on the taxable profits on the part of gross turnover up to IDR 4.8 billion.
- Certain resident corporations with annual gross turnover up to IDR 4.8 billion are subject to final income tax at 0.5% of its gross turnover.

Withholding tax

Based on the Income Tax Law and its implementing regulations, resident corporations are automatically appointed as withholding tax agents.

Different withholding tax rates would apply to different type of the income (e.g., employment income, dividends, lease) or different type of income recipients (i.e., a resident or non-resident, and an individual or corporation).

The general rate of withholding tax applied to a non-resident income recipient is 20% of the gross amount. However, this rate may be reduced or even exempted if the income recipient is entitled to the benefits of the tax treaty that Indonesia has with the country where the income recipient is a tax resident. To be entitled to the tax treaty benefits, the non-resident income recipient must meet all the requirements under the Indonesian domestic tax regulation on tax treaty application, including to provide a standardized certificate of domiciled required by the tax authority which is called Form DGT.

Value-added tax

Based on Law No. 8 of 1983 on Value-Added Tax (“**VAT**”) and Luxury-Goods Sales Tax (“**LGST**”) as last amended by Government Regulation No. 2 of 2022 on Job Creation (“**VAT Law**”), resident corporations that deliver VAT-able goods or render VAT-able services with gross turnover of more than IDR 4.8 billion annually must register themselves as VAT-able entrepreneurs.

VAT-able entrepreneurs must impose VAT (and any applicable LGST) on each of their VAT-able deliveries and issue a VAT invoice to the buyer, and then report it to the tax authority via a tax return monthly. In general, VAT-able entrepreneurs may claim the VAT that they pay on their purchases as tax credits against the VAT that they impose on their sales.

The general VAT rate is 11% (and will be 12% at the latest starting from 1 January 2025). For the export of VAT-able goods and certain VAT-able services, the VAT rate is 0%.

Other taxes

In addition to the above, resident corporations may also have other tax obligations, such as land and buildings tax, duty on the acquisition of land rights and buildings, import duties, excise, and stamp duties.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We have filed this annual report, including exhibits, with the SEC. As allowed by the SEC, in Item 19 of this annual report, we incorporate by reference certain information we filed with the SEC. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this annual report.

You may read and copy this annual report, including the exhibits incorporated by reference in this annual report, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 and at the SEC's regional offices in New York, New York, and Chicago, Illinois. You can also request copies of this annual report, including the exhibits incorporated by reference in this annual report, upon payment of a duplicating fee, by writing to the SEC's Public Reference Room for information.

The SEC also maintains a website that contains reports, proxy statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>. The information on that website is not a part of this annual report.

I. Subsidiary Information

Not applicable.

J. Annual Report to Security Holders

Not applicable.

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 bank borrowings, bonds payable and capital lease and other financing obligations and interest income generated by excess cash, which is mostly held in interest-bearing bank deposits. 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 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

Almost all of our revenue and substantially all of our expenses are denominated in Renminbi. We do not believe that we currently have any significant direct foreign exchange risk and have not used any derivative financial instruments to hedge exposure to such risk. Although in general our exposure to foreign exchange risks should be limited, the value of your investment in our ADSs will be affected by the exchange rate between the U.S. dollar and the Renminbi because the value of our business is effectively denominated in Renminbi, while our ADSs are traded in U.S. dollars. To a lesser extent, the value of your investment in our ADSs may also be affected by the exchange rate between the U.S. dollar and certain other foreign currencies used in our operations, namely, the Hong Kong dollar, Macanese pataca, the Singapore dollar, Malaysian ringgit and Indonesian rupiah, because the values of some of our business operations are effectively denominated in these currencies, while our ADSs are traded in U.S. dollars.

In particular, the conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the PBOC. On July 21, 2005, the PRC government changed its policy of pegging the value of the Renminbi to the U.S. dollar. The PRC government allowed the Renminbi to appreciate by more than 20% against the U.S. dollar between July 2005 and July 2008. Between July 2008 and June 2010, the exchange rate between the Renminbi and the U.S. dollar had been stable and traded within a narrow band. Since June 2010, the Renminbi has fluctuated against the U.S. dollar, at times significantly and unpredictably. On November 30, 2015, the Executive Board of the International Monetary Fund (IMF) completed the regular five-year review of the basket of currencies that make up the Special Drawing Right, or the SDR, and decided that with effect from October 1, 2016, Renminbi is determined to be a freely usable currency and will be included in the SDR basket as a fifth currency, along with the U.S. dollar, the Euro, the Japanese yen and the British pound. While the RMB appreciated approximately 6.3% and 2.3%, respectively, against the U.S. dollar in 2020 and 2021, the RMB depreciated approximately 8.2% against the U.S. dollar in 2022. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future. It remains unclear what further fluctuations may occur or what impact this will have on our results of operations.

To the extent that we need to convert U.S. dollars for our operations into Renminbi, Hong Kong dollars, Macanese patacas, Singapore dollars, Malaysian ringgit or Indonesian rupiah, the appreciation of such foreign currencies against the U.S. dollar would have an adverse effect on the foreign currency amount we receive from the conversion. Conversely, if we decide to convert Renminbi, Hong Kong dollars, Macanese patacas, Singapore dollars, Malaysian ringgit or Indonesian rupiah into U.S. dollars for the purpose of making payments for dividends on our ordinary shares or ADSs or for other business purposes, appreciation of the U.S. dollar against such foreign currencies would have a negative effect on the U.S. dollar amounts available to us.

Inflation

Since our inception, inflation in China has not materially affected our results of operations. According to the National Bureau of Statistics of China, the consumer price index in China was 2.5%, 0.9% and 2.0% in 2020, 2021 and 2022, respectively. Although we have not been materially affected by inflation in the past, we may be affected if China experiences higher rates of inflation in the future.

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

As an ADS holder, you will be required to pay the following service fees to the depositary bank:

Service:	Fee:
Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property	\$5.00 for each 100 ADSs (or portion thereof) issued
Cancellation of ADSs, including in the case of termination of the deposit agreement	\$5.00 for each 100 ADSs (or portion thereof) cancelled
Distribution of cash dividends or other cash distributions	Up to \$0.05 per ADS held
Distribution of ADSs pursuant to share dividends, free share distributions or exercise of rights	Up to \$0.05 per ADS held
Distribution of securities other than ADSs or rights to purchase ADSs or additional ADSs	A fee being in an amount equal to the fee for the execution and delivery of ADSs which would have been charged as a result of the deposit of such securities
Depositary services	An aggregate fee of \$0.05 per ADS per calendar year (or portion thereof) for services performed by the depositary bank in administering the ADRs
Transfer of ADRs	\$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 ordinary shares charged by the registrar and transfer agent for the ordinary shares in the Cayman Islands (i.e., upon deposit and withdrawal of 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, including any applicable stamp duties, any stock transfer charges or withholding taxes (i.e., when ordinary shares are deposited or withdrawn from deposit).
- Fees and expenses incurred in connection with the delivery or servicing of ordinary shares on deposit.
- Fees and expenses incurred in connection with complying with exchange control regulations and other regulatory requirements applicable to ordinary shares, deposited securities, ADSs and ADRs.
- Any applicable fees and penalties thereon.

The 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 holders of record of ADSs as of the applicable ADS record date.

The depositary fees payable for cash distributions are generally deducted from the cash being distributed or by selling a portion of distributable property to pay the fees. In the case of distributions other than cash (i.e., share dividends, rights), the depositary bank charges the applicable fee to the ADS record date holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or uncertificated in direct registration), 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.

The depositary has agreed to reimburse us for a portion of certain expenses we incur that are related to establishment and maintenance of the ADR program, including investor relations expenses. 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. Further, the depositary has agreed to reimburse us certain fees payable to the depositary by ADS holders. Neither the depositary nor we can determine the exact amount to be made available to us because (i) the number of ADSs that will be issued and outstanding, (ii) the level of service fees to be charged to ADS holders and (iii) our reimbursable expenses related to the program are not known at this time.

Payments by Depositary

In 2022, we did not receive any payments from JPMorgan Chase Bank, N.A., the depositary bank for our ADR program, for reimbursement of investor relations expenses and other program related expenses.

Conversion between ADSs and Class A Ordinary Shares

In connection with our initial public offering of Class A ordinary shares in Hong Kong, or the Hong Kong IPO, we have established a branch register of members in Hong Kong, or the Hong Kong share register, which is maintained by our Hong Kong Share Registrar, Computershare Hong Kong Investor Services Limited. Our principal register of members, or the Cayman share register, will continue to be maintained by our principal share registrar, Conyers Trust Company (Cayman) Limited.

All Class A ordinary shares offered in the Hong Kong IPO are registered on the Hong Kong share register in order to be listed and traded on the Hong Kong Stock Exchange. As described in further detail below, holders of Class A ordinary shares registered on the Hong Kong share register are able to convert these shares into ADSs, and vice versa.

In connection with the Hong Kong public offering, and to facilitate fungibility and conversion between ADSs and Class A ordinary shares and trading between the Nasdaq and the Hong Kong Stock Exchange, we moved a portion of our issued Class A ordinary shares that are represented by ADSs from our Cayman share register to our Hong Kong share register.

Our ADSs

Our ADSs representing our Class A ordinary shares are traded on the Nasdaq. Dealings in our ADSs on Nasdaq are conducted in U.S. Dollars.

ADSs may be held either:

- directly, by having a certificated ADS, or an ADR, registered in the holder's name, or by holding in the direct registration system, pursuant to which the depository may register the ownership of uncertificated ADSs, which ownership shall be evidenced by periodic statements issued by the depository to the ADS holders entitled thereto; or
- indirectly, by holding a security entitlement in ADSs through a broker or other financial institution that is a direct or indirect participant in The Depository Trust Company.

The depository for our ADSs is JPMorgan Chase Bank, N.A., whose office is located at 383 Madison Avenue, Floor 11, New York, NY 10179.

Converting Class A Ordinary Shares Trading in Hong Kong into ADSs

An investor who holds ordinary shares registered in Hong Kong and who intends to convert them to ADSs to trade on Nasdaq must deposit or have his or her broker deposit the Class A ordinary shares with the depository's Hong Kong custodian, JP Morgan Chase Bank, N.A., Hong Kong Branch, or the custodian, in exchange for ADSs.

A deposit of Class A ordinary shares trading in Hong Kong in exchange for ADSs involves the following procedures:

- If Class A ordinary shares have been deposited with CCASS, the investor must transfer Class A ordinary shares to the depository's account with the custodian within CCASS by following the CCASS procedures for transfer and submit and deliver a duly completed and signed conversion form to the depository via his or her broker.
- If Class A ordinary shares are held outside CCASS, the investor must arrange to deposit his or her Class A ordinary shares into CCASS for delivery to the depository's account with the custodian within CCASS, submit and deliver a request for conversion form to the custodian and after duly completing and signing such conversion form, and deliver such conversion form to the custodian.
- Upon payment of its fees and expenses and of any taxes or charges, such as stamp taxes or stock transfer taxes or fees, if applicable, the depository will issue the corresponding number of ADSs in the name(s) requested by an investor and will deliver the ADSs to the designated DTC account of the person(s) designated by an investor or his or her broker.

For Class A ordinary shares deposited in CCASS, under normal circumstances, the above steps generally require two business days. For Class A ordinary shares held outside CCASS in physical form, the above steps may take 14 business days, or more, to complete. Temporary delays may arise. For example, the transfer books of the depository may from time to time be closed to ADS issuances. The investor will be unable to trade the ADSs until the procedures are completed.

Converting ADSs to Class A Ordinary Shares Trading in Hong Kong

An investor who holds ADSs and who intends to convert his/her ADSs into Class A ordinary shares to trade on the Hong Kong Stock Exchange must cancel the ADSs the investor holds and withdraw Class A ordinary shares from our ADS program and cause his or her broker or other financial institution to trade such ordinary shares on the Hong Kong Stock Exchange.

An investor that holds ADSs indirectly through a broker should follow the broker's procedure and instruct the broker to arrange for cancellation of the ADSs, and transfer of the underlying ordinary shares from the depository's account with the custodian within the CCASS system to the investor's Hong Kong stock account.

For investors holding ADSs directly, the following steps must be taken:

- To withdraw Class A ordinary shares from our ADS program, an investor who holds ADSs may turn in such ADSs at the office of the depository (and the applicable ADR(s) if the ADSs are held in certificated form), and send an instruction to cancel such ADSs to the depository.
- Upon payment or net of its fees and expenses and of any taxes or charges, such as stamp taxes or stock transfer taxes or fees, if applicable, the depository will instruct the custodian to deliver Class A ordinary shares underlying the canceled ADSs to the CCASS account designated by an investor.
- If an investor prefers to receive Class A ordinary shares outside CCASS, he or she must receive Class A ordinary shares in CCASS first and then arrange for withdrawal from CCASS. Investors can then obtain a transfer form signed by HKSCC Nominees Limited (as the transferor) and register Class A ordinary shares in their own names with the Hong Kong Share Registrar.

For Class A ordinary shares to be received in CCASS, under normal circumstances, the above steps generally require two business days. For Class A ordinary shares to be received outside CCASS in physical form, the above steps may take 14 business days, or more, to complete. The investor will be unable to trade the Class A ordinary shares on the Hong Kong Stock Exchange until the procedures are completed.

Temporary delays may arise. For example, the transfer books of the depository may from time to time be closed to ADS cancellations. In addition, completion of the above steps and procedures is subject to there being a sufficient number of Class A ordinary shares on the Hong Kong share register to facilitate a withdrawal from the ADS program directly into the CCASS system. We are not under any obligation to maintain or increase the number of Class A ordinary shares on the Hong Kong share register to facilitate such withdrawals.

Depository Requirements

Before the depository issues ADSs or permits withdrawal of ordinary shares, the depository may require:

- production of satisfactory proof of the identity and genuineness of any signature or other information it deems necessary; and
- compliance with procedures it may establish, from time to time, consistent with the deposit agreement, including presentation of transfer documents.

The depository may refuse to deliver, transfer, or register issuances, transfers and cancellations of ADSs generally when the transfer books of the depository or our Hong Kong or Cayman Share Registrars are closed or at any time if the depository or we determine it advisable to do so or if it would violate any applicable law or the Depository's policies and procedures.

All costs attributable to the transfer of Class A ordinary shares to effect a withdrawal from or deposit of ordinary shares into our ADS program will be borne by the investor requesting the transfer. In particular, holders of ADSs and ordinary shares should note that the Hong Kong Share Registrar will charge between HK\$2.50 to HK\$20, depending on the speed of service (or such higher fee as may from time to time be permitted under the Hong Kong Listing Rules), for each transfer of ordinary shares from one registered owner to another, each share certificate canceled or issued by it and any applicable fee as stated in the share transfer forms used in Hong Kong. In addition, holders of ADSs and Class A ordinary shares must pay up to US\$5.00 (or less) per 100 ADSs for each issuance of ADSs and each cancellation of ADSs, as the case may be, in connection with the deposit of Class A ordinary shares into, or withdrawal of Class A ordinary shares from, our ADS program.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None of these events occurred in any of the years ended December 31, 2020, 2021 and 2022.

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

A. Modifications of Rights

In June 2020, in connection with investments from Hillhouse Capital and STT GDC of US\$400 million and US\$105 million, respectively, we granted to Hillhouse Capital registration rights substantially similar to the registration rights granted to holders of our registrable securities pursuant to our amended members agreement. See “Item 10. Additional Information—B. Memorandum and Articles of Association” for a description of the rights of securities holders. In June 2020, we also entered into a new investment rights agreement with STT GDC to grant to STT GDC (i) preemptive rights with respect to future private issuances of equity or equity-linked securities we conduct anytime in the eighteen months following Hillhouse Capital investment, whereby STT GDC has the right to subscribe for pro rata portions of any such future offerings based on their shareholdings at the time of the agreement, as well as (ii) registration rights substantially identical to those provided to Hillhouse Capital. In June 2020, we also entered into an amendment of our investment rights agreement with Ping An Overseas Holdings to undertake to grant to Ping An Overseas Holdings registration rights substantially identical to those provided to Hillhouse Capital. Copies of these rights agreements have been filed with this annual report.

In August 2020, we entered into an amendment of our June 2020 investment rights agreement with STT GDC, or Amendment No. 1, to expand the scope of their preemptive rights, to the extent permissible by applicable law, to cover any future issuances of equity-linked securities we conduct anytime in the eighteen months following June 26, 2020, whereby STT GDC has the right to subscribe for up to 35% of any such future offerings. A copy of this Amendment No. 1 has been filed with this annual report.

In February 2022, we entered into a second amendment of our June 2020 investment rights agreement with STT GDC, or Amendment No. 2, to (i) extend their preemptive rights to cover any allotment and issuance of equity or equity-linked securities we conduct anytime on or before June 25, 2023, whereby STT GDC has the right to subscribe for up to 35% of any such future offerings, and (ii) grant STT GDC certain registration rights until such time that their registrable securities can be sold pursuant to Rule 144 under the Securities Act without volume limitations. A copy of this Amendment No. 2 has been filed with this annual report.

B. Use of Proceeds

On November 2, 2020, we completed our secondary listing on the Hong Kong Stock Exchange and public offering of 160,000,000 Class A ordinary shares, equivalent to 20,000,000 ADSs. On November 6, 2020, we announced that the underwriters had fully exercised their over-allotment option to purchase 24,000,000 additional Class A ordinary shares, equivalent to 3,000,000 ADSs, to cover over-allocations. We raised approximately US\$1.9 billion in net proceeds to us after deducting underwriting discounts and commissions and other offering expenses.

As of December 31, 2020, we had not used any portion of the net proceeds received from our secondary listing on the Hong Kong Stock Exchange and public offering in November 2020.

As of December 31, 2021, we had used a portion of the net proceeds received from our secondary listing on the Hong Kong Stock Exchange and public offering in November 2020. This portion consisted of US\$1.5 billion for the development and acquisition of new data centers as well as general corporate purposes.

As of December 31, 2022, we had used the remainder of the net proceeds received from our secondary listing on the Hong Kong Stock Exchange and public offering in November 2020. This portion consisted of US\$0.4 billion for the development and acquisition of new data centers as well as general corporate purposes.

ITEM 15. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this annual report, an evaluation has been carried out under the supervision and with the participation of our management, including our chief executive officer and our chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) promulgated under the U.S. Exchange Act. Based on that evaluation, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures are effective in ensuring that material information required to be disclosed in this annual report is recorded, processed, summarized and reported to them for assessment, and required disclosure is made within the time period specified in the rules and forms of the SEC.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended, for our company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with generally accepted accounting principles and includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets, (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with U.S. GAAP and that a company's receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our consolidated financial statements.

As required by Section 404 of the Sarbanes-Oxley Act of 2002 and related rules as promulgated by the Securities and Exchange Commission, our management including our Chief Executive Officer and Chief Financial Officer assessed the effectiveness of internal control over financial reporting as of December 31, 2022 using the criteria set forth in the report "Internal Control—Integrated Framework (2013)" published by the Committee of Sponsoring Organizations of the Treadway Commission (known as COSO). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance with respect to consolidated financial statements preparation and presentation and 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.

Our independent registered public accounting firm, KPMG Huazhen LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2022, as stated in its report, which appears on page F-2 of this annual report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control 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 control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board of Directors has determined that each of Lim Ah Doo and Bin Yu, who are independent directors, satisfies the criteria of an audit committee financial expert as defined in Item 16A of the instruction to Form 20-F.

ITEM 16B. CODE OF ETHICS

We have adopted a code of business conduct that applies to our directors, employees, advisors and officers, including our Chief Executive Officer and Chief Financial Officer. No changes have been made to the code of business conduct since its adoption and no waivers have been granted therefrom to our directors or employees. We have filed our code of business conduct as an exhibit to our F-1 registration statement (File No. 333-213951), as amended, initially filed with the SEC on October 4, 2016, and a copy is available to any shareholder upon request. This code of business conduct is also available on our website at *investors.gds-services.com*.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

KPMG Huazhen LLP has served as our independent public accountant for each of the fiscal years in the three-year period ended December 31, 2022, for which audited financial statements appear in this annual report.

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by KPMG Huazhen LLP, for the years indicated.

	For the Year Ended	
	December 31,	
	2021	2022
	(In thousands of US dollars)	
Audit Fees ⁽¹⁾	2,400	2,595
Audit-related Fees ⁽²⁾	—	—
Tax Fees ⁽³⁾	203	323
All Other Fees ⁽⁴⁾	—	—
Total	2,603	2,918

- (1) "Audit Fees" represents the aggregate fees billed or to be billed for each of the fiscal years listed for professional services rendered by our auditor for the audit of our annual financial statements, interim reviews in connection with securities offering, statutory audits and review of documents filed with the SEC and other statutory and regulatory filings.
- (2) "Audit-related Fees" represents the aggregate fees billed or to be billed for each of the fiscal years listed for the assurance and related services rendered by our auditor that are reasonably related to the performance of the audit or review of our financial statements and not reported under "Audit Fees."
- (3) "Tax Fees" represents the aggregate fees billed for each of the fiscal years listed for the professional tax services rendered by our principal auditors.
- (4) "All Other Fees" represents the aggregate fees for services rendered by our auditor other than services reported under "Audit Fees," "Audit-related Fees" and "Tax Fees."

Pre-Approval Policies and Procedures

Our audit committee is responsible for the oversight of our independent accountants' work. The policy of our audit committee is to pre-approve all audit and non-audit services provided by KPMG Huazhen LLP, including audit services, audit-related services, tax services and other services, as described above.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

None.

ITEM 16E. PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

None.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

We are a “foreign private issuer” (as such term is defined in Rule 3b-4 under the U.S. Exchange Act), and our ADSs, each representing eight ordinary shares, are listed on the Nasdaq. Nasdaq Stock Market Rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq corporate governance listing standards. For instance, we are not required to:

- have a majority of the board be independent (although all of the members of the audit committee must be independent under the U.S. Exchange Act);
- have a compensation committee or a nominations or corporate governance committee consisting entirely of independent directors; or
- have regularly scheduled executive sessions with only independent directors each year.

We have relied on and intend to continue to rely on some of these exemptions.

Under Rule 19C.11 of the Hong Kong Listing Rules, we are exempt from certain corporate governance requirements of the Hong Kong Stock Exchange, including Appendix 14 of the Hong Kong Listing Rules (Corporate Governance Code and Corporate Governance Report) and Appendix 16 of the Hong Kong Listing Rules (Disclosure of Financial Information).

In connection with our listing on the Hong Kong Stock Exchange, the Hong Kong Stock Exchange and the SFC granted certain waivers and exemptions from strict compliance with the relevant provisions of the Hong Kong Listing Rules and the SFO, respectively, and the SFC also granted a ruling under the Takeovers Codes.

Not a Public Company in Hong Kong

Section 4.1 of the Introduction to the Takeovers Codes provides that the Takeovers Codes applies to takeovers, mergers and share buy-backs affecting public companies in Hong Kong, companies with a primary listing of their equity interests in Hong Kong. According to the Note to Section 4.2 of the Introduction to the Takeovers Codes, a Grandfathered Greater China Issuer within the meaning of Rule 19C.01 of the Hong Kong Listing Rules with a secondary listing on the Hong Kong Stock Exchange will not normally be regarded as a public company in Hong Kong under Section 4.2 of the Introduction to the Takeovers Codes.

The SFC granted a ruling that we are not a “public company in Hong Kong” for the purposes of the Takeovers Codes. Therefore, the Takeovers Codes does not apply to us. In the event that the bulk of trading in our Shares migrates to Hong Kong such that we would be treated as having a dual-primary listing pursuant to Rule 19C.13 of the Hong Kong Listing Rules, the Takeover Codes will apply to us.

Disclosure of Interests under Part XV of the SFO

Part XV of the SFO imposes duties of disclosure of interests in Shares. Under the U.S. Exchange Act, which we are subject to, any person (including directors and officers of the company concerned) who acquires beneficial ownership, as determined in accordance with the rules and regulations of the SEC and which includes the power to direct the voting or the disposition of the securities, of more than 5% of a class of equity securities registered under Section 12 of the U.S. Exchange Act must file beneficial owner reports with the SEC, and such person must promptly report any material change in the information provided (including any acquisition or disposition of 1% or more of the class of equity securities concerned), unless exceptions apply. Therefore, compliance with Part XV of the SFO would subject our corporate insiders to a second level of reporting, which would be unduly burdensome to them, would result in additional costs and would not be meaningful, since the statutory disclosure of interest obligations under the U.S. Exchange Act that apply to us and our corporate insiders would provide our investors with sufficient information relating to the shareholding interests of our significant shareholders.

The SFC granted a relevant partial exemption under section 309(2) of the SFO to us, our Substantial Shareholders, directors and chief executives from strict compliance with the provisions of Part XV of the SFO (other than Divisions 5, 11 and 12 of Part XV of the SFO), on the conditions that (i) the bulk of trading in the Shares is not considered to have migrated to Hong Kong on a permanent basis in accordance with Rule 19C.13 of the Hong Kong Listing Rules; (ii) all disclosures of interests filed with the SEC are also filed with the Hong Kong Stock Exchange as soon as practicable, which will then publish such disclosures in the same manner as disclosures made under Part XV of the SFO; and (iii) we will advise the SFC if there is any material change to any of the information which has been provided to the SFC, including any significant changes to the disclosure requirements in the U.S. and any significant changes in the volume of our worldwide share turnover that takes place on the Hong Kong Stock Exchange. This exemption may be reconsidered by the SFC in the event there is a material change in information provided to the SFC.

The U.S. Exchange Act and the rules and regulations promulgated thereunder require disclosure of interests by shareholders that are broadly equivalent to Part XV of the SFO. For relevant disclosure in respect of the substantial shareholder's interests, see "Item 6. Directors, Senior Management and Employees—E. Share Ownership."

Corporate Communications

Rule 2.07A of the Hong Kong Listing Rules provides that a listed issuer may send or otherwise make available to the relevant holders of its securities any corporate communication by electronic means, provided that either the listed issuer has previously received from each of the relevant holders of its securities an express, positive confirmation in writing or the shareholders of the listed issuer have resolved in a general meeting that the listed issuer may send or supply corporate communications to shareholders by making them available on the listed issuer's own website or the listed issuer's constitutional documents contain provision to that effect, and certain conditions are satisfied.

Since our listing on the Hong Kong Stock Exchange, we made the following arrangements:

- We issue all future corporate communications as required by the Hong Kong Listing Rules on our own website in English and Chinese, and on the Hong Kong Stock Exchange's website in English and Chinese;
- We continue to provide printed copies of notices of general meetings of shareholders including the proxy materials in English and Chinese to our shareholders at no costs; and
- We have added to the "Investor Relations" page of our website which will direct investors to all of our future filings with the Hong Kong Stock Exchange.

The Hong Kong Stock Exchange granted us a waiver from strict compliance with the corporate communication requirements under Rule 2.07A of the Hong Kong Listing Rules.

Monthly Returns

Rule 13.25B of the Hong Kong Listing Rules requires a listed issuer to publish a monthly return in relation to movements in its equity securities, debt securities and any other securitized instruments, as applicable, during the period to which the monthly return relates. Pursuant to the Joint Policy Statement Regarding the Listing of Overseas Companies, or Joint Policy Statement, companies applying for a secondary listing may seek a waiver from Rule 13.25B subject to satisfying the waiver condition that the SFC has granted a partial exemption from strict compliance with Part XV of the SFO (other than Divisions 5, 11 and 12 of Part XV of the SFO) in respect of disclosure of shareholders' interests. As we have obtained a partial exemption from the SFC, the Hong Kong Stock Exchange granted a waiver from strict compliance with Rule 13.25B of the Hong Kong Listing Rules. We will disclose information about share repurchases, if any, in our quarterly earnings releases and annual reports on Form 20-F which are furnished or filed with the SEC in accordance with applicable U.S. rules and regulations.

ITEM 16H. MINE SAFETY

Not applicable.

ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

(a) Please see the Certification by the Chief Executive Officer Pursuant to Item 16I(a) of Form 20-F, which has been furnished as Exhibit 15.3 to this annual report.

(b) For the fiscal year ended December 31, 2021, KPMG Huazhen LLP, which was a registered public accounting firm that the PCAOB determined in December 2021 that it was unable to inspect or investigate completely because of the positions taken by the PRC authorities, issued an audit report for us, and such audit report was included in our annual report on Form 20-F for the fiscal year ended December 31, 2021. On May 26, 2022, we were conclusively identified by the SEC as an SEC-identified issuer pursuant to Section 104(i)(2)(A) of the Sarbanes-Oxley Act of 2002 (15 U.S.C. 7214(i)(2)(A)). The PCAOB vacated its 2021 determinations in December 2022, and as a result, KPMG Huazhen LLP, which issued an audit report included in this annual report, is no longer a registered public accounting firm that the PCAOB determines it is unable to inspect or investigate completely because of the positions taken by an authority in any foreign jurisdiction.

Our company is incorporated in the Cayman Islands. The VIEs and other operating entities being consolidated in our financial statements, or the consolidated foreign operating entities, are incorporated or otherwise organized in the PRC.

To the best of our knowledge, no governmental entity in the PRC or the Cayman Islands owns any shares of our company or any of the consolidated foreign operating entities.

To the best of our knowledge, no governmental entity in the PRC (i.e. the applicable foreign jurisdiction with respect to KPMG Huazhen LLP) has a controlling financial interest with respect to our company or any of the consolidated foreign operating entities.

No member of the board of directors of our company or any of the consolidated foreign operating entities is any official of the Chinese Communist Party.

Neither our memorandum nor our Articles of Association nor the articles of incorporation (or equivalent organizing document) of the consolidated foreign operating entities contains any charter of the Chinese Communist Party.

ITEM 16J. INSIDER TRADING POLICIES

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

The Registrant has elected to provide the financial statements and related information specified in Item 18.

ITEM 18. FINANCIAL STATEMENTS

The consolidated financial statements of GDS Holdings Limited are included at the end of this annual report.

ITEM 19. EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
1.1**	Amended and Restated Memorandum and Articles of Association of the Registrant (incorporated by reference to Exhibit 3.1 to our report on Form 6-K (File No. 001-37925), initially filed with the SEC on June 29, 2021).
2.1**	Registrant's Specimen American Depositary Receipt evidencing American Depositary Shares (included in Exhibit 4.2) (incorporated by reference to Exhibit 4.3 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
2.2**	Registrant's Specimen Class A Ordinary Share Certificate (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
2.3	Form of Deposit Agreement, among the Registrant, JPMorgan Chase Bank, N.A., as depositary and holders of the American Depositary Receipts (incorporated by reference to Exhibit (a) to our Registration Statement on Form F-6 (File No. 333-249704) with respect to American depositary shares representing our Class A ordinary shares, filed with the SEC on October 28, 2020).
*2.4	Description of Securities Registered under Section 12 of the U.S. Exchange Act
2.5	Registrant's Form of Class A Ordinary Share Certificate (incorporated by reference to Exhibit 4.1 to our Current Report on Form 6-K for October 2020 (File No. 001-37925), initially filed with the SEC on October 27, 2020).
4.1**	Sixth Amended and Restated Members Agreement, dated May 19, 2016 (incorporated by reference to Exhibit 4.5 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.2**	Sixth Amended and Restated Voting Agreement, dated May 19, 2016 (incorporated by reference to Exhibit 4.6 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.3**	Sixth Amended and Restated Right of First Refusal And Co-sale Agreement, dated May 19, 2016 (incorporated by reference to Exhibit 4.7 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.4**	Agreement Dated September 29, 2016 Between Shanghai Waigaoqiao EDC Technology Co., Ltd. and Shanghai Yungang EDC Technology Co. Ltd. as Borrowers and GDS Holdings Limited as Ultimate Parent, arranged by Credit Agricole Corporate and Investment Bank, United Overseas Bank (China) Limited Shanghai Pilot Free Trade Zone Sub-Branch, DBS Bank (China) Ltd, Shanghai Branch, Shanghai HuaRui Bank Co., Ltd. and Australia and New Zealand Bank (China) Company Limited, Shanghai Branch as Mandated Lead Arrangers with United Overseas Bank (China) Limited Shanghai Pilot Free Trade Zone Sub-Branch acting as Facility Agent and Security Agent and United Overseas Bank (China) Limited Shanghai Pilot Free Trade Zone Sub-Branch acting as Account Bank, and Credit Agricole Corporate and Investment Bank and United Overseas Bank Limited acting as Coordinating Banks relating to Term Loan Facilities (incorporated by reference to Exhibit 4.9 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.5	Agreement Dated December 6, 2017 Between EDC (Chengdu) Industry Co., Ltd. as Borrower and Jiangsu International Trust Co., Ltd. acting as Lender relating to Term Loan Facilities (incorporated by reference to Exhibit 4.5 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2018 (File No. 001-37925), initially filed with the SEC on March 13, 2019).
4.6**	Share Swap Agreement among the Registrant, EDC Holding and the shareholders of EDC Holding, dated June 12, 2014 (incorporated by reference to Exhibit 10.1 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).

Exhibit Number	Description of Exhibit
4.7**	Subscription Agreement for up to US\$250,000,000 10% Convertible and Redeemable Bond due 2019 convertible into shares in GDS Holdings, among GDS Holdings, Perfect Success Limited and STT GDC Pte. Ltd., dated December 30, 2015 (incorporated by reference to Exhibit 10.2 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.8**	Equity Interest Pledge Agreement concerning GDS Beijing, among William Wei Huang, Qiuping Huang and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.3 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.9**	Shareholder Voting Rights Proxy Agreement concerning GDS Beijing, among GDS Investment Company, GDS Beijing, William Wei Huang and Qiuping Huang, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.4 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.10**	Exclusive Call Option Agreement concerning GDS Beijing, among William Wei Huang, Qiuping Huang and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.5 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.11**	Loan Agreement between William Wei Huang, Qiuping Huang and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.6 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.12**	Exclusive Technology License and Service Agreement between GDS Beijing and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.7 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.13**	Equity Interest Pledge Agreement concerning GDS Shanghai, among William Wei Huang, Qiuping Huang and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.8 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.14**	Shareholder Voting Rights Proxy Agreement concerning GDS Shanghai, among GDS Investment Company, GDS Shanghai, William Wei Huang and Qiuping Huang, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.9 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.15**	Intellectual Property Rights License Agreement between GDS Shanghai and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.10 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.16**	Exclusive Call Option Agreement concerning GDS Shanghai, among William Wei Huang, Qiuping Huang, GDS Shanghai and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.11 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.17**	Exclusive Technology License and Service Agreement between GDS Shanghai and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.12 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.18**	Loan Agreement among William Wei Huang, Qiuping Huang and GDS Investment Company, dated April 13, 2016 (English Translation) (incorporated by reference to Exhibit 10.13 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).

Exhibit Number	Description of Exhibit
4.19**	Form of Indemnification Agreement between the Registrant and its directors and executive officers (incorporated by reference to Exhibit 10.14 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.20**	Forms of Employment Agreements between the Registrant and its executive officers (incorporated by reference to Exhibit 10.15 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.21**	Data Center Outsourcing Service Agreement (English Translation) (incorporated by reference to Exhibit 10.17 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.22**†	Premises and Warehouse Lease Agreement dated December 26, 2008 (English Translation) (incorporated by reference to Exhibit 10.18 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.23**†	Premises and Warehouse Lease Agreement dated April 15, 2011 (English Translation) (incorporated by reference to Exhibit 10.19 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.24**†	Premise Lease Agreement dated July 16, 2012 (English Translation) (incorporated by reference to Exhibit 10.20 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.25**†	Premise Lease Agreement dated March 9, 2015 (English Translation) (incorporated by reference to Exhibit 10.21 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.26**†	Premise Lease Agreement dated July 6, 2015 (English Translation) (incorporated by reference to Exhibit 10.22 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.27**†	Tenement Lease Agreement dated April 1, 2015 (English Translation) (incorporated by reference to Exhibit 10.23 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.28**†	Premise Lease Agreement dated November 27, 2013 (English Translation) (incorporated by reference to Exhibit 10.24 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.29**†	Premise Lease Agreement dated August 1, 2015 (English Translation) (incorporated by reference to Exhibit 10.25 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
4.30	GDS Holdings Limited 2016 Equity Incentive Plan (as amended on August 6, 2020) (incorporated by reference to Exhibit 4.30 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2020 (File No. 001-37925), initially filed with the SEC on April 12, 2021).
4.31	Information Rights Letter dated November 7, 2016 from the Registrant to STT GDC (incorporated by reference to Exhibit 4.33 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2016 (File No. 001-37925), initially filed with the SEC on April 19, 2017).
4.32	Investor Rights Agreement, dated October 23, 2017, between the Registrant, Cheetah Asia Holdings LLC, CyrusOne LLC and Mr. Huang (only with respect to Article I (insofar as and only to the extent to which such Definitions are used in the other sections with respect to which Mr. Huang is entering into this Agreement), Section 2.2, and Article VI) (incorporated by reference to Exhibit 99.2 to our report on Form 6-K (File No. 001-37925), initially filed with the SEC on October 24, 2017).

Exhibit Number	Description of Exhibit
4.33	Investor Rights Agreement, dated October 23, 2017, between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 99.3 to our report on Form 6-K (File No. 001-37925), initially filed with the SEC on October 24, 2017).
4.34	Investor Rights Agreement, dated October 23, 2017, between the Registrant, SBCVC Fund II, L.P., SBCVC Company Limited, SBCVC Fund II-Annex, L.P., SBCVC Venture Capital and SBCVC Fund III, L.P. (incorporated by reference to Exhibit 99.4 to our report on Form 6-K (File No. 001-37925), initially filed with the SEC on October 24, 2017).
4.35	Indenture, dated June 5, 2018, between the Registrant and The Bank of New York Mellon, as Trustee, relating to the issuance of Registrant's 2% Convertible Senior Notes due 2025 in the aggregate principal amount of US\$300 million (incorporated by reference to Exhibit 4.36 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2018 (File No. 001-37925), initially filed with the SEC on March 13, 2019).
4.36	Investor Rights Agreement, dated March 27, 2019, by and among the Registrant and PA Goldilocks Limited (incorporated by reference to Exhibit 99.4 to our Current Report on Form 6-K for March 2019 (File No. 001-37925), initially filed with the SEC on March 13, 2019).
4.37	Form of Amendment No. 1 to Investor Rights Agreement between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 99.3 to the Amendment No. 7 to Schedule 13D of Singapore Technologies Telemedia Pte Ltd (File No. 005-89829), initially filed with the SEC on March 19, 2019).
4.38††	Share Purchase Agreement by and between GDS (Shanghai) Investment Co., Ltd., Beijing Zhong Cheng Fu Jing Technology Co., Ltd., Beijing Lan Ting Data Technology Co., Ltd., Beijing Zheng He Tian Ye Economic and Trade Co., Ltd., Jun He, Lanting (Beijing) Information Science and Technology Co., Ltd., and Lanting Xuntong (Beijing) Science and Technology Co., Ltd, dated December 4, 2019 (English Translation) (incorporated by reference to Exhibit 10.1 to our Current Report on Form 6-K for December 2019 (File No. 001-37925), initially filed with the SEC on December 5, 2019).
4.39	Amendment No. 2 to Investor Rights Agreement, dated December 10, 2019, between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 99.3 to the Amendment No. 8 to Schedule 13D of Singapore Technologies Telemedia Pte Ltd (File No. 005-89829), initially filed with the SEC on December 10, 2019).
4.40	Equity Pledge Agreement with regards to Beijing Wanguo Chang'an Science & Technology Co., Ltd., dated December 16, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.41 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.41	Voting Proxy Agreement with regards to Beijing Wanguo Chang'an Science & Technology Co., Ltd., dated December 16, 2019, among GDS (Shanghai) Investment Co., Ltd., Beijing Wanguo Chang'an Science & Technology Co., Ltd. and Shanghai Xinwan Enterprise Management Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.42 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.42	Exclusive Call Option Agreement with regards to Beijing Wanguo Chang'an Science & Technology Co., Ltd., dated December 16, 2019, among Shanghai Xinwan Enterprise Management Co., Ltd., Beijing Wanguo Chang'an Science & Technology Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.43 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).

Exhibit Number	Description of Exhibit
4.43	Loan Agreement, dated December 16, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd., Huang Wei, Huang Qiuping and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.44 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.44	Exclusive Technology License and Service Agreement, dated December 16, 2019, between Beijing Wanguo Chang'an Science & Technology Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.45 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.45	Intellectual Property Rights License Agreement, dated December 16, 2019, between Beijing Wanguo Chang'an Science & Technology Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.46 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.46	Equity Pledge Agreement with regards to Shanghai Shu'an Data Services Co., Ltd., dated December 18, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.47 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.47	Voting Proxy Agreement with regards to Shanghai Shu'an Data Services Co., Ltd., dated December 18, 2019, among GDS (Shanghai) Investment Co., Ltd., Shanghai Shu'an Data Services Co., Ltd. and Shanghai Xinwan Enterprise Management Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.48 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.48	Exclusive Call Option Agreement with regards to Shanghai Shu'an Data Services Co., Ltd., dated December 18, 2019, among Shanghai Xinwan Enterprise Management Co., Ltd., Shanghai Shu'an Data Services Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.49 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.49	Loan Agreement, dated December 18, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd., Huang Wei, Huang Qiuping and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.50 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.50	Exclusive Technology License and Service Agreement, dated December 18, 2019, between Shanghai Shu'an Data Services Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.51 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.51	Intellectual Property Rights License Agreement, dated December 18, 2019, between Shanghai Shu'an Data Services Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.52 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.52	Equity Pledge Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, between Li Wenfeng and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.53 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).

Exhibit Number	Description of Exhibit
4.53	Equity Pledge Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, between Liang Yan and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.54 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.54	Equity Pledge Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, between Wang Qi and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.55 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.55	Equity Pledge Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, between Chen Yilin and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.57 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.56	Voting Proxy Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among GDS (Shanghai) Investment Co., Ltd., Shanghai Xinwan Enterprise Management Co., Ltd. and Li Wenfeng (English Translation) (incorporated by reference to Exhibit 4.58 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.57	Voting Proxy Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among GDS (Shanghai) Investment Co., Ltd., Shanghai Xinwan Enterprise Management Co., Ltd. and Liang Yan (English Translation) (incorporated by reference to Exhibit 4.59 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.58	Voting Proxy Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among GDS (Shanghai) Investment Co., Ltd., Shanghai Xinwan Enterprise Management Co., Ltd. and Wang Qi (English Translation) (incorporated by reference to Exhibit 4.60 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.59	Voting Proxy Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among GDS (Shanghai) Investment Co., Ltd., Shanghai Xinwan Enterprise Management Co., Ltd. and Chen Yilin (English Translation) (incorporated by reference to Exhibit 4.62 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.60	Exclusive Call Option Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among Li Wenfeng, Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.63 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.61	Exclusive Call Option Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among Liang Yan, Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.64 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.62	Exclusive Call Option Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among Wang Qi, Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.65 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).

Exhibit Number	Description of Exhibit
4.63	Exclusive Call Option Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated December 16, 2019, among Chen Yilin, Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.67 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.64	Loan Agreement, dated December 16, 2019, between Li Wenfeng and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.68 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.65	Loan Agreement, dated December 16, 2019, between Liang Yan and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.69 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.66	Loan Agreement, dated December 16, 2019, between Wang Qi and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.70 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.67	Loan Agreement, dated December 16, 2019, between Chen Yilin and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.72 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.68	Exclusive Technology License and Service Agreement, dated December 16, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.73 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.69	Intellectual Property Rights License Agreement, dated December 16, 2019, between Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation) (incorporated by reference to Exhibit 4.74 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2019 (File No. 001-37925), initially filed with the SEC on April 17, 2020).
4.70	Amendment No. 1 to Investor Rights Agreement, dated June 26, 2020, between the Registrant and PA Goldilocks Limited (incorporated by reference to Exhibit 4.11 to our Registration Statement on Form F-3 (File No. 333-252680), initially filed with the SEC on February 3, 2021).
4.71	Investor Rights Agreement, dated June 26, 2020, by and among the Registrant, Gaoling Fund, L.P. and YHG Investment, L.P. (incorporated by reference to Exhibit 4.12 to our Registration Statement on Form F-3 (File No. 333-252680), initially filed with the SEC on February 3, 2021).
4.72	Investor Rights Agreement, dated June 26, 2020, between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 4.13 to our Registration Statement on Form F-3 (File No. 333-252680), initially filed with the SEC on February 3, 2021).
4.73	Amendment No. 1 to Investor Rights Agreement, dated August 4, 2020, between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 99.2 to the Amendment No. 10 to Schedule 13D of Singapore Technologies Telemedia Pte Ltd (File No. 005-89829), initially filed with the SEC on August 6, 2020).

Exhibit Number	Description of Exhibit
4.74††	Share Purchase Agreement by and between Beijing Yize Data Science & Technology Co., Ltd, Shanghai Rongyu Investment Management Center (Limited Partnership), Shuntou (Tianjin) Technology Development Partnership (Limited Partnership), Tianjin Rongxin Business Management Partnership (Limited Partnership), Tibet Lingyu Venture Capital Management Co., Ltd, Zhongyunxin Science & Technology Co., Ltd, Beijing Zhongyunxin Shunyi Data Science & Technology Co., Ltd and Tianjin Zhongyunxin Data Co., Ltd, dated February 26, 2021 (incorporated by reference to Exhibit 4.78 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2020 (File No. 001-37925), initially filed with the SEC on April 12, 2021).
4.75††	Share Purchase Agreement by and between Beijing Wanguo Chang'an Science & Technology Co., Ltd, Shanghai Rongyu Investment Management Center (Limited Partnership), Shuntou (Tianjin) Technology Development Partnership (Limited Partnership), Tianjin Rongxin Business Management Partnership (Limited Partnership), Tibet Lingyu Venture Capital Management Co., Ltd, Shaoyan Gao and Tianjin Zhongyunxin Science & Technology Co., Ltd, dated February 26, 2021 (incorporated by reference to Exhibit 4.79 to our Annual Report on Form 20-F for the Fiscal Year Ended December 31, 2020 (File No. 001-37925), initially filed with the SEC on April 12, 2021).
4.76	Amendment No. 2 to Investor Rights Agreement, dated February 20, 2022, between the Registrant and STT GDC Pte. Ltd. (incorporated by reference to Exhibit 4.1 to our Current Report on Form 6-K for February 2022 (File No. 001-37925), initially filed with the SEC on February 22, 2022).
4.77	Convertible Note Purchase Agreement, dated February 21, 2022, among the Registrant, SCC Infrastructure I 2021-A (BVI), L.P., SCC Infrastructure I Holdco A, Ltd., Reco Millennium Pte Ltd and Ceningan Investment Pte Ltd, relating to the issuance of the Registrant's 0.25% Convertible Senior Notes due 2029 in the aggregate principal amount of US\$520 million (incorporated by reference to Exhibit 4.2 to our Current Report on Form 6-K for February 2022 (File No. 001-37925), initially filed with the SEC on February 22, 2022).
4.78	Form of Indenture between the Registrant and The Bank of New York Mellon, London Branch as Trustee, relating to the issuance of Registrant's 0.25% Convertible Senior Notes due 2029 in the aggregate principal amount of US\$520 million (incorporated by reference to Exhibit 4.3 to our Current Report on Form 6-K for February 2022 (File No. 001-37925), initially filed with the SEC on February 22, 2022).
4.79	Convertible Note Purchase Agreement, dated February 21, 2022, between the Registrant and STT GDC Pte. Ltd., relating to the issuance of the Registrant's 0.25% Convertible Senior Notes due 2029 in the aggregate principal amount of US\$100 million (incorporated by reference to Exhibit 4.4 to our Current Report on Form 6-K for February 2022 (File No. 001-37925), initially filed with the SEC on February 22, 2022).
4.80	Form of Convertible Note Instrument between the Registrant and STT GDC Pte. Ltd., relating to the issuance of the Registrant's 0.25% Convertible Senior Notes due 2029 in the aggregate principal amount of US\$100 million (incorporated by reference to Exhibit 4.5 to our Current Report on Form 6-K for February 2022 (File No. 001-37925), initially filed with the SEC on February 22, 2022).
4.81	Note Purchase Agreement, dated January 11, 2023, among the Registrant and the Persons Listed in Schedule I, relating to the issuance of the Registrant's 4.50% Convertible Senior Notes due 2030 in the aggregate principal amount of US\$580 million (incorporated by reference to Exhibit 4.1 to our Current Report on Form 6-K for January 2023 (File No. 001-37925), initially filed with the SEC on January 31, 2023).
4.82	Indenture, dated January 20, 2023, between the Registrant and The Bank of New York Mellon, London Branch as Trustee, relating to the issuance of Registrant's 4.50% Convertible Senior Notes due 2030 in the aggregate principal amount of US\$580 million (incorporated by reference to Exhibit 4.2 to our Current Report on Form 6-K for January 2023 (File No. 001-37925), initially filed with the SEC on January 31, 2023).
*4.83	Equity Pledge Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated August 1, 2022, between Zhang Kejing and GDS (Shanghai) Investment Co., Ltd. (English Translation).

Exhibit Number	Description of Exhibit
*4.84	Voting Proxy Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated August 1, 2022, among GDS (Shanghai) Investment Co., Ltd., Shanghai Xinwan Enterprise Management Co., Ltd. and Zhang Kejing (English Translation).
*4.85	Exclusive Call Option Agreement with regards to Shanghai Xinwan Enterprise Management Co., Ltd., dated August 1, 2022, among Zhang Kejing, Shanghai Xinwan Enterprise Management Co., Ltd. and GDS (Shanghai) Investment Co., Ltd. (English Translation).
*4.86	Loan Agreement, dated August 1, 2022, among Zhang Kejing, Chen Liang and GDS (Shanghai) Investment Co., Ltd. (English Translation).
*8.1	List of Subsidiaries of the Registrant
11.1**	Code of Business Conduct of the Registrant (incorporated by reference to Exhibit 99.1 to our Registration Statement on Form F-1 (File No. 333-213951), initially filed with the SEC on October 4, 2016).
*12.1	Certification of our Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*12.2	Certification of our Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
***13.1	Certification of our Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
***13.2	Certification of our Chief Financial Officer pursuant to 18 U.S.C Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*15.1	Consent of Independent Registered Public Accounting Firm
*15.2	Consent of King & Wood Mallesons
***15.3	Certification by the Chief Executive Officer Pursuant to Item 16I(a) of Form 20-F
*101.INS	XBRL Instance Document.
*101.SCH	XBRL Taxonomy Extension Schema Document.
*101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
*101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
*101.LAB	XBRL Taxonomy Extension Labels Linkbase Document.
*101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.
*104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

** Previously filed as an exhibit to our Registration Statement on Form F-1 (File No. 333-213951), which was initially filed with the SEC on October 4, 2016.

*** Furnished herewith.

As permitted by Item 601(b)(4)(iii)(A) of Regulation S-K, our company has not filed with this annual report certain instruments defining the rights of holders of long-term debt of our company and its subsidiaries because the total amount of securities authorized under any such instruments does not exceed 10% of the total assets of our company and its subsidiaries on a consolidated basis. The Company agrees to furnish a copy of any such agreement to the SEC upon request.

† Confidential treatment has been granted for portions of this document.

†† Portions of this exhibit have been omitted in accordance with Item 601(b)(10) of Regulation S-K.

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.

GDS Holdings Limited

By: /s/ William Wei Huang
Name: William Wei Huang
Title: Chief Executive Officer

Date: April 4, 2023

GDS HOLDINGS LIMITED AND SUBSIDIARIES

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders GDS Holdings Limited:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of GDS Holdings Limited and subsidiaries (“the Company”) as of December 31, 2021 and 2022, the related consolidated statements of operations, comprehensive loss, changes in shareholders’ equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, 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 Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s consolidated financial statements and an opinion on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Realizability of deferred tax assets associated with the Company's net operating losses carry forwards

As discussed in Note 2(y) and Note 21 to the consolidated financial statements, the Company's deferred tax assets for net operating losses carry forwards and related valuation allowance were RMB993,062 thousand and RMB922,240 thousand, respectively, as of December 31, 2022. The Company evaluated the realizability of deferred tax assets associated with the Company's net operating losses carry forwards to determine whether there was more than a 50% likelihood that these deferred tax assets would be realized. The evaluation was based on the Company's estimates of the future taxable income. The future taxable income incorporates the Company's best estimate of utilization rates of relevant data centers based on historical actual utilization rates and the Company's business plans for those data centers which were approved by the board of directors.

We identified the realizability of deferred tax assets associated with the Company's net operating losses carry forwards as a critical audit matter. A high degree of auditor judgment was required in assessing the utilization rates of certain data centers used to evaluate the future taxable income.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of the internal control related to the Company's deferred tax assets valuation allowance assessment process. This included the control related to the determination of the utilization rates. We evaluated the utilization rates of certain data centers used in the development of the forecast of future taxable income, by comparing the utilization rates of such data centers to the historical actual utilization rates and the Company's business plans for those data centers which were approved by the board of directors. We performed sensitivity analysis over the utilization rates used to determine the amount and the timing of forecasted taxable income to assess the impact of changes in utilization rates on the Company's realizability assessment.

/s/ KPMG Huazhen LLP

We have served as the Company's auditor since 2015.

Shanghai, China

April 4, 2023

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands of RMB, except share data and per share data, or otherwise noted)

	Note	As of December 31,	
		2021	2022
Assets			
Current assets			
Cash	3	9,968,109	8,608,131
Restricted cash	3	2,014,304	158,075
Accounts receivable, net of allowance for doubtful accounts	4	1,732,686	2,406,025
Value-added-tax ("VAT") recoverable		229,090	164,743
Prepaid expenses		202,744	186,807
Other current assets		316,942	427,295
Total current assets		14,463,875	11,951,076
Property and equipment, net	5	40,623,503	46,916,628
Intangible assets, net	6	1,282,636	1,047,709
Prepaid land use rights, net	7	634,953	23,002
Operating lease right-of-use assets	12	4,030,205	5,633,946
Goodwill	8	7,076,505	7,076,505
Deferred tax assets	21	186,496	228,999
Restricted cash	3	43,954	115,860
VAT recoverable		2,218,944	1,155,586
Other non-current assets		1,071,372	664,643
Total assets		71,632,443	74,813,954
Liabilities, Mezzanine Equity and Shareholders' Equity			
Current liabilities			
Short-term borrowings and current portion of long-term borrowings (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB233,326 and RMB83,502 as of December 31, 2021 and 2022, respectively)	9	5,948,013	3,623,967
Convertible bonds payable, current	10	—	2,083,829
Accounts payable (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB430,518 and RMB493,332 as of December 31, 2021 and 2022, respectively)	11	3,901,799	3,092,884
Accrued expenses and other payables (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB223,563 and RMB235,388 as of December 31, 2021 and 2022, respectively)	11	2,679,555	1,016,961
Deferred revenue (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB87,364 and RMB151,050 as of December 31, 2021 and 2022, respectively)	4	90,992	156,130
Operating lease liabilities, current (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB40,371 and RMB41,898 as of December 31, 2021 and 2022, respectively)	12	145,739	175,749
Finance lease and other financing obligations, current (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB28,161 and RMB33,398 as of December 31, 2021 and 2022, respectively)	12	699,145	453,855
Total current liabilities		13,465,243	10,603,375
Long-term borrowings, excluding current portion (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB13,733 and RMB10,231 as of December 31, 2021 and 2022, respectively)	9	18,284,514	23,518,058
Convertible bonds payable	10	1,895,846	4,294,985
Operating lease liabilities, non-current (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB172,458 and RMB134,684 as of December 31, 2021 and 2022, respectively)	12	1,883,560	1,617,986
Finance lease and other financing obligations, non-current (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB965,356 and RMB931,580 as of December 31, 2021 and 2022, respectively)	12	8,933,540	8,916,266
Deferred tax liabilities (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB76,460 and RMB69,831 as of December 31, 2021 and 2022, respectively)	21	734,278	1,410,376
Other long-term liabilities (including amounts of the consolidated VIEs without recourse to GDS Holdings of RMB66,379 and RMB52,222 as of December 31, 2021 and 2022, respectively)	13	539,300	268,253
Total liabilities		45,736,281	50,629,299
Mezzanine Equity			
Redeemable preferred shares (US \$0.00005 par value; 150,000 shares authorized, issued and outstanding as of December 31, 2021 and 2022; Redemption value of RMB958,480 and RMB1,047,012 as of December 31, 2021 and 2022, respectively; Liquidation preference of RMB1,269,027 and RMB1,047,012 as of December 31, 2021 and 2022, respectively)	14	958,480	1,047,012
Redeemable non-controlling interests	15	404,673	—
Total mezzanine equity		1,363,153	1,047,012
GDS Holdings Limited Shareholders' Equity			
Ordinary shares (US \$0.00005 par value; 2,002,000,000 authorized; 1,427,590,059 and 1,456,842,655 Class A ordinary shares issued and outstanding as of December 31, 2021 and 2022, respectively; 67,590,336 Class B ordinary shares issued and outstanding as of December 31, 2021 and 2022)	18	507	516
Additional paid-in capital		28,983,330	29,048,598
Accumulated other comprehensive loss		(599,186)	(848,360)
Accumulated deficit		(3,910,815)	(5,179,705)
Total GDS Holdings Limited shareholders' equity		24,473,836	23,021,049
Non-controlling interests		59,173	116,594
Total equity		24,533,009	23,137,643
Commitments and contingencies	26		
Total liabilities, mezzanine equity and equity		71,632,443	74,813,954

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands of RMB, except share data and per share data, or otherwise noted)

	Note	Years ended December 31,		
		2020	2021	2022
Net revenue	20	5,738,972	7,818,681	9,325,631
Cost of revenue		(4,188,521)	(6,039,252)	(7,389,774)
Gross profit		1,550,451	1,779,429	1,935,857
Operating expenses				
Selling and marketing expenses		(134,937)	(148,614)	(150,433)
General and administrative expenses		(702,524)	(1,021,950)	(1,185,080)
Research and development expenses		(40,049)	(39,343)	(35,806)
Impairment loss of long-lived assets	2(o)	—	—	(12,759)
Income from operations		672,941	569,522	551,779
Other income (expenses):				
Interest income		29,011	50,445	42,460
Interest expenses	2(w)	(1,316,506)	(1,654,737)	(1,887,887)
Foreign currency exchange (loss) gain, net		(21,038)	(7,644)	1,272
Government grants		27,050	88,209	95,581
Gain from purchase price adjustment	8	55,154	7,010	205,000
Others, net		4,952	(1,557)	1,912
Loss before income taxes		(548,436)	(948,752)	(989,883)
Income tax expenses	21	(120,778)	(242,461)	(276,235)
Net loss		(669,214)	(1,191,213)	(1,266,118)
Net loss (income) attributable to non-controlling interests		—	1,403	(3,427)
Net loss attributable to redeemable non-controlling interests	15	2,807	2,592	655
Net loss attributable to GDS Holdings Limited shareholders		(666,407)	(1,187,218)	(1,268,890)
Accretion to redemption value of redeemable non-controlling interests	15	(18,627)	(77,644)	(10,801)
Adjustment to the redemption value of redeemable non-controlling interests	15	—	—	(178,982)
Net loss available to GDS Holdings Limited shareholders		(685,034)	(1,264,862)	(1,458,673)
Cumulative dividend on redeemable preferred shares	14	(52,709)	(49,073)	(51,212)
Net loss available to GDS Holdings Limited ordinary shareholders		(737,743)	(1,313,935)	(1,509,885)
Loss per Class A and Class B ordinary share				
Basic and diluted	23	(0.59)	(0.90)	(1.03)
Weighted average number of ordinary share outstanding				
Basic and diluted	23	1,253,559,523	1,452,906,722	1,464,447,843

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands of RMB, except share data and per share data, or otherwise noted)

	Years ended December 31,		
	2020	2021	2022
Net loss	(669,214)	(1,191,213)	(1,266,118)
Other comprehensive loss			
Foreign currency translation adjustments, net of nil tax	(386,951)	(159,714)	(247,509)
Comprehensive loss	(1,056,165)	(1,350,927)	(1,513,627)
Comprehensive loss (income) attributable to non-controlling interests	—	1,566	(5,092)
Comprehensive loss attributable to redeemable non-controlling interests	2,807	2,592	655
Comprehensive loss attributable to GDS Holdings Limited shareholders	(1,053,358)	(1,346,769)	(1,518,064)

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
(In thousands of RMB, except share data and per share data, or otherwise noted)

	Note	Ordinary Shares		Additional paid-in capital	Accumulated other comprehensive (loss)/income	Accumulated deficit	Total GDS Holdings Limited shareholders' equity	Non-controlling interests	Total equity
		Number	Amount						
Balance at January 1, 2020		1,216,432,715	412	12,403,043	(52,684)	(2,057,190)	10,293,581	—	10,293,581
Loss for the year (Note i)		—	—	—	—	(666,407)	(666,407)	—	(666,407)
Other comprehensive loss		—	—	—	(386,951)	—	(386,951)	—	(386,951)
Total comprehensive loss		—	—	—	(386,951)	(666,407)	(1,053,358)	—	(1,053,358)
Issuance of ordinary shares	18	246,153,848	84	15,974,433	—	—	15,974,517	—	15,974,517
Shares issued to depository bank	23	32,592,288	11	(11)	—	—	—	—	—
Conversion of convertible bonds	10	1,544	—	65	—	—	65	—	65
Accretion to redemption value of redeemable non-controlling interests	15	—	—	(18,627)	—	—	(18,627)	—	(18,627)
Redeemable preferred shares dividends	14	—	—	(52,709)	—	—	(52,709)	—	(52,709)
Share-based compensation	19	—	—	333,686	—	—	333,686	—	333,686
Exercise of share options	19	14,222,096	—	78,748	—	—	78,748	—	78,748
Vesting of restricted shares	19	12,494,104	—	—	—	—	—	—	—
Settlement of liability-classified restricted shares award	19	190,536	—	10,089	—	—	10,089	—	10,089
Settlement of share options and restricted share awards with shares held by depository bank		(26,906,736)	—	—	—	—	—	—	—
Balance at December 31, 2020 and January 1, 2021		1,495,180,395	507	28,728,717	(439,635)	(2,723,597)	25,565,992	—	25,565,992
Loss for the year (Note ii)		—	—	—	—	(1,187,218)	(1,187,218)	(1,403)	(1,188,621)
Other comprehensive loss		—	—	—	(159,551)	—	(159,551)	(163)	(159,714)
Total comprehensive loss		—	—	—	(159,551)	(1,187,218)	(1,346,769)	(1,566)	(1,348,335)
Accretion to redemption value of redeemable non-controlling interests	15	—	—	(77,644)	—	—	(77,644)	—	(77,644)
Redeemable preferred shares dividends	14	—	—	(49,073)	—	—	(49,073)	—	(49,073)
Acquisition of subsidiaries	8	—	—	—	—	—	—	56,519	56,519
Capital contribution from non-controlling interests		—	—	—	—	—	—	17,147	17,147
Acquisition of non-controlling interests		—	—	(25,267)	—	—	(25,267)	(39,846)	(65,113)
Sales of non-controlling interest of a subsidiary while retaining control		—	—	2,093	—	—	2,093	26,919	29,012
Share-based compensation	19	—	—	391,275	—	—	391,275	—	391,275
Exercise of share options	19	407,000	—	2,082	—	—	2,082	—	2,082
Vesting of restricted shares	19	12,453,824	—	—	—	—	—	—	—
Settlement of liability-classified restricted shares award	19	178,280	—	11,147	—	—	11,147	—	11,147
Settlement of share options and restricted share awards with shares held by depository bank		(13,039,104)	—	—	—	—	—	—	—
Balance at December 31, 2021 and January 1, 2022		1,495,180,395	507	28,983,330	(599,186)	(3,910,815)	24,473,836	59,173	24,533,009
Loss for the year (Note iii)		—	—	—	—	(1,268,890)	(1,268,890)	3,427	(1,265,463)
Other comprehensive loss		—	—	—	(249,174)	—	(249,174)	1,665	(247,509)
Total comprehensive loss		—	—	—	(249,174)	(1,268,890)	(1,518,064)	5,092	(1,512,972)
Shares issued to depository bank	23	29,252,600	9	(9)	—	—	—	—	—
Accretion to redemption value of redeemable non-controlling interests	15	—	—	(10,801)	—	—	(10,801)	—	(10,801)
Adjustment to the redemption value of redeemable non-controlling interests	15	—	—	(178,982)	—	—	(178,982)	—	(178,982)
Redeemable preferred shares dividends	14	—	—	(51,212)	—	—	(51,212)	—	(51,212)
Capital contribution from non-controlling interests		—	—	—	—	—	—	10,362	10,362
Sales of non-controlling interest of a subsidiary while retaining control		—	—	1,738	—	—	1,738	41,967	43,705
Share-based compensation	19	—	—	290,815	—	—	290,815	—	290,815
Vesting of restricted shares	19	4,555,720	—	—	—	—	—	—	—
Settlement of liability-classified restricted shares award	19	460,272	—	13,719	—	—	13,719	—	13,719
Settlement of restricted share awards with shares held by depository bank		(5,015,992)	—	—	—	—	—	—	—
Other		(4)	—	—	—	—	—	—	—
Balance at December 31, 2022		1,524,432,991	516	29,048,598	(848,360)	(5,179,705)	23,021,049	116,594	23,137,643

Note i: Exclude net loss attributable to redeemable non-controlling interests of RMB2,807 for the year ended December 31, 2020.

Note ii: Exclude net loss attributable to redeemable non-controlling interests of RMB2,592 for the year ended December 31, 2021.

Note iii: Exclude net loss attributable to redeemable non-controlling interests of RMB655 for the year ended December 31, 2022.

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands of RMB, except share data and per share data, or otherwise noted)

	Note	Years ended December 31,		
		2020	2021	2022
Cash flows from operating activities:				
Net loss		(669,214)	(1,191,213)	(1,266,118)
Adjustments to reconcile net loss to net cash provided by operating activities:				
Amortization of debt issuance and commitment cost and debt discount		160,699	200,069	154,916
Depreciation and amortization		1,638,474	2,616,898	3,189,074
Operating lease cost relating to prepaid land use rights		20,412	40,422	101,848
Net gain on disposal of property and equipment		(256)	(1,763)	(15,025)
Share-based compensation expenses	19	333,686	391,275	290,815
Impairment loss of long-lived assets	2(o)	—	—	12,759
Gain from purchase price adjustment		(55,154)	(7,010)	(205,000)
Loss from equity method investment		3,375	968	9,934
Allowance for doubtful accounts	4	2,037	10,070	9,930
Deferred tax benefit	21	(89,739)	(48,463)	(99,153)
Changes in operating assets and liabilities, net of effect of acquisitions:				
Accounts receivable		(465,189)	(37,992)	(678,834)
VAT recoverable		(463,630)	(631,562)	1,182,515
Prepaid expenses		(53,933)	(35,192)	18,284
Other current assets		65,756	(55,452)	3,859
Other non-current assets		(72,099)	(53,702)	2,981
Accounts payable		119,163	35,496	189,714
Accrued expenses and other payables		(139,891)	(121,828)	(123,513)
Deferred revenue		6,285	24,470	49,557
Other long-term liabilities		9,015	15,190	2,374
Operating leases		(28,910)	50,682	27,150
Net cash provided by operating activities		320,887	1,201,363	2,858,067
Cash flows from investing activities:				
Payments for purchase of property and equipment and land use rights		(8,037,002)	(9,700,536)	(7,847,305)
Cash acquired from the business combinations	8	4,801	57,236	—
Cash paid for the business combinations	8	(1,172,518)	(3,451,941)	(1,196,758)
Cash paid for the asset acquisitions	8	(180,910)	(179,770)	(2,287,199)
Cash paid for equity investments		(4,500)	(3,000)	(3,400)
(Deposits and prepayments) refund of deposits for potential acquisitions		(4,300)	(435,804)	19,000
Receipts from collection of loans		—	20,866	—
Payments for purchase of debt securities		—	—	(2,840)
Proceeds from sale of property and equipment		16,422	1,411	43,618
Net cash used in investing activities		(9,378,007)	(13,691,538)	(11,274,884)

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS - CONTINUED
(In thousands of RMB, except share data and per share data, or otherwise noted)

	Note	Years ended December 31,		
		2020	2021	2022
Cash flows from financing activities:				
Proceeds from short-term borrowings		1,156,215	3,775,353	4,876,691
Proceeds from long-term borrowings		6,939,140	12,409,833	7,012,465
Repayment of short-term borrowings		(438,925)	(902,659)	(8,237,650)
Repayment of long-term borrowings		(4,187,184)	(5,177,495)	(1,347,740)
Payment of issuance cost and commitment cost of debts		(158,480)	(150,008)	(109,419)
Proceeds from exercise of stock options		78,748	2,082	—
Net proceeds from issuance of ordinary shares	18	15,974,517	—	—
Proceeds from issuance of convertible bonds	10	—	—	3,917,036
Payment of redeemable preferred shares dividends	14	(65,489)	(49,221)	(51,578)
Capital contribution from non-controlling shareholders	15	105,000	225,948	—
Proceeds from sales of non-controlling interests of subsidiaries while retaining control		—	—	69,828
Payment under finance leases and other financing obligations	12	(198,234)	(265,481)	(1,138,542)
Proceeds from other financing arrangements	12	1,079,370	50,312	845,319
Payment for purchase of property and equipment through vendor financing		(92,299)	(808,200)	(105,916)
Payment of contingent consideration for the acquisition of subsidiaries	8	(48,718)	(926,196)	(280,375)
Payment for acquisition of non-controlling interests		—	(65,113)	(593,801)
Net cash provided by financing activities		<u>20,143,661</u>	<u>8,119,155</u>	<u>4,856,318</u>
Effect of exchange rate changes on cash and restricted cash		(566,874)	(95,542)	416,198
Net increase (decrease) in cash and restricted cash		10,519,667	(4,466,562)	(3,144,301)
Cash and restricted cash at beginning of year		<u>5,973,262</u>	<u>16,492,929</u>	<u>12,026,367</u>
Cash and restricted cash at end of year		<u>16,492,929</u>	<u>12,026,367</u>	<u>8,882,066</u>
Supplemental disclosures of cash flow information				
Interest paid		1,113,443	1,538,974	1,803,013
Income tax paid		211,612	252,071	343,349
Supplemental disclosures of non-cash investing and financing activities				
Non-cash effect of acquisitions of subsidiaries		718,546	2,044,575	7,644
Settlement of liability-classified restricted share award	19	10,089	11,147	13,719
Conversion of convertible bonds	10	65	—	—
Other receivable contributed by non-controlling shareholders as capital contribution		—	—	10,362

See accompanying notes to consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands of RMB, except share data and per share data, or otherwise noted)

1 DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

(a) Description of business

GDS Holdings Limited (the “Parent” or “GDS Holdings”) was incorporated in the Cayman Islands on December 1, 2006. GDS Holdings and its consolidated subsidiaries and consolidated variable interest entities (collectively referred to as “the Company”) are principally engaged in providing colocation, managed hosting and managed cloud services in the People’s Republic of China (the “PRC” excluding Taiwan, the Hong Kong Special Administrative Region (the “Hong Kong SAR”) and the Macau Special Administrative Region (the “Macau SAR”) for the purposes of these consolidated financial statements only), Hong Kong SAR, Singapore, Malaysia and Indonesia and serves customers who primarily are cloud service provider, large internet, financial institution and enterprise customers.

(b) Basis of presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“US GAAP”).

The consolidated financial statements are presented in Renminbi (“RMB”), rounded to the nearest thousand.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Principles of consolidation

The accompanying consolidated financial statements include the financial statements of GDS Holdings Limited, its subsidiaries and consolidated variable interest entities and variable interest entities’ subsidiaries for which GDS Holdings is the primary beneficiary.

The Company’s data center related operations are mainly conducted through Shanghai Xinwan Enterprise Management Co., Ltd. (“Management HoldCo”), Beijing Wanguo Chang’an Science and Technology Co., Ltd. (“GDS Beijing”), GDS Beijing’s subsidiaries and Shanghai Shu’an Data Services Co., Ltd. (“GDS Shanghai”) (referred to as the “VIEs”) to comply with the PRC laws and regulations, which prohibit foreign investments in companies that are engaged in data center related business. Individuals acting as nominee equity holders ultimately hold the legal equity interests of the VIEs on behalf of GDS Holdings.

Prior to December 2019, the equity holders of GDS Beijing and GDS Shanghai were William Wei Huang, CEO of GDS Holdings, and his relative. In order to enhance corporate governance and facilitate administration of the VIEs, in December 2019, GDS Holdings completed transfer of ownership of the 100% equity interest of GDS Beijing and GDS Shanghai from William Wei Huang and his relative to a newly established holding company, Management HoldCo. The entire equity interest in Management HoldCo is held by a number of management personnel designated by the board of directors of GDS Holdings. In conjunction with the transfer of legal ownership, GDS (Shanghai) Investment Co., Ltd. (“GDS Investment Company”), a subsidiary of GDS Holdings, entered into a series of contractual arrangements with Management HoldCo, its shareholders, GDS Beijing and GDS Shanghai to replace the previous contractual arrangements with GDS Beijing and GDS Shanghai on substantially the same terms under such previous contractual arrangements. The previous contractual arrangements were terminated simultaneously when the current contractual arrangements came into effect, and the subsidiary of GDS Holdings under the previous and current contractual arrangements is the same entity, namely GDS Investment Company. GDS Holdings also replaced the sole director of GDS Shanghai and certain subsidiaries of GDS Beijing with a board of three directors. William Wei Huang acts as the Chairman of the board of directors of Management HoldCo, GDS Investment Company, GDS Beijing and GDS Shanghai and their subsidiaries respectively. Other management members of GDS and board appointee serve as directors and officers of Management HoldCo., GDS Investment Company, GDS Beijing and GDS Shanghai and their subsidiaries.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

This restructuring could reduce risk by allocating ownership of the VIEs among a larger number of individual management shareholders, and strengthen corporate governance with the establishment of the board of directors of the VIEs and their subsidiaries. This restructuring could also create a more stable ownership structure by avoiding reliance on a single or small number of natural persons, and by buffering the ownership of the VIEs with an additional layer of legal entities.

A series of contractual arrangements, including equity interest pledge agreements, shareholder voting rights proxy agreements, exclusive technology license and service agreements, intellectual property rights license agreements, exclusive call option agreements and loan agreements (collectively, referred to as “VIE Agreements”) were entered into among GDS Beijing, GDS Shanghai, Management HoldCo, its shareholders and GDS Investment Company.

Equity Interest Pledge Agreements. Pursuant to the equity interest pledge agreements, each shareholder of Management HoldCo has pledged all of his or her equity interest in Management HoldCo as a continuing first priority security interest in favor of GDS Investment Company, as applicable, to respectively guarantee Management HoldCo’s and its shareholders’ performance of their obligations under the relevant contractual arrangement, and Management HoldCo has pledged all of its equity interest in GDS Beijing and GDS Shanghai as a continuing first priority security interest in favor of GDS Investment Company, as applicable, to respectively guarantee their performance of their obligations under the relevant contractual arrangement, which include the exclusive technology license and service agreement, loan agreement, exclusive call option agreement, and shareholder voting rights proxy agreement, and intellectual property rights license agreement. If GDS Beijing or GDS Shanghai or Management HoldCo or any of its shareholders breaches their contractual obligations under these agreements, GDS Investment Company, as pledgee, will be entitled to certain rights regarding the pledged equity interests, including receiving proceeds from the auction or sale of all or part of the pledged equity interests of Management HoldCo, GDS Beijing and GDS Shanghai in accordance with PRC law. Management HoldCo and each of its shareholders agrees that, during the term of the equity interest pledge agreements, it or he or she will not dispose of the pledged equity interests or create or allow creation of any encumbrance on the pledged equity interests without the prior written consent of GDS Investment Company. The equity interest pledge agreements remain effective until GDS Beijing and GDS Shanghai and Management HoldCo and its shareholders discharge all their obligations under the contractual arrangements. The equity pledge has been registered by Management HoldCo, GDS Beijing and GDS Shanghai in favor of GDS Investment Company with the relevant office of the Administration for Market Regulation in accordance with the relevant PRC laws and regulations.

Shareholder Voting Rights Proxy Agreements. Pursuant to the shareholder voting rights proxy agreements, each of GDS Beijing, GDS Shanghai, Management HoldCo and each of its shareholders has irrevocably appointed the PRC citizen(s) as designated by GDS Investment Company to act as GDS Beijing’s, GDS Shanghai’s, Management HoldCo’s and GDS Beijing’s, GDS Shanghai’s, Management HoldCo’s shareholder’s exclusive attorney-in-fact to exercise all shareholder rights, including, but not limited to, voting on all matters of Management HoldCo, GDS Beijing, GDS Beijing’s subsidiaries, GDS Shanghai and GDS Shanghai’s subsidiaries requiring shareholder approval, and appointing directors and executive officers. GDS Investment Company is also entitled to change the appointment by designating another PRC citizen(s) to act as exclusive attorney-in-fact of GDS Beijing, GDS Shanghai, Management HoldCo and its shareholders with prior notice to Management HoldCo or its such shareholders. Each shareholder voting rights proxy agreement will remain in force for so long as Management HoldCo remains a shareholder of GDS Beijing or GDS Shanghai and the shareholder remains a shareholder of Management HoldCo, as applicable.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

Exclusive Technology License and Service Agreements. Under the exclusive technology license and service agreements, GDS Investment Company licenses certain technology to each of Management HoldCo, GDS Beijing and GDS Shanghai and GDS Investment Company has the exclusive right to provide Management HoldCo, GDS Beijing and GDS Shanghai with technical support, consulting services and other services. Without GDS Investment Company's prior written consent, each of Management HoldCo, GDS Beijing and GDS Shanghai agrees not to accept the same or any similar services provided by any third party. Each of Management HoldCo, GDS Beijing and GDS Shanghai agrees to pay service fees on a yearly basis and at an amount equivalent to all of its net profits as confirmed by GDS Investment Company. GDS Investment Company owns the intellectual property rights arising out of its performance of these agreements. In addition, each of Management HoldCo, GDS Beijing and GDS Shanghai has granted GDS Investment Company an exclusive right to purchase or to be licensed with any or all of the intellectual property rights of Management HoldCo, GDS Beijing or GDS Shanghai at the lowest price permitted under PRC law. Unless otherwise agreed by the parties, these agreements will continue remaining effective.

Intellectual Property Rights License Agreements. Pursuant to an intellectual property rights license agreement between GDS Investment Company and each of Management HoldCo, GDS Beijing and GDS Shanghai, Management HoldCo, GDS Beijing and GDS Shanghai has granted GDS Investment Company an exclusive license to use for free any or all of the intellectual property rights owned by each of them from time to time, and without the parties' prior written consent, Management HoldCo, GDS Beijing and GDS Shanghai cannot take any actions, including without limitation to, transferring or licensing outside its ordinary course of business any intellectual property rights to any third parties, which may affect or undermine GDS Investment Company's use of the licensed intellectual property rights from Management HoldCo, GDS Beijing and GDS Shanghai. The parties have also agreed under the agreement that GDS Investment Company should own the new intellectual property rights developed by it regardless of whether such development is dependent on any of the intellectual property rights owned by Management HoldCo, GDS Beijing and GDS Shanghai. This agreement can only be early terminated by prior mutual consent of the parties and need to be renewed upon GDS Investment Company's unilateral request.

Exclusive Call Option Agreements. Pursuant to the exclusive call option agreements, Management HoldCo and each of its shareholders has irrevocably granted GDS Investment Company an exclusive option to purchase, or have its designated person or persons to purchase, at its discretion, to the extent permitted under PRC law, all or part of Management HoldCo's equity interests in GDS Beijing and GDS Shanghai or its such shareholders' equity interests in Management HoldCo. The purchase price should equal to the minimum price required by PRC law or such other price as may be agreed by the parties in writing. Without GDS Investment Company's prior written consent, Management HoldCo and its shareholders have agreed that each of Management HoldCo, GDS Beijing and GDS Shanghai shall not amend its articles of association, increase or decrease the registered capital, sell or otherwise dispose of its assets or beneficial interest, create or allow any encumbrance on its assets or other beneficial interests, provide any loans, distribute dividends to the shareholders and etc. These agreements will remain effective until all equity interests of Management HoldCo, GDS Beijing and GDS Shanghai held by their shareholders have been transferred or assigned to GDS Investment Company or its designated person(s).

Loan Agreements. Pursuant to the loan agreements between GDS Investment Company and Management HoldCo or its shareholders, GDS Investment Company has agreed to extend loans in an aggregate amount of RMB310,100 to Management HoldCo solely for the capitalization of GDS Beijing and GDS Shanghai and RMB1,000 to the shareholders of Management HoldCo solely for the capitalization of Management HoldCo. Pursuant to the loan agreements, GDS Investment Company has the right to require repayment of the loans upon delivery of thirty-day's prior notice to Management HoldCo or its shareholders, as applicable, and Management HoldCo or its shareholders can repay the loans by either sale of their equity interests in GDS Beijing and GDS Shanghai or Management HoldCo, as applicable, to GDS Investment Company or its designated person(s) pursuant to their respective exclusive call option agreements, or other methods as determined by GDS Investment Company pursuant to its articles of association and the applicable PRC laws and regulations.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

Under the terms of the VIE Agreements, GDS Holdings has (i) the right to receive service fees on a yearly basis at an amount equivalent to all of the net profits of the VIEs under the exclusive technology license and services agreements when such services are provided; (ii) the right to receive all dividends declared by the VIEs and the right to all undistributed earnings of the VIEs; (iii) the right to receive the residual benefits of the VIEs through its exclusive option to acquire 100% of the equity interests in the VIEs, to the extent permitted under PRC law; and (iv) the right to require each of the shareholder of the VIEs to appoint the PRC citizen(s) as designated by GDS Investment Company to act as such shareholder's exclusive attorney-in-fact to exercise all shareholder rights, including, but not limited to, voting on all matters of the VIEs requiring shareholder approval, disposing of all or part of the shareholder's equity interest in the VIEs, and appointing directors and executive officers.

In accordance with Accounting Standards Codification ("ASC") 810-10-25-38A, GDS Holdings has a controlling financial interest in the VIEs because GDS Holdings has (i) the power to direct activities of the VIEs that most significantly impact the economic performance of the VIEs; and (ii) the right to receive expected residual return of the VIEs that could potentially be significant to the VIEs. There is currently no contractual arrangement that would require GDS Holdings to provide additional financial support to the VIEs. As GDS Holdings is conducting certain businesses mainly through the VIEs, GDS Holdings may provide such support on a discretionary basis in the future, which could expose GDS Holdings to a loss. The terms of the VIE Agreements and financial support from GDS Holdings to the VIEs were considered in determining that GDS Holdings is the primary beneficiary of the VIEs. Accordingly, the financial statements of the VIEs are consolidated in GDS Holdings's consolidated financial statements.

Under the terms of the VIE Agreements, the VIEs' equity holders have no rights to the net assets nor have the obligations to fund the deficit, and such rights and obligations have been vested to GDS Holdings. All of the equity (net assets) or deficits (net liabilities) and net income (loss) of the VIEs are attributed to GDS Holdings.

The Company has been advised by its PRC legal counsel that each of the VIE agreements is valid, legally binding and enforceable in accordance with its terms and applicable PRC laws and the ownership structure of the VIEs does not violate applicable PRC Laws. However, there are substantial uncertainties regarding the interpretation and application of PRC laws and future PRC laws and regulations. There can be no assurance that the PRC authorities will take a view that is not contrary to or otherwise different. If the current ownership structure of the Company and the VIE Agreements are determined to be in violation of any existing or future PRC laws and regulations, the PRC government could:

- Levy fines on the Company or confiscate income of the Company;
- Revoke or suspend the VIEs' business or operating licenses;
- Discontinue or place restrictions or onerous conditions on VIE's operations;
- Require the Company to discontinue their operations in the PRC;
- Require the Company to undergo a costly and disruptive restructuring;
- Take other regulatory or enforcement actions that could be harmful to the Company's business.

The imposition of any of these government actions could result in the termination of the VIE agreements, which would result in GDS Holdings losing the (i) ability to direct the activities of the VIEs and (ii) rights to receive substantially all the economic benefits and residual returns from the VIEs and thus result in the deconsolidation of the VIEs in GDS Holdings's consolidated financial statements.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

The following tables set forth the financial statement balances and amounts of the VIEs and their subsidiaries included in the consolidated financial statements after the elimination of intercompany balances and transactions among VIEs and their subsidiaries.

	As of December 31,	
	2021	2022
Assets		
Current assets		
Cash	1,338,525	2,326,332
Accounts receivable, net of allowance for doubtful accounts	1,677,171	2,371,362
VAT recoverable	138,304	79,163
Prepaid expenses	90,848	76,557
Other current assets	99,231	126,385
Total current assets	<u>3,344,079</u>	<u>4,979,799</u>
Property and equipment, net	2,671,567	2,441,858
Intangible assets, net	175,004	124,691
Operating lease right-of-use assets	204,825	186,795
Deferred tax assets	32,949	38,348
Restricted cash	—	32,621
VAT recoverable	111,982	26,087
Other non-current assets	153,696	148,787
Total assets	<u>6,694,102</u>	<u>7,978,986</u>
Liabilities		
Current liabilities		
Short-term borrowings and current portion of long-term borrowings	426,000	258,200
Accounts payable	430,518	493,332
Accrued expenses and other payables	223,563	235,388
Deferred revenue	87,364	151,050
Operating lease liabilities, current	40,371	41,898
Finance lease and other financing obligations, current	28,161	33,398
Total current third-party liabilities	<u>1,235,977</u>	<u>1,213,266</u>
Long-term borrowings, excluding current portion	899,769	721,387
Operating lease liabilities, non-current	172,458	134,684
Finance lease and other financing obligations, non-current	965,356	931,580
Deferred tax liabilities	76,460	69,831
Other long-term liabilities	66,379	52,222
Total third-party liabilities	<u>3,416,399</u>	<u>3,122,970</u>
Amounts due to GDS Holdings and its non-VIE subsidiaries, net	2,947,857	4,302,245
Total liabilities	<u>6,364,256</u>	<u>7,425,215</u>

As of December 31, 2021 and 2022, accounts receivable of RMB70,945 and RMB66,503, respectively, other non-current assets of RMB14,691 and RMB9,337, respectively, and property and equipment of RMB46,007 and RMB45,572, respectively, of VIEs were pledged solely to secure banking borrowings of VIEs.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

Net revenue, net income, operating, investing and financing cash flows of the VIEs that were included in the Company's consolidated financial statements for the years ended December 31, 2020, 2021 and 2022 are as follows:

	Years ended December 31,		
	2020	2021	2022
Net revenue	5,453,802	7,516,345	8,958,853
Net income	129,254	112,257	223,925
Net cash provided by operating activities	899,132	744,493	1,533,548
Net cash used in investing activities	(278,744)	(205,041)	(143,796)
Net cash used in financing activities	(20,682)	(561,101)	(369,324)

The unrecognized revenue-producing assets that are held by the VIEs comprise of internally developed software, intellectual property and trademarks which were not recorded on the Company's consolidated balance sheets as they do not meet all the capitalization criteria.

Costs recognized by the VIEs for outsourcing and other services provided by other entities within the Company were RMB3,076,398, RMB5,160,638 and RMB6,336,874 for the years ended December 31, 2020, 2021 and 2022, respectively, net of the related services provided to other entities within the Company. These inter-company transactions are eliminated in the consolidated financial statements.

(b) Use of estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include, but are not limited to, the fair values of assets acquired and liabilities assumed and the consideration transferred in a business combination, the realization of deferred income tax assets, the fair value of share-based compensation awards, the recoverability of long-lived assets, and incremental borrowing rate of leases. 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.

(c) Cash and cash equivalents

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. The Company does not have any cash equivalents as of December 31, 2021 and 2022.

(d) Restricted cash

Restricted cash represents amounts held by banks, which are not available for the Company's use, as security for bank borrowings, related interests and certain construction projects. Upon repayment of bank borrowings and the related interests and completion of construction projects, the deposits are released by the bank and available for general use by the Company.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands of RMB, except share data and per share data, or otherwise noted)

(e) Fair value of financial instruments

The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels (Note 17 to the consolidated financial statements):

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the reporting entity at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date.

(f) Contract balances

The timing of revenue recognition, billings and cash collections result in accounts receivable, contract assets and contract liabilities (i.e. deferred revenue). Accounts receivable are recorded at the invoice amount, net of an allowance for doubtful account and is recognized in the period when the Company has transferred products or provided services to its customers and when its right to consideration is unconditional. Amounts collected on accounts receivable are included in net cash provided by operating activities in the consolidated statements of cash flows.

Prior to the adoption of ASC 326, *Financial Instruments - Credit Loss*, the Company maintains an allowance for doubtful accounts for estimated losses inherent in its accounts receivable portfolio. In establishing the required allowance, management considers historical losses adjusted to take into account current market conditions and customers' financial condition, the amount of receivables in dispute, the accounts receivable aging, and the customers' repayment patterns. The Company reviews its allowance for doubtful accounts on a customer-by-customer basis. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

Upon adoption of ASC 326 starting from January 1, 2020, the provision of credit losses for accounts receivable is based upon the current expected credit losses ("CECL") model. The CECL model requires an estimate of the credit losses expected over the life of accounts receivable since initial recognition, and accounts receivable with similar risk characteristics are grouped together when estimating CECL. In assessing the CECL, the Company considers both quantitative and qualitative information that is reasonable and supportable, including historical credit loss experience, adjusted for relevant factors impacting collectability and forward-looking information indicative of external market conditions. While the Company uses the best information available in making determination, the ultimate recovery of recorded receivables is also dependent upon future economic events and other conditions that may be beyond the Company's control. Accounts receivable that are ultimately deemed to be uncollectible, and for which collection efforts have been exhausted, are written off against the allowance for doubtful accounts. The Company does not have any off-balance-sheet credit exposure related to its customers. The adoption did not have material impact on the Company's consolidated financial statements for the year ended December 31, 2020.

A contract asset exists when the Company has transferred products or provided services to its customers but customer payment is contingent upon satisfaction of additional performance obligations. Contract assets are recorded in other current assets in the consolidated balance sheet.

Deferred revenue (a contract liability) is recognized when the Company has an unconditional right to a payment before it transfers goods or services to customers.

GDS HOLDINGS LIMITED AND SUBSIDIARIES
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(In thousands of RMB, except share data and per share data, or otherwise noted)

(g) Fulfilment costs

Fulfilment costs are capitalized when all three of the criteria are met: a) the costs relate directly to a contract or an anticipated contract that the Company can specifically identify; b) the costs generate or enhance resources of the Company that will be used in satisfying or continuing to satisfy future performance obligations; and c) the costs are expected to be recovered. The asset recognized from capitalizing the costs to fulfill a contract is amortized on a systematic basis consistent with the pattern of the transfer of the goods or services to which the asset relates. As of December 31, 2021 and 2022, the Company recorded capitalized fulfilment cost of RMB80,742 and RMB47,400, respectively, in other non-current assets.

(h) Equity method investments

The Company's investments in entities in which the Company can exercise significant influence but does not own a majority equity interest or control are generally accounted for under the equity method of accounting. Equity method investments are initially measured at cost, and are subsequently adjusted for cash contributions, distributions and the Company's share of the income and losses of the investees. The Company records its equity method investment in other non-current assets on the consolidated balance sheet. The Company's proportionate share of the income or loss from its equity method investment are recorded in others, net on the consolidated statement of operations. The Company reviews its investment periodically to determine if any investment may be impaired considering both qualitative and quantitative factors that may have a significant impact on the investees' fair value. The Company did not record any impairment charges related to its equity method investment for the years ended December 31, 2020, 2021 and 2022.

(i) Property and equipment

Property and equipment are carried at cost less accumulated depreciation and any recorded impairment. Property and equipment acquired under finance leases are initially recorded at the present value of minimum lease payments. Buildings and equipment under finance leases and leasehold improvements with definite useful lives are amortized over the shorter of the lease term or the estimated useful life of the asset or improvement. Leasehold land is amortized on a straight-line basis over the lease term. Freehold land is not amortized.

Gains or losses arising from the disposal of an item of property and equipment are determined based on the difference between the net disposal proceeds and the carrying amount of the item and are recognized in profit or loss on the date of disposal.

The estimated useful lives of self-owned property and equipment are presented below.

Buildings	30 years
Data center equipment	
– Machinery	10 - 20 years
– Other equipment	3 - 5 years
Furniture and office equipment	3 - 5 years
Vehicles	5 years

Construction in progress primarily consists of the cost of data center buildings and the related construction expenditures that are required to prepare the data center buildings for their intended use.

No depreciation is provided in respect of construction in progress until it is substantially completed and ready for its intended use. Once a data center building is ready for its intended use and becomes operational, construction in progress is transferred to the respective category of property and equipment and is depreciated over the estimated useful life of the underlying assets.

Depreciation on property and equipment is calculated on the straight-line method over the estimated useful lives of the assets.

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(j) *Leases*

The Company is a lessee in a number of non-cancellable operating leases and finance leases, primarily for data centers, lands, offices and other equipment. The Company adopted ASC 842, *Leases*, on January 1, 2019, using a modified retrospective method.

The Company determines if an arrangement is or contains a lease at its inception.

The Company recognizes lease liabilities and right-of-use (“ROU”) assets at lease commencement date. Lease liabilities are measured at the present value of unpaid lease payments at the lease commencement date and is subsequently measured at amortized cost using the effective-interest method. Since most of the Company’s leases do not provide an implicit rate, the Company uses its own incremental borrowing rate in determining the present value of unpaid lease payments. The incremental borrowing rate was determined using a portfolio approach based on the rate of interest that the Company would have to borrow an amount equal to the lease payments on a collateralized basis over a similar term.

ROU assets are initially measured at cost, which consist of (i) initial measurement of the lease liability; (ii) lease payments made to the lessor at or before the commencement date less any lease incentives received; and (iii) initial direct costs incurred by the Company. Variable lease payments are excluded from the measurement of ROU assets and lease liabilities and are recognized in the period in which the obligation for those payments is incurred. For operating leases, the Company recognizes a single lease cost on a straight-line basis over the remaining lease term. For finance leases, the ROU assets are subsequently amortized using the straight-line method from the lease commencement date to the earlier of the end of its useful life or the end of the lease term. Amortization of the ROU assets are recognized and presented separately from interest expense on the lease liability. For leases acquired in business combinations or asset acquisitions, ROU assets are measured at the same amount as the lease liability as adjusted to reflect favorable or unfavorable terms of the lease when compared with market terms.

Prior to the adoption of ASC 842, *Leases*, prepayment for land use rights are presented as prepaid land use rights on the consolidated balance sheet and are measured at cost and subsequently amortized using the straight-line method. Upon the adoption of ASC 842 on January 1, 2019, land use rights acquired are assessed in accordance with ASC 842 and recognized in operating lease ROU assets if they meet the definition of operating lease, or property and equipment if they meet the definition of finance lease.

The Company has elected not to recognize ROU assets and lease liabilities for short-term leases (i.e. leases that, at the commencement date, have a lease term of 12 months or less and do not include an option to purchase the underlying asset that the lessee is reasonably certain to exercise). As a practical expedient, the Company has elected that for all leases, where it is the lessee, not to separate non-lease components from lease components and instead to account for all lease and non-lease components associated with each lease as a single lease component.

The Company records an asset and related financing obligation for the estimated construction costs under build-to-suit lease arrangements where it controls the asset during construction. Upon completion of the construction and commencement of the lease terms, the Company assesses whether these arrangements qualify for sales recognition under the sale-leaseback transaction. If the arrangements do not qualify for sales recognition under the sale-leaseback accounting guidance, the Company continues to be the deemed owner of the build-to-suit assets for financial reporting purposes. The Company accounted for costs incurred relating to the construction of the underlying assets before the lease commencement dates in accordance with ASC 360 on its balance sheet. In addition, the financing liability is reduced by the non-interest portion of the lease payments.

If a lease is modified and that modification is not accounted for as a separate contract, the classification of the lease is reassessed as of the effective date of the modification based on its modified terms and conditions and the facts and circumstances as of that date.

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The FASB has provided accounting elections for entities that provide or receive rent concessions (e.g., deferral of lease payments, reduced future lease payments) due to the COVID-19 pandemic. During years ended December 31, 2020, 2021 and 2022, the Company was granted lease concessions by certain landlords due to the effects of the COVID-19 pandemic. The Company assessed that these rent concessions qualify for the election, as these concessions did not result in a substantial increase in the rights of the lessor or the obligations of the lessee. The Company then elected to not evaluate whether these concessions are lease modifications and chose to adopt a policy to not account for these concessions as lease modifications. Instead, the Company, as a lessee that was contractually released from certain lease payments, accounts these rent concessions as negative variable lease payments (Note 12).

(k) Asset retirement costs

The Company's asset retirement obligations are primarily related to its data center buildings, of which the majority are leased under long-term arrangements, and, in certain cases, are required to be returned to the landlords in their original condition.

The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred. The corresponding asset retirement costs are capitalized as part of the cost of leasehold improvements and are depreciated over the shorter of the estimated useful life of the asset or the term of the lease subsequent to the initial measurement. The Company accretes the liability in relation to the asset retirement obligations over time and the accretion expense is recorded in cost of revenue.

Asset retirement obligations are recorded in other long-term liabilities. The following table summarizes the activity of the asset retirement obligation liability:

Asset retirement obligations as of January 1, 2020	52,441
Additions	20,384
Accretion expense	4,084
Asset retirement obligations as of December 31, 2020	76,909
Additions	22,745
Accretion expense	6,227
Settlement	(998)
Asset retirement obligations as of December 31, 2021	104,883
Additions	4,382
Accretion expense	6,366
Foreign exchange impact	158
Settlement	(3,978)
Asset retirement obligations as of December 31, 2022	111,811

(l) Intangible assets

Intangible assets acquired in the acquisitions comprised of customer contracts and licenses.

The weighted-average amortization period by major intangible asset class is as follows:

Customer contracts	5-15 years
Licenses	20 years

The amortization period of customer contracts is determined based on the remaining contractual period of the contracts with the customers at the time of acquisition and an estimate of the contract renewal period.

Licenses are amortized using a straight-line method over the terms of those licenses.

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(m) Prepaid land use rights

The land use rights represent the amounts paid and relevant costs incurred for the rights to use land in the PRC and Hong Kong SAR before the adoption of ASC 842, and are carried at cost less accumulated amortization. Amortization is provided on a straight-line basis over the remaining terms of the land use rights. As of December 31, 2022, the remaining terms of the land use rights range from 36 to 39 years.

(n) Business combinations and goodwill

The Company accounts for business combinations using the acquisition method of accounting in accordance with ASC Topic 805, *Business Combinations*.

The acquisition method of accounting requires the Company to estimate fair values of the separately identifiable assets acquired and liabilities assumed. The consideration transferred in an acquisition is measured as the aggregate of the fair values at the date of exchange of the assets given, liabilities incurred, and equity instruments issued as well as the contingent considerations as of the acquisition date. The costs directly attributable to the acquisition are expensed as incurred. Identifiable assets, liabilities and contingent liabilities acquired or assumed are measured separately at their fair value as of the acquisition date, irrespective of the extent of any non-controlling interests.

The determination of fair values of the identifiable assets acquired, liabilities assumed and non-controlling interests is based on various assumptions and valuation methodologies requiring considerable judgment from management. The most significant variables in these valuations are discount rates, the number of years on which to base the cash flow projections, as well as the assumptions and estimates used to determine the cash inflows and outflows. The Company determines discount rates to be used based on the risk inherent in the related activity's current business model and industry comparisons.

Goodwill is an asset representing the future economic benefits arising from other assets acquired in the acquisition that are not individually identified and separately recognized.

Goodwill is not amortized but is tested for impairment annually or more frequently if events or changes in circumstances indicate that it might be impaired. Goodwill is tested for impairment at the reporting unit level on an annual basis and between annual tests if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying value. These events or circumstances could include a significant change in macroeconomic conditions, the industry and market considerations, cost factors, overall financial performance, other relevant entity-specific events, and events affecting a reporting unit and share price. Application of the goodwill impairment test requires judgment, including the identification of the reporting unit, assignment of assets and liabilities to the reporting unit, assignment of goodwill to the reporting unit, and determination of the fair value of each reporting unit.

The Company has the option to perform a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying value prior to performing the goodwill impairment test. If it is more-likely-than-not that the fair value of a reporting unit is greater than its carrying amount, the goodwill impairment test is not required. If the goodwill impairment test is required, the fair value of the reporting unit is compared with its carrying amount (including goodwill). If the fair value of the reporting unit is less than its carrying amount, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. In assessing the qualitative factors, the Company considered the impact of abovementioned events or circumstances. No impairment losses were recorded for goodwill for the years ended December 31, 2020, 2021 and 2022.

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(o) Impairment of long-lived assets

Long-lived assets (primarily including property and equipment, operating lease ROU assets and prepaid land use rights) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows generated by that asset or asset group to its carrying amount. If the carrying amount of the long-lived assets or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. For the purposes of impairment testing of long-lived assets, the Company has concluded that an individual data center is the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. In the year ended December 31, 2022, an impairment loss of long-lived assets of RMB12,759 was recognized. No impairment loss was recorded in the years ended December 31, 2020 and 2021.

(p) Value-added-tax (“VAT”)

Entities that are VAT general taxpayers are permitted to offset qualified input VAT paid to suppliers against their output VAT upon receipt of appropriate supplier VAT invoices on an entity-by-entity basis. When the output VAT exceeds the input VAT, the difference is remitted to tax authorities, usually on a monthly basis; whereas when the input VAT exceeds the output VAT, the difference is treated as VAT recoverable which can be carried forward indefinitely to offset future net VAT payables. VAT related to purchases and sales which have not been settled at the balance sheet date is disclosed separately as an asset and liability, respectively, in the consolidated balance sheets.

As of December 31, 2021 and 2022, the Company recorded a VAT recoverable of RMB229,090 and RMB164,743 as current assets, and RMB2,218,944 and RMB1,155,586 as non-current assets, respectively. The Company also recorded VAT payables of RMB19,251 and RMB20,297 in accrued expenses and other payables, in the consolidated balance sheets as of December 31, 2021 and 2022, respectively.

At each balance sheet date, the Company reviews the balance of VAT recoverable for recoverability, taking into consideration of the indefinite life of the VAT recoverable as well as the Company’s forecasted operating results and capital spendings. The Company has not made an allowance for the recoverability of the VAT recoverable, as the balance is expected to be utilized to offset against VAT payables.

(q) Derivative financial instruments

Derivative financial instruments are recognized initially at fair value. At the end of each reporting period, the fair value is remeasured. The gain or loss on remeasurement to fair value is recognized immediately in profit or loss.

The Company entered into interest rate swap contracts primarily for the purpose to manage the interest rate risk for the long-term borrowings. The Company has elected not to apply hedge accounting to these derivative instruments and recognized all derivatives on the Company’s consolidated balance sheets at fair value. The Company estimates the fair value of its interest rate swap contracts using a pricing model based on market observable inputs. Fair value gains or losses associated with interest rate swap contracts are recorded within interest expenses in the Company’s consolidated statements of operations. Cash received or paid for realized gains or losses associated with interest rate swap contracts are included in operating cash flows in the consolidated statements of cash flows.

For further information on derivative financial instruments, see Note 16 below.

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(r) *Commitment and contingencies*

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. Legal costs incurred in connection with loss contingencies are expensed as incurred. When a loss contingency is not both probable and estimable, the Company does not record an accrued liability but discloses the nature and the amount of the claim, if material. However, if the loss (or an additional loss in excess of the accrual) is at least reasonably possible, then the Company discloses an estimate of the loss or range of loss, unless it is immaterial, or an estimate cannot be made. The assessment of whether a loss is probable or reasonably possible, and whether the loss or a range of loss is estimable, often involves complex judgments about future events. Management is often unable to estimate the loss or a range of loss, particularly where (i) the damages sought are indeterminate, (ii) the proceedings are in the early stages, or (iii) there is a lack of clear or consistent interpretation of laws specific to the industry-specific complaints among different jurisdictions. In such cases, there is considerable uncertainty regarding the timing or ultimate resolution of such matters, including eventual loss, fine, penalty or business impact, if any.

(s) *Revenue recognition*

The Company recognizes revenue as the Company satisfies a performance obligation by transferring control over a good or service to a customer. For each performance obligation satisfied over time, the Company recognizes revenue over time by measuring the progress toward complete satisfaction of that performance obligation. If the Company does not satisfy a performance obligation over time, the performance obligation is satisfied at a point in time. Revenue is measured as the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

For contracts with customers that contain multiple performance obligations, the Company accounts for individual performance obligations separately if they are distinct or as a series of distinct obligations if the individual performance obligations meet the series criteria. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The transaction price is allocated to the separate performance obligation on a relative standalone selling price basis. The standalone selling price is determined based on overall pricing objectives, taking into consideration market conditions, geographic locations and other factors.

The Company derives revenue primarily from the delivery of (i) colocation services; and (ii) managed services, including managed hosting services and managed cloud services. The remainder of the Company's revenue is from IT equipment sales that are either sold on a stand-alone basis or bundled in a managed service contract arrangement and consulting services.

Colocation services are services where the Company provides space, power and cooling to customers for housing and operating their IT system equipment in the Company's data centers.

Managed hosting services are services where the Company provides outsourced services to manage the customers' data center operations, including data migration, IT operations, security and data storage.

Managed cloud services are services where the Company offers direct private connection to major cloud platforms, an innovative service platform for managing hybrid clouds.

Contracts with customers for colocation services and managed services include i) those provide for variable considerations that are primarily based on the usage of such services. Revenues on such contracts are recognized based on the agreed usage-based fees as the actual services are rendered throughout the contract term; and ii) those provide for a fixed consideration over the contract service period. Revenue on such contracts is recognized on a straight-line basis over the term of the contract.

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In certain colocation and managed hosting service contracts, the Company agrees to charge customers for their actual power consumption. Relevant revenue is recognized based on actual power consumption during each period. In certain other colocation and managed hosting service contracts, the Company specifies a fixed power consumption limit each month for customers. If a customer's actual power consumption is below the limit, no additional fee is charged. If the actual power consumption is above the limit, the Company charges the customer additional power consumption fees calculated based on the portion of actual power consumption exceeding the limit, multiplied by a fixed unit price, which is determined based on market price, without providing the customer with any rights to acquire additional goods or services. Accordingly, relevant revenue is recognized each month based on actual additional power consumption fees.

The Company's colocation service and managed service contracts with customers contain both lease and non-lease components. The Company elected to adopt the practical expedient which allows lessors to combine lease and non-lease components and account for them as one component if i) they have the same timing and pattern of transfer; and ii) the lease component, if accounted for separately, would be classified as an operating lease. The Company elected to apply the practical expedient on the contracts that meet the criteria. In addition, the Company has performed a qualitative analysis to determine that the non-lease component is the predominant component of its revenue stream as the customer would ascribe more value to the services provided rather than to the lease component. Therefore, the combined component is accounted for in accordance with the current revenue accounting guidance ("ASC 606"). For contracts that do not meet the criteria for the practical expedient, the lease component is accounted for in accordance with the current lease accounting guidance ("ASC 842"), which is immaterial for the years ended December 31, 2020, 2021 and 2022.

Revenue recognized for colocation or managed hosting and cloud services delivered prior to billing is recorded within accounts receivable. The Company generally bills the customer on a monthly or quarterly basis in arrears.

Cash received in advance from customers prior to the delivery of the colocation or managed hosting and cloud services is recorded as deferred revenue.

The sale of IT equipment is recognized when the customer obtains control of the equipment, which is typically when delivery has occurred, the customer accepts the equipment and the Company has no performance obligation after the delivery.

In certain managed service contracts, the Company sells and delivers IT equipment such as servers and computer terminals prior to the delivery of the services. Since sale of equipment can be distinguished and is separately identifiable from other promises in the contract and it is distinct within the context of the contract, the sale of equipment is considered a separate performance obligation. Accordingly, the contract consideration is allocated to the equipment and the managed services based on their relative standalone selling prices.

Sales of IT equipment is generally recognized on a gross basis as the Company is primarily responsible for fulfilling the contract, assumes inventory risk and has discretion in establishing the price when selling to the customer.

To the extent the Company does not meet the criteria for recognizing revenue on a gross basis, the Company records the revenue on a net basis.

Consulting services are provided to customers for a fixed amount over the service period, usually less than one year. The Company recognizes revenues from consulting services over the period when the services were provided, since customers simultaneously receive and consume the benefit of the services. The Company uses the input method based on the pattern of service provided to the customers.

(t) Cost of revenues

Cost of revenues consists primarily of utility costs, depreciation of property and equipment, lease costs, labor costs and other costs directly attributable to the provision of the service revenue and sales of IT equipment.

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(u) Research and development and advertising costs

Research and development costs incurred during the application development stage of developing internal-use software are capitalized. Other research and development costs are expensed as incurred. Research and development costs consist primarily of payroll and related personnel costs for developing or significantly improving the Company's services and products.

Advertising costs are expensed as incurred. Advertising costs amounted to RMB14,778, RMB15,043 and RMB8,639 in 2020, 2021 and 2022, respectively.

(v) Government grants

Government grants are recognized when received and when all the conditions for their receipt have been met. Subsidies that compensate the Company for expenses incurred are recognized as a reduction of expenses in the consolidated statements of operations. Subsidies that are not associated with expenses are recognized as other income.

The Company received government subsidies for acquisition of property and equipment that required the Company to meet certain conditions. The subsidies are recorded as a liability until the conditions are met and then depreciated over the useful life of the related assets as a reduction of the depreciation charges. The Company received government subsidies that required the Company to operate in a particular area for a certain period. The Company recorded the subsidies in other long-term liabilities when the subsidies were received and subsequently recognized as government subsidy income ratably over the period the Company is required to operate in the area.

As of December 31, 2021 and 2022, deferred government grants of RMB22,245 and RMB30,741 are recorded in other long-term liabilities, respectively. As of December 31, 2021 and 2022, deferred government grants of nil and RMB7,299 are recorded as a deduction of property and equipment, net, respectively. There were no significant commitment, contingencies or provision for recapture conditions for the government subsidies received for the years ended December 31, 2021 and 2022.

(w) Capitalized interest

A reconciliation of total interest costs to "Interest expenses" as reported in the consolidated statements of operations for the years ended December 31, 2020, 2021 and 2022 is as follows:

	Years ended December 31,		
	2020	2021	2022
Total interest costs	1,402,015	1,805,434	2,084,565
Less: interest costs capitalized	(85,509)	(150,697)	(196,678)
Interest expenses	1,316,506	1,654,737	1,887,887

Interest costs that are directly attributable to the construction of an asset which necessarily takes a substantial period of time to get ready for its intended use are capitalized as part of the cost of that asset. The capitalization of interest costs as part of the cost of a qualifying asset commences when expenditure for the asset is being incurred, interest costs are being incurred and activities that are necessary to prepare the asset for its intended use are in progress. Capitalization of interest costs is ceased when the asset is substantially complete and ready for its intended use.

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(x) Debt issuance costs and commitment costs

Debt issuance costs are capitalized and are amortized over the life of the related debts based on the effective interest method. Debt commitment costs are capitalized and are amortized over the commitment period of the facility on a straight-line basis. Such amortization is included as a component of interest expense.

Unamortised debt issuance costs of RMB197,119 and RMB186,313 are presented as a reduction of debt as of December 31, 2021 and 2022, respectively.

(y) Income tax

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and net operating losses and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for deferred tax assets for which it is more likely than not that the related tax benefits will not be realized. The evaluation is based on the Company's estimates of the future taxable income. The future taxable income incorporates the Company's best estimate of utilization rates of relevant data centers based on historical actual utilization rates and the Company's business plans for those data centers which are approved by the board of directors. The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest related to unrecognized tax benefits in interest expense and penalties in general and administrative expenses.

(z) Share-based compensation

The Company accounts for the compensation cost from share-based payment transactions with employees based on the grant-date fair value of the equity -classified awards. The grant-date fair value of the award is recognized as compensation expense, net of forfeitures, over the period during which an employee is required to provide service in exchange for the award, which is generally the vesting period. When no future services are required to be performed by the employee in exchange for an award of equity instruments, and if such award does not contain a performance or market condition, the cost of the award is expensed on the grant date. The Company recognizes compensation cost for an award with only service conditions that has a graded vesting schedule on a straight-line basis over the requisite service period for the entire award, provided that the cumulative amount of compensation cost recognized at any date at least equals the portion of the grant-date value of such award that is vested at that date.

Awards granted to employees with performance conditions attached are measured at fair value on the grant date and are recognized as the compensation expenses , net of forfeitures, over the performance period when the performance goal becomes probable to achieve. The Company also adjusts the compensation cost based on the probability of performance goal achievement at the end of each reporting period. The rewards are earned upon attainment of identified performance goals.

Awards granted to employees with market conditions attached are measured at fair value on the grant date and are recognized as the compensation expenses , net of forfeitures, over the estimated requisite service period, regardless of whether the market condition has been satisfied if the requisite service period is fulfilled.

The Company accounts for forfeitures when they occur. Compensation cost previously recognized are reversed in the period the award is forfeited before completion of the requisite service period.

Share-based payment transactions with nonemployees in which goods or services are received in exchange for equity instruments are accounted for based on the fair value of the consideration received or the fair value of the equity instrument issued, whichever is more reliably measurable.

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For further information on share-based compensation, see Note 19 below.

(aa) Employee benefits

Pursuant to relevant PRC regulations, the Company is required to make contributions to various defined contribution plans organized by municipal and provincial PRC governments. The contributions are made for each PRC employee at rates ranging from 28% to 40% on a standard salary base as determined by local social security bureau. Contributions to the defined contribution plans are charged to the consolidated statements of operations when the related service is provided.

(bb) Foreign currency translation and foreign currency risks

The functional currency of GDS Holdings is the United States dollar (“USD”), whereas the functional currency of its PRC subsidiaries and consolidated VIEs in PRC, subsidiaries in Hong Kong SAR and Macau SAR, subsidiaries in Singapore, subsidiaries in Malaysia and subsidiaries in Indonesia is the RMB, Hong Kong dollar (“HKD”), Singapore dollar (“SGD”), Malaysian Ringgit (“MYR”) and Indonesian Rupiah (“IDR”), respectively. The reporting currency of the Company is RMB as the major operations of the Company are within the PRC.

Transactions denominated in currencies other than the functional currency 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 dates. Non-monetary items that are denominated in foreign currency are measured at the historical costs by using the exchange rates at the dates of the initial transactions. Exchange gains and losses are recognized in profit or loss and are reported in foreign currency exchange gain (loss) on a net basis.

The results of foreign operations are translated into RMB at the exchange rates as of the balance sheet date for assets and liabilities, the average daily exchange rate for each month for income and expense items and the historical exchange rates for equity accounts. Translation gains and losses are recorded in other comprehensive income and accumulated in the translation adjustment component of equity until the sale or liquidation of the foreign entity.

The RMB is not a freely convertible currency. The PRC State Administration for Foreign Exchange, under the authority of the PRC government, controls the conversion of RMB to foreign currencies. The value of the RMB is subject to changes of central government policies and international economic and political developments affecting supply and demand in the China foreign exchange trading system market. The Company’s cash and restricted cash denominated in RMB amounted to RMB5,809,753 and RMB6,601,979 as of December 31, 2021 and 2022, respectively.

As of December 31, 2022, the Company’s cash and restricted cash were deposited in major financial institutions located in PRC, Hong Kong SAR, Singapore, Macau SAR, US, Malaysia and Indonesia and were denominated in the following currencies:

	<u>RMB</u>	<u>USD</u>	<u>HKD</u>	<u>JPY</u>	<u>EUR</u>	<u>SGD</u>	<u>MYR</u>	<u>IDR</u>
In PRC	6,514,881	105,587	—	—	—	—	—	—
In Hong Kong SAR	87,098	44,101	720,746	8,316	146	—	—	—
In Singapore	—	35,831	—	—	—	10,047	—	—
In Macau SAR	—	—	158,635	—	—	—	—	—
In US	—	12,046	—	—	—	—	—	—
In Malaysia	—	7,795	—	—	—	—	3,767	—
In Indonesia	—	558	—	—	—	—	—	1,938,977
Total in original currency	<u>6,601,979</u>	<u>205,918</u>	<u>879,381</u>	<u>8,316</u>	<u>146</u>	<u>10,047</u>	<u>3,767</u>	<u>1,938,977</u>
RMB equivalent	<u>6,601,979</u>	<u>1,434,137</u>	<u>785,551</u>	<u>435</u>	<u>1,085</u>	<u>52,075</u>	<u>5,941</u>	<u>863</u>

GDS HOLDINGS LIMITED AND SUBSIDIARIES
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(cc) Concentration of credit risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist principally of cash, restricted cash, and accounts receivable. The Company's investment policy requires cash and restricted cash to be placed with high-quality financial institutions and to limit the amount of credit risk from any one issuer. The Company regularly evaluates the credit standing of the counterparties or financial institutions.

The Company conducts credit evaluations on its customers prior to transfer the control of goods or services. The assessment of customer creditworthiness is primarily based on historical collection records, research of publicly available information and customer on-site visits by senior management. Based on this analysis, the Company determines what credit terms, if any, to offer to each customer individually. If the assessment indicates a likelihood of collection risk, the Company will not deliver the services or sell the products to the customer. Otherwise the Company will require the customer to pay cash, post letters of credit to secure payment or to make significant down payments. Historically, credit losses on accounts receivable have been insignificant.

(dd) Earnings (loss) per share

Basic earnings (loss) per ordinary share is computed by dividing net income (loss) available to the Company's ordinary shareholders by the weighted average number of ordinary shares outstanding during the year using the two-class method. The liquidation and dividend rights of the holders of the Company's Class A and Class B ordinary shares are identical, except with respect to voting rights. As a result, under the two-class method in accordance with ASC 260, net income (loss) available to the Company's ordinary shareholders is allocated between Class A and Class B ordinary shares and other participating securities based on participating rights in undistributed earnings on a proportionate basis. The Company's redeemable preferred shares (Note 14) are participating securities since the holders of these securities participate in dividends on the same basis as ordinary shareholders, in addition to the cumulative preferential dividend they enjoy. These participating securities are not included in the computation of basic loss per ordinary share in periods when the Company reports net loss, because these participating security holders have no obligation to share in the losses of the Company.

Diluted earnings (loss) per share is calculated by dividing net income (loss) available to the Company's ordinary shareholders as adjusted for the effect of dilutive ordinary share equivalents, if any, by the weighted average number of ordinary and dilutive ordinary share equivalents outstanding during the year. Ordinary share equivalents include the ordinary shares issuable upon the exercise of the outstanding share options (using the treasury stock method) and conversion of redeemable preferred shares and convertible bonds (using the as-if-converted method). Potential dilutive securities are not included in the calculation of diluted earnings (loss) per share if the impact is anti-dilutive.

(ee) Changes in accounting principle

- 1) The Company adopted Accounting Standards Update "ASU" 2020-06, *Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)*, on January 1, 2022. This ASU reduces the number of accounting models for convertible debt instruments and convertible preferred stock and clarifies the scope and certain requirements under Subtopic 815-40. The ASU also improves the guidance related to the disclosures and earnings-per-share for convertible instruments and contract in entity's own equity. The adoption of this standard did not have a material impact on the consolidated financial statements.
- 2) The Company adopted ASU 2021-04, *Earnings Per Share (Topic 260), Debt—Modifications and Extinguishments (Subtopic 470-50), Compensation—Stock Compensation (Topic 718), and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options (a consensus of the FASB Emerging Issues Task Force)*, on January 1, 2022. This ASU provides certain guidance for a modification or an exchange of a freestanding equity-classified written call option that is not within the scope of other Topic. The adoption of this standard did not have a material impact on the consolidated financial statements.

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- 3) The Company adopted ASU 2021-05, *Lessors—Certain Leases with Variable Lease*, on January 1, 2022. This ASU requires lessors to classify leases as operating leases if they have variable lease payments that do not depend on an index or rate and would have selling losses if they were classified as sales-type or direct financing leases. The adoption of this standard did not have a material impact on the consolidated financial statements.
- 4) The Company adopted ASU 2021-10, *Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance*, on January 1, 2022. This ASU requires certain annual disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model. The adoption of this standard did not have a material impact on the consolidated financial statements.

(ff) Recently issued accounting standards

In October 2021, the FASB issued ASU 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which requires that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606, *Revenue from Contracts with Customers*. The ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted, and should be adopted prospectively to business combinations occurring on or after the effective date of the amendments. The Company adopted this standard in the first quarter of 2023, and the adoption of this standard did not have a significant impact on the Company’s consolidated financial statements.

In September 2022, the FASB issued ASU 2022-04, *Liabilities-Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*, which requires a buyer in a supplier finance program to disclose qualitative and quantitative information about its supplier finance programs. The ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, except for the amendment on rollforward information for the relevant obligations, which is effective for fiscal years beginning after December 15, 2023. Early adoption is permitted. The ASU should be applied retrospectively to each period in which a balance sheet is presented, except for the amendment on rollforward information, which should be applied prospectively. The Company adopted this standard, except for the amendment on rollforward information for the relevant obligations, in the first quarter of 2023, and the adoption of this standard did not have a significant impact on the Company’s consolidated financial statements. The Company will adopt the amendment on rollforward information for the relevant obligations in the first quarter of 2024 and does not expect the adoption to have a material impact on the Company’s consolidated financial statements.

3 CASH AND RESTRICTED CASH

A reconciliation of cash and restricted cash in the consolidated balance sheets to the amounts in the consolidated statements of cash flows is as follows:

	As of December 31,	
	2021	2022
Cash	9,968,109	8,608,131
Restricted cash - current assets	2,014,304	158,075
Restricted cash - non-current assets	43,954	115,860
Total cash and restricted cash shown in the consolidated statements of cash flows	12,026,367	8,882,066

Restricted cash was used primarily to secure the repayment of bank borrowings and related interests.

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4 CONTRACT BALANCES

Accounts Receivable, Net

Accounts receivable, net consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Accounts receivable	1,744,810	2,426,753
Less: allowance for doubtful accounts	(12,124)	(20,728)
Accounts receivable, net	<u>1,732,686</u>	<u>2,406,025</u>

Accounts receivable of RMB1,040,521 and RMB1,256,289 was pledged as security for bank loans (Note 9) as of December 31, 2021 and 2022, respectively. Accounts receivable of RMB110,391 and RMB145,764 was pledged as security for finance lease and other financing obligations (Note 12) as of December 31, 2021 and 2022, respectively.

The following table presents the movement of the allowance for doubtful accounts:

	<u>Years ended December 31,</u>		
	<u>2020</u>	<u>2021</u>	<u>2022</u>
Balance at the beginning of the year	133	2,163	12,124
Allowance made during the year	2,032	10,070	7,744
Foreign exchange impact	(2)	(109)	860
Balance at the end of the year	<u>2,163</u>	<u>12,124</u>	<u>20,728</u>

Deferred Revenue

The opening and closing balances of the Company's deferred revenue are as following:

	<u>Deferred revenue</u>
Beginning balance as of January 1, 2022	135,900
Increase	<u>49,933</u>
Closing balance as of December 31, 2022	<u>185,833</u>

The difference between the opening and closing balances of the Company's deferred revenue primarily results from the timing difference between the satisfaction of the Company's performance obligation and the customer's payment. As of December 31, 2021 and 2022, the deferred revenue expected to be recognized as revenue after one year amounted to RMB44,908 and RMB29,703, respectively, were recorded in other long-term liabilities in the consolidated balance sheet. The amounts of revenue recognized during the years ended December 31, 2020, 2021 and 2022 from the opening deferred revenue balance was RMB96,084, RMB104,640 and RMB122,378, respectively.

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Remaining performance obligations

The Company enters into certain usage-based contracts for colocation and managed services in which revenues are based on the agreed usage-based fees as the actual services are rendered throughout the contract term. The Company elected to apply the practical expedient under ASC606-10-50-14(b) that allows the Company not to disclose the remaining performance obligations for variable considerations, which are charged based on the agreed unit price and number of racks in usage, in connection with these contracts with remaining durations ranging from 1 year to 14 years.

As of December 31, 2022, the revenues, excluding any variable considerations, expected to be recognized in future periods related to remaining performance obligations that are unsatisfied were as follows:

Revenue expected to be recognized	<u>RMB</u>
Within 1 year	1,525,645
After 1 year but within 2 years	1,296,684
After 2 years but within 3 years	1,137,459
After 3 years but within 4 years	1,004,562
After 4 years but within 5 years	735,522
After 5 years	<u>2,298,037</u>
Total	<u>7,997,909</u>

5 PROPERTY AND EQUIPMENT, NET

Property and equipment consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
At cost:		
Land	1,552,704	3,302,148
Buildings	12,178,017	13,847,692
Data center equipment	17,710,351	19,603,839
Leasehold improvement	8,230,992	8,444,282
Furniture and office equipment	137,691	167,410
Vehicles	4,606	5,619
	<u>39,814,361</u>	<u>45,370,990</u>
Less: Accumulated depreciation	<u>(6,425,293)</u>	<u>(9,269,587)</u>
	33,389,068	36,101,403
Construction in progress	7,234,435	10,827,984
	<u>40,623,503</u>	<u>46,929,387</u>
Less: Impairment provision	<u>—</u>	<u>(12,759)</u>
Property and equipment, net	<u>40,623,503</u>	<u>46,916,628</u>

The carrying amounts of the Company's property and equipment acquired under finance leases and other financing arrangement were RMB8,867,222 and RMB9,906,404 as of December 31, 2021 and 2022, respectively.

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Depreciation of property and equipment (including assets acquired under finance leases and other financing arrangement) was RMB1,543,130, RMB2,399,451 and RMB2,947,200 for the years ended December 31, 2020, 2021 and 2022, respectively, and included in the following captions:

	Years ended December 31,		
	2020	2021	2022
Cost of revenue	1,418,846	2,264,620	2,722,169
General and administrative expenses	120,604	129,128	218,567
Research and development expenses	3,680	5,703	6,464
	1,543,130	2,399,451	2,947,200

Property and equipment with net a book value of RMB4,479,259 and RMB12,721,652 was pledged as security for bank loans (Note 9) and other financing obligations (Note 12) as of December 31, 2021 and 2022, respectively.

6 INTANGIBLE ASSETS, NET

Intangible assets consisted of the following:

	Note	As of December 31,	
		2021	2022
Customer contracts	8	1,641,900	1,641,900
Licenses		15,782	15,782
Others		—	364
		1,657,682	1,658,046
Less: accumulated amortization		(375,046)	(610,337)
Intangible assets, net		1,282,636	1,047,709

The Company's customer contracts were acquired in business combinations (Note 8). Amortization of intangible assets was RMB68,688, RMB192,486 and RMB235,292 for the years ended December 31, 2020, 2021 and 2022, respectively.

Estimated future amortization expense related to these intangible assets is as follows:

Fiscal year ending December 31,	
2023	233,766
2024	226,908
2025	212,596
2026	206,405
2027	78,483
Thereafter	89,551
Total	1,047,709

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7 PREPAID LAND USE RIGHTS

Prepaid land use rights, representing the amounts paid and relevant costs incurred for the rights to use land in the PRC and Hong Kong SAR acquired before the adoption of ASC 842, consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Prepaid land use rights	716,492	28,246
Less: Accumulated amortization	(81,539)	(5,244)
Prepaid land use rights, net	<u>634,953</u>	<u>23,002</u>

Amortization of prepaid land use rights was RMB26,656, RMB24,961 and RMB6,582 for the years ended December 31, 2020, 2021 and 2022, respectively.

In the year ended December 31, 2022, the terms of certain land use right acquired in Hong Kong SAR were modified. Accordingly, the Company reassessed the classification of the modified land use right according to ASC 842 and determined that they meet the definition of finance lease. As a result, the related net balance of prepaid land use rights was reclassified to property and equipment due to the modification.

Prepaid land use rights with a net book value of RMB634,953 and RMB17,733 were pledged as security for bank loans (Note 9) as of December 31, 2021 and 2022, respectively.

8 ACQUISITIONS AND GOODWILL

The movement of goodwill is set out as below:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Balance at the beginning of the year	2,596,393	7,076,505
Addition during the year	4,463,504	—
Measurement period adjustments	16,608	—
Balance at end of year	<u>7,076,505</u>	<u>7,076,505</u>

Goodwill represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired in the acquisition. The goodwill is not deductible for tax purposes. Goodwill is assigned to the design, build-out and operation of data centers reporting unit.

No business combinations were consummated in the year ended December 31, 2022.

Business Combinations in 2021

Beijing 15 and Beijing 16 Acquisition

On April 30, 2021, the Company consummated an acquisition of all equity interests in a target group, which owns one in-service data center (Beijing 15) and one in-development data center (Beijing 16) by converting a vacant building located at the site of Beijing 15 in Beijing, China, from third parties. The provisional cash consideration for the equity interest was RMB3,176,354, subject to the final confirmation on certain conditions.

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Pursuant to a supplemental agreement entered into between the seller and the Company in October 2021, both parties agreed to revise the terms of payment of the purchase price consideration and its payment conditions, resulting in the reductions of the purchase price consideration of RMB7,007 and RMB205,000 based on achievement of conditions during the years ended December 31, 2021 and 2022, respectively. The reductions were recognized as gain from purchase price adjustment in the consolidated statement of operations for the years ended December 31, 2021 and 2022, respectively.

The amounts of net revenue and net loss of the target group included in the Company's consolidated statements of operations from the acquisition date to December 31, 2021 were RMB354,281 and RMB23,663, respectively.

Beijing 20, Beijing 21, Beijing 22 and Beijing 23 Acquisition

On December 17, 2021, the Company consummated an acquisition of 90% equity interests in a target group, which owns four data center projects (Beijing 20, Beijing 21, Beijing 22 and Beijing 23) in Beijing, China, from third parties for an aggregate cash consideration of RMB1,303,714.

The amounts of net revenue and net loss of the target group included in the Company's consolidated statements of operations from the acquisition date to December 31, 2021 were immaterial.

Other Business Combinations

In the year ended December 31, 2021, the Company also consummated other acquisitions of data center projects, including Beijing 17, Beijing 18, Beijing 19, Shenzhen 9 and Shenzhen 10, for an aggregate provisional cash consideration of RMB768,107.

The amounts of net revenue and net loss of the target companies included in the Company's consolidated statements of operations from the acquisition date to December 31, 2021 were immaterial.

Business Combinations in 2020

Beijing 10, Beijing 11 and Beijing 12 Acquisition

On June 5, 2020, the Company consummated an acquisition of all equity interests in a target group from third parties. The target group owns three data center projects ("Beijing 10, Beijing 11 and Beijing 12") in Beijing, China. Pursuant to the share purchase agreement, the considerations included purchase price adjustments resulting from the differences between the fair value of certain assets and liabilities on the date of acquisition compared to the estimated fair value used to determine the closing considerations. The Company initially estimated the considerations to be RMB847,586 (including contingent considerations of RMB130,720).

The amounts of net revenue and net profit of the target group included in the Company's consolidated statements of operations from the acquisition date to December 31, 2020 amounted to RMB281,926 and RMB14,083, respectively.

Beijing 9 Acquisition

On December 18, 2020, the Company consummated an acquisition of all equity interests in a target company from a third party for an aggregate cash consideration of RMB816,969 (including contingent considerations of RMB463,496). The target entity owns a data center project ("Beijing 9") in Beijing, China.

The amounts of net revenue and net profit of the target entity included in the Company's consolidated statements of operations from the acquisition date to December 31, 2020 were immaterial.

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Shanghai 19 Acquisition

On November 17, 2020, the Company consummated an acquisition of all equity interests in a target group from third parties for an aggregate cash consideration of RMB62,480. The target group owns a data center project (“Shanghai 19 Phase I and II”) in Shanghai, China.

The amounts of net revenue and net profit of the target entity included in the Company’s consolidated statements of operations from the acquisition date to December 31, 2020 were immaterial.

The allocations of purchase price as of the date of acquisitions for the years ended December 31, 2020 and 2021 are summarized as follows.

	<u>2020</u>	<u>2021</u>
	<u>Note (i)(ii)(iii)</u>	<u>Note (iv)(v)</u>
Fair value of consideration	1,660,685	5,230,362
Effective settlement of pre-existing relationships upon consolidation	(31,229)	20,000
Other net assets acquired	(547,815)	(256,650)
Identifiable intangible assets	(449,600)	(689,800)
Deferred tax liabilities	75,120	159,592
Total identifiable net assets	<u>(922,295)</u>	<u>(786,858)</u>
Goodwill	<u>707,161</u>	<u>4,463,504</u>

Note (i): Other net assets acquired primarily include property and equipment of RMB2,783,257, accounts payable of RMB1,133,760 and finance lease and other financing obligations of RMB1,362,103.

Note (ii): Identifiable intangible assets acquired consisted of customer contracts of RMB449,600 with estimated useful lives from 6.5 to 12.1 years.

Note (iii): During the one-year measurement period from the acquisition date, the Company recorded adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill of RMB55,462 in the year ended December 31, 2020 and increase to goodwill of RMB16,608 in the years ended December 31, 2021, respectively. The adjustments were a result of information obtained subsequent to the Company’s initial reporting of provisional amounts in accordance with ASC 805, *Business Combinations*.

Note (iv): Other net assets acquired primarily included property and equipment of RMB2,974,715, accounts receivable of RMB224,307, accounts payable of RMB412,380, short-term borrowings of RMB461,494, long-term borrowings of RMB840,000 and finance lease and other financing obligations of RMB1,463,851.

Note (v): Identifiable intangible assets acquired consisted of customer contracts of RMB689,800 with estimated useful lives from 5.7 to 7 years.

Supplemental pro forma financial information as if the acquisitions had occurred as of the beginning of the comparable prior annual reporting period has not been provided as each of the acquisitions, individually and in aggregate, were not material to the Company’s results of operations during the respective year of the acquisitions.

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Asset Acquisitions

In 2020, 2021 and 2022, the Company consummated several acquisitions of certain target entities. These target entities did not meet the definition of a business as of the acquisition date in accordance with ASC 805 *Business Combinations*, and the acquisitions were accounted for as assets acquisitions. The primary assets acquired were properties self-owned or under finance leases, equipment and leasehold improvements. The Company has elected an accounting policy to measure non-controlling interests in asset acquisition at carryover basis, which is based on the carrying amounts within the acquired entity. Non-controlling interests with a total amount of nil, RMB56,519 and nil was recognized upon these acquisitions in the year ended December 31, 2020, 2021 and 2022, respectively.

9 LOANS AND BORROWINGS

The Company's borrowings consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Short-term borrowings	4,639,674	1,652,196
Current portion of long-term borrowings	1,308,339	1,971,771
Sub-total	5,948,013	3,623,967
Long-term borrowings, excluding current portion	18,284,514	23,518,058
Total loans and borrowings	<u>24,232,527</u>	<u>27,142,025</u>

Short-term borrowings

The Company's short-term borrowings consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Unsecured short-term loans and borrowings	512,387	1,388,192
Secured short-term loans and borrowings	4,127,287	264,004
	<u>4,639,674</u>	<u>1,652,196</u>

Short-term borrowings were secured by the following assets:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Accounts receivable	65,985	—
Property and equipment, net	397,285	245,543
Operating lease ROU assets	81,397	—
	<u>544,667</u>	<u>245,543</u>

As of December 31, 2021 and 2022, short-term borrowings of the consolidated VIEs of RMB18,460 and nil, respectively, were guaranteed by GDS Holdings Limited and its subsidiaries.

The weighted average interest rates of short-term borrowings outstanding as of December 31, 2021 and 2022 were 4.91% and 7.94% per annum, respectively.

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Long-term borrowings

The Company's long-term borrowings consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Unsecured long-term loans and borrowings	60,000	—
Secured long-term loans and borrowings	19,532,853	25,489,829
	<u>19,592,853</u>	<u>25,489,829</u>

Long-term borrowings were secured by the following assets:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Accounts receivable	974,536	1,256,289
Other current assets	—	97,049
Property and equipment, net	2,629,904	11,103,541
Prepaid land use rights, net	634,953	17,733
Operating lease ROU assets	1,537,304	3,607,506
Other non-current assets	14,691	23,912
	<u>5,791,388</u>	<u>16,106,030</u>

As of December 31, 2021 and 2022, long-term borrowings of the consolidated VIEs of RMB1,060,250 and RMB885,854, respectively, were guaranteed by GDS Holdings Limited and its subsidiaries.

In addition to the above assets pledged for secured borrowings, some of the borrowings were guaranteed by the equity interests of the subsidiaries of GDS Holdings Limited.

The weighted average interest rates of long-term borrowings as of December 31, 2021 and 2022 were 5.53% and 5.44% per annum, respectively, taking into the consideration of debt issuance costs incurred relating to the facilities.

The outstanding long-term borrowings mature serially from 2023 to 2037. The aggregate maturities of the above long-term borrowings for each for the five years and thereafter subsequent to December 31, 2022 are as follows:

	<u>Long-term borrowings</u>
Twelve months ending December 31,	
2023	1,971,771
2024	3,454,547
2025	2,676,381
2026	3,231,850
2027	4,235,557
Thereafter	<u>9,919,723</u>
	<u>25,489,829</u>

The Company entered into secured loan agreements with various financial institutions for project development and working capital purpose with terms ranging from 1 to 15 years.

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As of December 31, 2022, the Company had total working capital and project financing credit facilities of RMB37,767,305 from various financial institutions, of which the unused amount was RMB10,730,455. As of December 31, 2022, the Company had drawn down RMB27,036,850 from such facilities, of which RMB1,389,256 (net of debt issuance costs of RMB3,526) was recorded in short-term loans and borrowings and RMB25,489,829 (net of debt issuance costs of RMB154,239) was recorded in long-term loans and borrowings, respectively. In addition, the Company also had other short-term loans and borrowings from non-financial institutions which were assumed through certain acquisitions of subsidiaries. Drawdowns from the credit facility from financial institutions are subject to the approval of the banks and are subject to the terms and conditions of each agreement.

More specifically, the terms of these secured loan facility agreements generally include one or more of the following conditions. If any of the below conditions were to be triggered, the Company could be obligated to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule.

Specifically, the secured loan facilities can be divided into onshore project loan facilities and offshore project loan facilities (including Hong Kong SAR and Malaysia).

Below are the terms and conditions for onshore project loan facilities:

- (i) STT GDC Pte. Ltd. (a) is not or ceases to, directly or indirectly, be the beneficial owner of at least 25% of the issued share capital of GDS Holdings, or (b) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 25% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of GDS Holdings, or (c) is not or ceases to be the single largest shareholder of GDS Holdings;
- (ii) GDS Holdings and GDS Investment Company are not or cease to be, directly or indirectly, the legal and beneficial owner of 100% of the equity interests of, and have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control, GDS Investment Company (in the case of GDS Holdings), GDS Beijing, Global Data Solutions Co., Ltd. (“GDS Suzhou”), a subsidiary company of GDS Beijing and the relevant borrowing subsidiaries;
- (iii) Management HoldCo ceases to, directly or indirectly, own at least 100% of the equity interests of and have the power to control GDS Beijing or GDS Suzhou;
- (iv) GDS Beijing, GDS Suzhou and the relevant borrowing subsidiaries cease to, directly or indirectly, be the legal and beneficial owner of 100% of the equity interests of, and have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control, their consolidated subsidiaries;
- (v) GDS Holdings is not or cease to be, directly or indirectly, the legal and beneficial owner of all equity interests held by it in the relevant borrowing subsidiaries, or have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control the relevant borrowing subsidiaries;
- (vi) there are changes in the shareholding structure of a principal operating subsidiary of GDS Holdings, as defined in the relevant loan facility agreement; and
- (vii) the IDC license of GDS Beijing, the borrowing subsidiaries, other affiliated entities, or the authorization by GDS Beijing to one such subsidiary to operate the data center business and provide IDC services under the auspices of the IDC license held by GDS Beijing, is cancelled or fails to be renewed on or before the expiry date.

Below are the terms and conditions for offshore project loan facilities:

- (i) STT GDC Pte. Ltd. (a) is not or ceases to, directly or indirectly, be the beneficial owner of at least 25% of the issued share capital of GDS Holdings, or (b) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 25% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of GDS Holdings, or (c) is not or ceases to be the single largest shareholder of GDS Holdings;
- (ii) GDS Holdings is not or cease to be, directly or indirectly, the legal and beneficial owner of 100% of the issued share capital of, or have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to control the relevant borrowing subsidiaries;

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(iii) GDS Holdings (a) is not or ceases to be, directly or indirectly, the single largest shareholder of, (b) is not or ceases to be, directly or indirectly, the beneficial owner of at least 40% of the issued share capital of, or (c) does not or ceases to have the power (whether by way of ownership of shares, proxy, contract, agency or otherwise) to cast, or control the casting of, at least 50.1% of the votes that may be cast at a meeting of the board of directors (or similar governing body) of the relevant borrowing subsidiaries;

(iv) DigitalLand Holdings Limited is not or ceases to be, directly or indirectly, the beneficial owner of 100% of the issued share capital of the relevant borrowing subsidiaries; and

(v) There are changes in the shareholding structure of a principal operating subsidiary of GDS Holdings, as defined in the relevant loan facility agreement.

There are certain other events in the loan facility agreements the occurrence of which could obligate GDS Holdings to notify the lender or repay any loans outstanding immediately or on an accelerated repayment schedule, including, among others, if the borrowing subsidiary fails to use the loan in accordance with the use of proceeds as provided in the loan facility agreement, the borrowing subsidiary violates or fails to perform any of its commitments under the loan facility agreement, or if GDS Holdings fails to maintain its shares listed on at least one of the following stock exchanges before the maturity date under the relevant loan facility agreement : (i) Nasdaq; or (ii) The Singapore Exchange Securities Trading Limited; or (iii) The Hong Kong Stock Exchange; or (iv) any other stock exchange acceptable to the lender. In addition, the terms of these loan agreements include financial covenants that limit certain financial ratios, such as the interest coverage, gross leverage ratio and tangible net worth, during the relevant period, as defined in the agreements. The terms of these loan agreements also include cross default provisions which could be triggered if the Company (i) fails to repay any financial indebtedness in an aggregate amount equivalent to or exceeding US\$4,500 thousand, or, in some cases, RMB50,000, when due or within any originally applicable grace period; (ii) fails to repay any financial indebtedness or perform any of its obligations under any agreement which could have a material adverse effect on its performance of the loan facility agreements; (iii) fails to repay any financial indebtedness raised with any financial institution; or (iv) fails to perform any loan facility agreement with any financial institution which could result in immediate or accelerated repayment of the financial indebtedness or downgrading of the borrowing subsidiary by any credit rating agency administered by the People’s Bank of China (“PBOC”) in accordance with the regulations promulgated by PBOC governing loan market rating standards. As of December 31, 2022, the Company was in compliance with all of the abovementioned covenants.

10 CONVERTIBLE BONDS PAYABLE

The convertible notes payable consisted of following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Convertible Notes due 2025	1,895,846	2,083,829
Convertible Notes due 2029	—	4,294,985
Total	<u>1,895,846</u>	<u>6,378,814</u>
Including:		
- Current	—	2,083,829
- Non-current	1,895,846	4,294,985

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The interest expenses related to the convertible notes are as follows:

	Years ended December 31,		
	2020	2021	2022
Contractual interest	41,355	38,720	48,996
Amortization of issuance cost	12,274	11,617	16,813
Total interest expenses	<u>53,629</u>	<u>50,337</u>	<u>65,809</u>

Convertible Notes due June 1, 2025 issued by the Company (“Convertible Bonds due 2025”)

On June 5, 2018, the Company completed its issuance of Convertible Bonds due 2025 in an aggregate principal amount of US\$300 million. The related issuance costs of US\$8,948 thousand were deducted from principal of the Convertible Bonds due 2025 and amortized over the period from issuance to the first put date (i.e. June 1, 2023) using the effective interest rate method.

The key terms of the Convertible Bonds due 2025 are summarized as follows:

Maturity Date

- June 1, 2025

Interest

- 2.0% per annum, accruing from June 5, 2018 (computed on the basis of a 360-day year composed of twelve 30-day months), payable semiannually in arrears on June 1 and December 1 of each year

Repurchase of Notes

- Holders will have the right to require the Company to repurchase for cash all of their notes, or any portion of the principal thereof that is equal to US\$1 thousand or an integral multiple of US\$1 thousand, on June 1, 2023 or if a fundamental change occurs at any time.

Tax redemption

- The Company may redeem, at its option, all but not part of the Convertible Bonds due 2025 if it becomes obligated to pay to the holder of any note “additional amounts” (which are more than a de minimis amount) as a result of any change in tax law at the price equal to 100% of the principal amount together with accrued and unpaid interest. Upon receiving notice of redemption, each holder will have the right to elect to: convert its notes; or not have its notes redeemed and GDS Holdings will not pay any additional amounts as a result of such change in tax law.

Conversion rights

- Holders may convert their notes at their option at any time prior to the close of business on the third scheduled trading day immediately preceding the maturity date.
- The conversion rate is initially 19.3865 American Depositary Shares (“ADSs”) of the Company per US\$1 thousand principal amount of notes (equivalent to an initial conversion price of approximately US\$51.58 per ADS), and subject to changes under certain anti-dilution conditions.

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The Company determined that the embedded conversion option of the Convertible Bonds due 2025 was not required to be accounted for as an embedded derivative pursuant to ASC 815 *Derivatives and Hedging*, because it is both indexed to the Company's own stock and classified in shareholders' equity. The Company also determined there was no other embedded derivative to be separated from the Convertible Bonds due 2025.

In the year ended December 31, 2020, Convertible Bonds with principal amount of US\$10 thousand were converted into ordinary shares as the holders exercised their conversion option. The Company recorded additional paid-in capital of RMB65 upon conversion. As of December 31, 2021 and 2022, the outstanding principal amount of Convertible Bonds due 2025 was US\$299,990 thousand. As of December 31, 2022, the balance of Convertible Bonds due 2025 was presented as current liability due to holder's repurchase option exercisable on June 1, 2023.

Convertible Notes due March 8, 2029 issued by the Company (“Convertible Bonds due 2029”)

On March 8, 2022, the Company completed its issuance of Convertible Bonds due 2029 in an aggregate principal amount of US\$620 million. The related issuance costs of US\$3,950 thousand were deducted from principal of the Convertible Bonds due 2029 and amortized over the period from issuance to the first put date (i.e. March 8, 2027) using the effective interest rate method.

The key terms of the Convertible Bonds due 2029 are summarized as follows:

Maturity Date

- March 8, 2029

Interest

- 0.25% per annum, computed on the basis of a 360-day year composed of twelve 30-day months, payable semiannually in arrears on March 8 and September 8 of each year

Repurchase of Notes

- Holders will have the right to require the Company to repurchase for cash all of their notes, or any portion of the principal thereof that is in denominations of US\$200 thousand and integral multiples of US\$1 thousand in excess thereof, on March 8, 2027 or if a fundamental change occurs at any time.

Tax redemption

- The Company may redeem, at its option, all but not part of the Convertible Bonds due 2029 if it becomes obligated to pay to the holder of any note “additional amounts” (which are more than a de minimis amount) as a result of any change in tax law at the price equal to 100% of the principal amount together with accrued and unpaid interest. Upon receiving notice of redemption, each holder will have the right to elect to: convert its notes; or not have its notes redeemed and GDS Holdings will not pay any additional amounts as a result of such change in tax law.

Conversion rights

- Holders may convert their notes at their option at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting Holder elects to receive Ordinary Shares in lieu of any ADSs) immediately preceding the maturity date.

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- The conversion rate is initially 20 ADSs of the Company per US\$1 thousand principal amount of notes (equivalent to an initial conversion price of US\$50 per ADS), and subject to changes under certain anti-dilution conditions.

Forced conversion

- If (1) the Daily VWAP per ADS (or, if the ADSs are no longer traded on The NASDAQ Global Market, of the Ordinary Shares) exceeds 150% of the Conversion Price (the “Agreed Threshold”) on any twenty trading days (whether or not consecutive) during any thirty consecutive trading day period beginning on or after the 5th anniversary of March 8, 2022 (such thirty 30 consecutive trading day period being the “Forced Conversion Qualification Period”), (2) the Daily VWAP per ADS (or, if the ADSs are no longer traded on The NASDAQ Global Market, of the Ordinary Shares) for each of the last five consecutive trading days during the Forced Conversion Qualification Period is not lower than the Agreed Threshold and (3) the aggregate average daily dollar trading volume (as reported on Bloomberg) of (x) the ADSs on The NASDAQ Global Market and (y) the Ordinary Shares on the Hong Kong Stock Exchange during such Forced Conversion Qualification Period is at least US\$70.0 million, then, the Company shall have the right (but not the obligation) to force the conversion of all (and not some only) of the outstanding principal amount held by such Holders into the Company’s shares at the then applicable Conversion Rate.

The Company determined that the embedded conversion option of the Convertible Bonds due 2029 was not required to be accounted for as an embedded derivative pursuant to ASC 815, *Derivatives and Hedging*, because it is both indexed to the Company’s own stock and classified in shareholders’ equity. The Company also determined there was no other embedded derivative to be separated from the Convertible Bonds due 2029.

The effective interest rate of the Convertible Bonds due 2025, after considering the related issuance cost, was 2.65% as of December 31, 2021 and 2022, respectively. The effective interest rate of the Convertible Bonds due 2029, after considering the related issuance cost, was 0.38% as of December 31 2022.

As of December 31, 2021 and 2022, accrued interests of RMB3,187 and RMB6,870, respectively, were recorded in accrued expenses.

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11 ACCOUNTS PAYABLE AND ACCRUED EXPENSES AND OTHER PAYABLES

Accounts payable consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Accounts payable for operating expenses	328,331	518,788
Accounts payable for purchase of property and equipment	3,573,468	2,574,096
	<u>3,901,799</u>	<u>3,092,884</u>

Accrued expenses and other payables consisted of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Consideration payables for acquisitions	1,855,261	183,220
Accrued payroll and welfare benefits	184,220	200,394
Accrued interest expenses	141,642	70,251
Income tax payable	139,667	202,589
Other tax payables	40,986	54,981
Accrued debt issuance costs and other financing costs	25,930	52,254
Amount due to related parties	24,144	16,995
Others	267,705	236,277
	<u>2,679,555</u>	<u>1,016,961</u>

12 LEASES

The Company enters into lease arrangements primarily for data center spaces, office spaces and equipment.

Data center buildings and land leases

During the year ended December 31, 2022, the Company entered into lease agreements with the landlords to lease the building and land, including those acquired through acquisition of subsidiaries, for certain data centers. The Company assessed the lease classification of the building and land components separately at the commencement date. During the year ended December 31, 2022, the Company recorded additional finance lease liabilities of RMB460,810 and operating lease liabilities of RMB149,879 through new lease agreements and acquisition of subsidiaries.

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The components of lease cost are as follows:

	<u>Years ended December 31,</u>		
	<u>2020</u>	<u>2021</u>	<u>2022</u>
Finance lease cost:			
- Amortization of right-of-use assets	423,075	546,437	619,675
- Interest on lease liabilities	465,692	592,835	632,183
Operating lease cost	195,869	313,752	402,514
Short-term lease cost	19,987	23,715	44,873
Variable lease cost (Note)	<u>(55,599)</u>	<u>(786)</u>	<u>(47,729)</u>
Total lease cost	<u>1,049,024</u>	<u>1,475,953</u>	<u>1,651,516</u>

Note: During the years ended December 31, 2020, 2021 and 2022, the Company was granted lease concessions of RMB55,188, nil and RMB45,291, respectively, by certain landlords due to the effects of the COVID-19 pandemic. The lease concessions were primarily in the form of rent reduction. Such concessions were recognized as variable lease cost (credit) in the period when the concession was granted. In addition, the Company recognized variable lease cost (credit) of RMB411, RMB786 and RMB2,438 in the years ended December 31, 2020, 2021 and 2022, respectively, for certain finance lease and other financing obligations with floating interest rate.

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Supplemental cash flow information related to leases is as follows:

	Years ended December 31,		
	2020	2021	2022
Cash paid for amounts included in measurement of lease liabilities (Note):			
- Operating cash flows from finance leases	(389,679)	(591,189)	(532,323)
- Operating cash flows from operating leases	(141,480)	(236,589)	(244,643)
- Financing cash flows from finance leases	(198,234)	(265,481)	(1,138,542)
Non-cash information on lease liabilities arising from obtaining ROU assets:			
- Finance leases	1,099,698	25,731	264,958
- Operating leases	553,154	368,069	151,709
Non-cash information on lease liabilities and ROU assets derecognized for termination of leases:			
- Finance leases	—	—	524,180
- Operating leases	—	—	286,774
Gain on early termination of leases:			
- Finance leases	—	—	33,453
- Operating leases	—	—	10,445

Note: The above table does not include cash paid for purchase of land use rights and initial direct costs of leases of RMB744,761, RMB875,162 and RMB760,610 in the years ended December 31, 2020, 2021 and 2022, respectively, which are included in “Payments for purchase of property and equipment and land use rights” in the consolidated statements of cash flows.

The financing cash flows from finance leases include the payment of principal due to early termination of certain financing arrangements for data center equipment.

Weighted average remaining lease term and weighted average discount rate for leases, excluding prepaid land use rights, are as follows:

	As of December 31,	
	2021	2022
Weighted average remaining lease term:		
- Finance leases	14.8	13.8
- Operating leases	13.7	12.8
Weighted average discount rate:		
- Finance leases	6.69 %	6.68 %
- Operating leases	5.87 %	5.89 %

Weighted average discount rate for other financing obligations is 7.53% and 8.18% as of December 31, 2021 and 2022, respectively.

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Maturities of lease and other financing obligations were as follows:

	As of December 31, 2021					As of December 31, 2022				
	Finance lease obligations	Other financing obligations	Total of finance lease and other financing obligations	Operating lease obligations	Total	Finance lease obligations	Other financing obligations	Total of finance lease and other financing obligations	Operating lease obligations	Total
Within 1 year	621,196	701,350	1,322,546	260,935	1,583,481	670,992	330,773	1,001,765	272,796	1,274,561
After 1 year but within 2 years	640,445	713,338	1,353,783	246,970	1,600,753	666,487	1,373,214	2,039,701	250,716	2,290,417
After 2 years but within 3 years	672,306	714,084	1,386,390	249,383	1,635,773	708,642	450,691	1,159,333	206,489	1,365,822
After 3 years but within 4 years	714,035	454,918	1,168,953	212,829	1,381,782	729,283	428,175	1,157,458	169,014	1,326,472
After 4 years but within 5 years	735,219	417,214	1,152,433	178,627	1,331,060	753,410	407,211	1,160,621	151,160	1,311,781
After 5 years	7,623,211	473,110	8,096,321	1,935,590	10,031,911	6,768,112	209,784	6,977,896	1,582,879	8,560,775
Total	11,006,412	3,474,014	14,480,426	3,084,334	17,564,760	10,296,926	3,199,848	13,496,774	2,633,054	16,129,828
Less: total future interest	(4,192,322)	(608,178)	(4,800,500)	(1,055,035)	(5,855,535)	(3,694,302)	(421,227)	(4,115,529)	(839,319)	(4,954,848)
Less: estimated construction costs	—	(47,241)	(47,241)	—	(47,241)	—	(11,124)	(11,124)	—	(11,124)
Present value of lease and other financing obligations	6,814,090	2,818,595	9,632,685	2,029,299	11,661,984	6,602,624	2,767,497	9,370,121	1,793,735	11,163,856
Including:										
- Current portion			699,145	145,739	844,884			453,855	175,749	629,604
- Non-current portion			8,933,540	1,883,560	10,817,100			8,916,266	1,617,986	10,534,252

As of December 31, 2022, the Company has additional leases, primarily for data center buildings, that have not yet commenced with total future lease payments of RMB4,933,129. These leases are expected to commence after December 31, 2022 with lease terms of 1 to 30 years.

Financing transaction of Hong Kong 4 (“HK4”)

During the year ended December 31, 2022, the Company entered into a financing transaction with consideration of RMB886,312 with a third party for transferring the assets of HK4, which mainly includes the land. The transaction is accounted for as a financing transaction since the control of the assets are not considered transferred. Accordingly, the Company did not derecognize the transferred assets and the consideration received was recognized as other financing obligations.

Lease and other financing obligations were secured by the following assets:

	As of December 31,	
	2021	2022
Accounts receivable	110,391	145,764
Property and equipment, net	1,452,070	1,372,568
	<u>1,562,461</u>	<u>1,518,332</u>

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13 OTHER LONG-TERM LIABILITIES

Other long-term liabilities consisted of the following:

	As of December 31,	
	2021	2022
Consideration payable for acquisitions	261,000	7,644
Asset retirement obligations	96,862	102,591
Deferred revenue – non-current (Note 4)	44,908	29,703
Deferred government grants	22,245	30,741
Others	114,285	97,574
Total	539,300	268,253

14 REDEEMABLE PREFERRED SHARES

On March 27, 2019 (the “Issue Date”), GDS Holdings completed its issuance of 150,000 Convertible Preferred Shares (“redeemable preferred shares”) to an investor at the subscription price of US\$1 thousand per share with total consideration of US\$150 million.

The movement of redeemable preferred shares is set out as below:

	Redeemable preferred shares
Balance at January 1, 2020	1,061,981
Accrual of redeemable preferred shares dividends	52,709
Settlement of redeemable preferred shares dividends	(65,489)
Foreign exchange impact	(68,291)
Balance at December 31, 2020 and January 1, 2021	980,910
Accrual of redeemable preferred shares dividends	49,073
Settlement of redeemable preferred shares dividends	(49,221)
Foreign exchange impact	(22,282)
Balance at December 31, 2021 and January 1, 2022	958,480
Accrual of redeemable preferred shares dividends	51,212
Settlement of redeemable preferred shares dividends	(51,578)
Foreign exchange impact	88,898
Balance at December 31, 2022	1,047,012

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Key terms of the convertible preferred shares

Dividends

The holders of the preferred shares are entitled to receive, in priority to the holders of the ordinary shares, cumulative preferred share dividends which are payable quarterly in arrears on March 15, June 15, September 15 and December 15, commencing on June 15, 2019 (each such payment date being a “Regular Dividend Payment Date”). The dividends are 5.0% per annum of the respective preferred shares Stated Value (i.e. the subscription price of preferred shares plus any accrued dividends that are not paid on Regular Dividend Payment Date) (and shall be adjusted to an amount equal to the ordinary share dividend rate if higher). The dividend rate will increase to 7.0% per annum and further increase by 50 basis points each quarter thereafter if the Company has not redeemed all of the preferred shares outstanding as of the eighth anniversary of the Issue Date. The dividends are computed on a basis of a 360-day year and the actual number of days elapsed. Dividends may, at the option of the Company, be paid in cash only, be paid in cash or in additional preferred shares, or a combination thereof.

Conversion

The holders of preferred shares have the right to convert any or all of their holdings of preferred shares Stated Value into Class A Ordinary Shares based on the conversion rate then in effect.

In addition, if, at any time beginning on March 15, 2022, (i) the volume-weighted average price (“VWAP”) per ADS of the GDS Holdings equals or exceeds US\$53.40 (adjusted as according to anti-dilution provisions) for at least 20 trading days in any period of 30 consecutive trading days and (ii) the average daily trading volume of the ADS for such 20 qualifying trading days is at least US\$10 million in the aggregate, at the Company’s election, all of the preferred shares then outstanding shall be converted into a number of Class A Ordinary Shares based on the conversion rate then in effect.

The initial conversion rate is corresponding to a conversion price of US\$35.60 per ADS, and will be subject to adjustments for any split, subdivision, combination, consolidation, recapitalization or similar event.

Liquidation preference

Upon a liquidation, after satisfaction of all liabilities and obligations to creditors of the Company and before any distribution or payment shall be made to holders of ordinary shares, each holder of preferred shares shall be entitled to receive an amount per preferred share equal to the greater of: (1) the Stated Value of preferred shares plus any dividends accumulated but unpaid thereon after the immediately preceding Regular Dividend Payment Date to but excluding the date of liquidation; (2) the payment such holders would have received had such holders, immediately prior to such liquidation converted their preferred shares into Class A Ordinary Shares.

Optional Redemption by the Company

The preferred shares may be redeemed, in whole or in part, at any time after March 15, 2027, at the option of the Company at a redemption price per share equal to the sum of the Stated Value per preferred share to be redeemed plus an amount per share equal to accrued but unpaid dividends on such preferred shares after the immediately preceding Regular Dividend Payment Date to but excluding the date of redemption.

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Repurchase at the Option of the Holder Upon a Fundamental Change

Upon the occurrence of a Fundamental Change, as defined in the share subscription agreement, each holder of preferred shares shall have the right to require the Company to repurchase all or any portion of such holder's preferred shares at a purchase price per preferred share equal to the greater of

- (i) the sum of (x) 100% multiplied by the Stated Value per preferred share plus (y) an amount equal to accrued but unpaid dividends on such preferred share after the immediately preceding Regular Dividend Payment Date to but excluding the date of repurchase, plus (z) solely in the event that such Fundamental Change occurs prior to the third anniversary of the Issue Date, the present value of all undeclared dividends from the date of redemption to, and including, the third anniversary of the Issue Date, in each case, discounted to the date of redemption on the basis of actual days elapsed (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate, which is the yield to maturity at the time of computation of United States Treasury securities with a constant maturity, plus 50 basis points, and
- (ii) the amount of cash and/or other assets such holder would have received had such holder, immediately prior to the occurrence of such Fundamental Change, converted such preferred shares into Class A Ordinary Shares.

Financing for Redemption of Convertible Preferred Shares

In the event that any preferred shares remain outstanding from and after the tenth anniversary of the Issue Date, the holders of preferred shares constituting at least 90% of the preferred shares issued as of the Issue Date (as adjusted for any split, subdivision, combination, consolidation, recapitalization or similar event with respect to the preferred shares) shall have the right to require the Company to sell all or a portion of its business and/or to conduct other fundraising or refinancing activities, and use reasonable best efforts to consummate such sale or to issue equity or debt securities (or obtain other debt financing) in an amount sufficient to redeem in full in cash, and use best endeavors to as soon as reasonably practicable redeem in full in cash, all of the preferred shares then outstanding at a redemption price per share equal to the sum of the Stated Value per preferred share to be redeemed plus an amount per share equal to accrued but unpaid dividends on such preferred shares after the immediately preceding Regular Dividend Payment Date to but excluding the date of redemption.

Voting rights

The holders of the preferred shares have voting rights equivalent to the ordinary shareholders on an "if converted" basis. In addition, the Company shall not take certain actions without first obtaining the written consent or affirmative vote at a meeting called for that purpose by holders of at least 75% of the then outstanding preferred shares.

The Company has classified these preferred shares as mezzanine equity in the consolidated balance sheets since they are contingently redeemable upon a Fundamental Change or include liquidation preference provisions that are not solely within the Company's control. The Company evaluated the embedded conversion, call and put options in the preferred shares to determine if they require bifurcation and are accounted for as derivatives, and concluded that there were no embedded derivatives to be bifurcated from the preferred share pursuant to ASC 815.

The Company incurred issuance cost of US\$2,646 thousand for the issuance of such preferred shares, which was treated as an adjustment to the initial value of the redeemable preferred shares. The Company has elected to measure the redeemable preferred shares by recognizing changes in the redemption value immediately as they occur and adjust the carrying amount to equal the redemption value at the end of each reporting period. As a result, such issuance cost is immediately recognized as a change in redemption value and charged against retained earnings or, in the absence of retained earnings, by charges against additional paid-in capital.

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15 REDEEMABLE NON-CONTROLLING INTERESTS

In July 2020, the Company formed a joint venture (“JV”) to undertake a new data center project in Beijing (“Beijing 13” and “Beijing 14”, previously referred to as “Beijing 13” which was then split to two data center projects according to the design) with a private equity fund (“CPE Fund”) controlled by CITIC Private Equity Funds Management Co., Limited. The Company owns a 58% controlling interest in the JV, while CPE Fund owns 42%. On completion of the project and satisfaction of certain other conditions, the Company is required to acquire CPE Fund’s 42% equity interest in the JV, the consideration of which will be calculated based on the power capacity, sales contract with customers and the assets and liabilities of the JV at that time.

The non-controlling interest of JV is redeemable for cash when specified conditions are met, which are not events that are certain to occur. However, the occurrence of these conditions and therefore the Company’s redemption obligations are not solely within the control of the Company. Pursuant to ASC 480-10-S99 and the related guidance, the redeemable non-controlling interest in the JV is accounted for as temporary equity and measured at redemption value. The initial carrying amount of the redeemable non-controlling interests was the capital injection received from CPE Fund in July 2020. The change of the carrying amount of the redeemable non-controlling interests, other than the capital injection received and the net income or loss attributable to redeemable non-controlling interests, is recognized as accretion to redemption value of redeemable non-controlling interests in the consolidated statements of operations and charged against retained earnings or, in the absence of retained earnings, against additional paid-in capital.

In January 2022, the Company and CPE Fund re-negotiated the early exit terms and entered into a supplement agreement, pursuant to which the Company would purchase and CPE Fund would sell 42% equity interests it held in the JV for a total consideration of RMB593,801. As a result, the balance of redeemable non-controlling interest was immediately accreted to the redemption value of RMB593,801 and reclassified to accrued expenses and other payables. The consideration payable was fully settled in November 2022.

The change in the carrying amount of redeemable non-controlling interests is as follows:

	Year ended December 31,	
	2021	2022
Balance at beginning of the year	120,820	404,673
Capital injection from CPE Fund	208,801	—
Net loss attributable to redeemable non-controlling interests	(2,592)	(655)
Accretion to redemption value of redeemable non-controlling interests	77,644	10,801
Adjustment to the redemption value of redeemable non-controlling interests	—	178,982
Reclassification to current liability	—	(593,801)
Balance at end of the year	<u>404,673</u>	<u>—</u>

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16 DERIVATIVE FINANCIAL INSTRUMENTS

As of December 31, 2021 and 2022, the Company did not have outstanding interest rate swap contracts.

The following table reflects the location in the consolidated statements of operations and the amount of realized and unrealized gains/(losses) recognized for the derivative contracts not designated as hedging instruments for the years ended December 31, 2020, 2021 and 2022:

	Consolidated statements of operations location	Years ended December 31,		
		2020	2021	2022
Interest rate swap contracts (not designated as hedging instruments) — realized loss	Interest expenses	(19,814)	—	—
Interest rate swap contracts (not designated as hedging instruments) — unrealized gain	Interest expenses	10,039	—	—
		<u>(9,775)</u>	<u>—</u>	<u>—</u>

17 FAIR VALUE MEASUREMENT

The Company did not have financial assets or liabilities measured at fair value on a recurring basis as of December 31, 2021 and 2022.

Following is a description of the valuation techniques that the Company uses to measure fair value of other financial assets and financial liabilities:

- Short-term financial instruments (cash, restricted cash, accounts receivable and payable, short-term borrowings, and accrued expenses and other payables) — cost approximates fair value because of the short maturity period.
- Long-term borrowings — fair value is based on the amount of future cash flows associated with each debt instrument discounted at the Company’s current borrowing rate for similar debt instruments of comparable terms. The carrying values of the long-term borrowings approximate their fair values as all the long-term debt carry various interest rates which approximate rates currently offered by the Company’s bankers for similar debt instruments of comparable maturities.
- Convertible Bonds payable—the estimated fair value was RMB2,246,231 and RMB5,281,029 as of December 31, 2021 and 2022, respectively. The fair value of Convertible Bonds due 2025 was measured based on the price in the open market and the fair value of Convertible Bonds due 2029 was measured using Binomial Model.

Non-recurring fair value measurements

Certain long-lived assets of the Company may be measured at fair value on a non-recurring basis, if determined to be impaired. As of December 31, 2022, one of the Company’s data center level asset groups was measured at fair value of RMB60,000 based on unadjusted quoted price in active market (Level 1 Inputs) and impairment loss of long-lived assets of RMB12,759 was recognized for the amount of its carrying amount exceeding the fair value.

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18 ORDINARY SHARES

In June 2020, two investors, Hillhouse Capital (“Hillhouse”) and STT GDC, purchased, through a private placement, of US\$400 million and US\$105 million respectively of 62,153,848 newly issued Class A ordinary shares of the Company at a price equivalent to US\$65 per ADS (or US\$8.125 per share). The Company received net proceeds of US\$500,784 thousand (RMB3,533,285) from this private placement, after deducting underwriting commissions and other issuance costs.

On November 2, 2020, the Company successfully completed its secondary listing in Hong Kong and public offering of 160,000,000 Class A ordinary shares (or 20,000,000 ADSs) at a price of HK\$80.88 per share. On November 6, 2020, the underwriters had fully exercised their over-allotment option in respect of 24,000,000 shares (or 3,000,000 ADSs). The Company received net proceeds from this offering of RMB12,441,232, after deducting underwriting discounts and commissions and the offering expenses payable by the Company.

As of December 31, 2022, the Company’s outstanding share capital consisted of 1,456,842,655 Class A ordinary shares and 67,590,336 Class B ordinary shares. A holder of a Class A ordinary share is conferred one vote per share on any resolution tabled at the general meeting of GDS Holdings. A holder of a Class B ordinary share is entitled to 20 votes per share on resolutions tabled at the general meeting of GDS Holdings for (i) the election or removal of a simple majority, or six, of directors; and (ii) any change to Articles of Association (“AoA”) that would adversely affect the rights of Class B shareholders, and which are convertible into Class A ordinary shares, and will automatically convert into Class A ordinary shares under certain circumstances. Every Class B ordinary share shall automatically be re-designated and re-classified as a Class A ordinary share upon the occurrence of the automatic conversion events, including the first occur of William Wei Huang ceasing to have Beneficial Ownership in not less than 5% of the then issued share capital of the Company on an as converted basis, as defined in AoA.

19 SHARE-BASED COMPENSATION

Equity Incentive Plans

The Company adopted the 2014 Equity Incentive Plan (“the 2014 Plan”) in July 2014 for the granting of share options to key employees, directors and external consultants in exchange for their services. The total number of shares, which may be issued under the 2014 Plan, is 29,240,000 shares.

The Company adopted the 2016 Equity Incentive Plan (“the 2016 Plan”) in August 2016 for the granting of share options, stock appreciation rights and other stock-based award (collectively referred to as the “Awards”) to key employees and directors. The maximum aggregate number of ordinary shares, which may be subject to Awards under the Plan, is 56,707,560 ordinary shares, provided, however, that the maximum number of unallocated ordinary shares which may be issuable pursuant to Awards are subject to certain automatic approval mechanism up to 3% of total issued and outstanding ordinary shares of the Company, if and whenever the unallocated ordinary shares which may be subject to equity awards under the 2016 Plan accounts for less than 1.5% of the Company’s total issued and outstanding ordinary shares.

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A summary of the option activity is as follows:

	<u>Number of options</u>	<u>Weighted average exercise price (RMB)</u>	<u>Weighted average grant-date fair value per option (RMB)</u>
Options outstanding at December 31, 2019 and January 1, 2020	14,629,096	5.4	1.7
Granted	—		
Exercised	(14,222,096)	5.5	1.6
Forfeited	—		
Options outstanding at December 31, 2020 and January 1, 2021	407,000	5.1	1.6
Granted	—		
Exercised	(407,000)	5.1	1.6
Forfeited	—		
Options outstanding at December 31, 2021 and 2022	<u>—</u>		
Options vested and expected to be vested at December 31, 2022	<u>—</u>		

Total intrinsic value of options exercised was RMB633,606, RMB27,775 and nil, respectively, for the years ended December 31, 2020, 2021 and 2022.

Settlement of liability-classified restricted shares award

During the years ended December 31, 2020, 2021 and 2022, the Company issued 190,536, 178,280 and 460,272, respectively, fully vested restricted shares to its directors to settle a portion of their remuneration for services provided by the directors, which had been recorded in general and administrative expenses. The number of restricted shares issued was determined by the fair value of the restricted shares on the date of settlement and the share-settled portion of the liability of RMB10,089, RMB11,147 and RMB13,719 for the years ended December 31, 2020, 2021 and 2022, respectively.

Upon issuance of the shares to settle the obligation, equity is increased by the amount of the liability settled in shares and no additional share-based compensation expense was recorded.

Restricted shares to directors, officers and employees

In August 2020, August 2021 and August 2022, the Company granted non-vested restricted shares of 11,520,312, 11,929,608 and 21,488,048, respectively, to employees, officers and directors. The restricted share awards contained service and market conditions, or service and performance conditions, which are tied to the financial performance of the Company. For restricted shares granted, the value of the restricted shares was determined by the fair value of the restricted shares on the grant date, when all criteria for establishing the grant dates were satisfied. The value of restricted shares subject to service conditions and market conditions attached is recognized as the compensation expense using the graded-vesting method. The value of restricted shares with performance conditions attached is recognized as compensation expense using the graded-vesting method only when the achievement of performance conditions becomes probable. For restricted shares with market conditions, the probability to achieve market conditions is reflected in the grant date fair value.

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A summary of the restricted share activity is as follows:

	<u>Number of Shares</u>	<u>Weighted average grant- date fair value per share (RMB)</u>
Unvested at January 1, 2020	33,357,296	22.4
Granted	11,710,848	66.7
Vested	(12,684,640)	14.1
Forfeited	<u>(1,364,736)</u>	25.1
Unvested at December 31, 2020 and January 1, 2021	31,018,768	42.4
Granted	12,107,888	31.6
Vested	(12,632,104)	29.3
Forfeited	<u>(1,563,832)</u>	37.7
Unvested at December 31, 2021 and January 1, 2022	28,930,720	43.9
Granted	21,948,320	19.4
Vested	(5,015,992)	43.3
Forfeited	<u>(7,328,536)</u>	32.5
Unvested at December 31, 2022	<u>38,534,512</u>	32.2

The Company recognized share-based compensation expenses of RMB333,686, RMB391,275 and RMB290,815 for the years ended December 31, 2020, 2021 and 2022, respectively, for the restricted share awards. As of December 31, 2022, total unrecognized compensation expense relating to the unvested shares was RMB348,884. The expense is expected to be recognized over a weighted average period of 1.58 years using the graded-vesting attribution method. The Company did not capitalize any of the share-based compensation expenses as part of the cost of any asset for the years ended December 31, 2020, 2021 and 2022.

Total intrinsic value of restricted shares vested was RMB827,396, RMB674,147 and RMB132,123, respectively, for the years ended December 31, 2020, 2021 and 2022. Aggregate intrinsic value of unvested restricted shares as of December 31, 2022 was RMB691,740.

The fair value of the restricted shares granted is estimated on the date of grant using the Monte Carlo simulation model with the following assumptions used.

<u>Grant date:</u>	<u>August 2020</u>	<u>August 2021</u>	<u>August 2022</u>
Risk-free rate of return	0.14% - 0.19 %	0.07% - 0.33 %	2.82% - 2.98 %
Volatility	59.23 %	49.271% - 50.295 %	53.14% - 54.15 %
Expected dividend yield	0.00 %	0.00 %	0.00 %
Share price at grant date	US\$10.1475 (RMB70.5)	US\$7.45 (RMB48.2)	US\$3.3650 (RMB22.7)
Expected term	1 – 3 years	1 – 3 years	1 – 3 years

(1) Volatility

Expected volatility is assumed based on the historical volatility of the Company in the period equal to the expected term of each grant.

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(2) Risk-free interest rate

Risk-free rate equal to the United States Government Treasury Yield Rates for a term equal to the remaining expected term.

(3) Dividend yield

The dividend yield was estimated by the Company based on its expected dividend policy over the expected term of the restricted shares.

A summary of share-based compensation expenses for the years ended December 31, 2020, 2021 and 2022 is as follows:

	Years ended December 31,		
	2020	2021	2022
Costs of revenue	89,943	110,291	97,055
Selling and marketing expenses	54,204	53,560	41,685
General and administrative expenses	184,943	219,328	146,781
Research and development expenses	4,596	8,096	5,294
Total share-based compensation expenses	<u>333,686</u>	<u>391,275</u>	<u>290,815</u>

20 REVENUE

Net revenue consisted of the following:

	Years ended December 31,		
	2020	2021	2022
Colocation services	4,710,923	6,514,268	7,943,268
Managed service and others	1,005,945	1,300,136	1,374,623
Service revenue	5,716,868	7,814,404	9,317,891
Equipment sales	22,104	4,277	7,740
Total	<u>5,738,972</u>	<u>7,818,681</u>	<u>9,325,631</u>

21 INCOME TAX

Pursuant to the rules and regulations of the Cayman Islands, GDS Holdings is not subject to any income tax in the Cayman Islands in 2020. It was registered as a Hong Kong SAR tax resident in 2021 and subject to the Hong Kong SAR Profits Tax rate of 16.5% in 2021 and 2022.

Three PRC entities are entitled to PRC Corporate Income Tax (“CIT”) rate of 15% in those years that being recognized as “High and New Technology Enterprise” as long as the relevant requirements are satisfied. Certain PRC entities satisfying the criteria of “Small and Micro Businesses” enjoy lower income tax rates. All the other PRC subsidiaries and consolidated VIEs of the Company are subject to CIT rate of 25%.

The Company’s Hong Kong SAR subsidiaries are subject to the Hong Kong SAR Profits Tax rate of 16.5%. A two-tiered Profits Tax rates regime was introduced since year 2018 where the first HK\$2 million of assessable profits earned will be taxed at half the current tax rate (8.25%) whilst the remaining profits will continue to be taxed at 16.5%. There is an anti-fragmentation measure where each group will have to nominate only one entity in the group to benefit from the progressive rates.

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The Company's Singapore subsidiaries are subject to the Singapore CIT rate of 17%, except for one Singapore entity which was granted the Development and Expansion Incentive under the International Headquarters Award making it enjoy a concessionary CIT rate of 10% from March 1, 2022 to February 28, 2027 for its qualifying activities.

The Company's Malaysia, Indonesia and Macau SAR subsidiaries are subject to the Malaysia CIT rate of 24%, Indonesia CIT rate of 22% and Macau SAR CIT rate of 12%, respectively in 2021 and 2022.

The operating results before income tax and the provision for income taxes by tax jurisdictions for the years ended December 31, 2020, 2021 and 2022 are as follows:

	Years ended December 31,		
	2020	2021	2022
(Income) loss before income taxes:			
PRC	(19,765)	287,250	144,885
Other jurisdictions	568,201	661,502	844,998
Total loss before income taxes	<u>548,436</u>	<u>948,752</u>	<u>989,883</u>
Current tax expenses:			
PRC	210,503	290,924	375,388
Other jurisdictions	14	—	—
Total current tax expenses	<u>210,517</u>	<u>290,924</u>	<u>375,388</u>
Deferred tax benefits:			
PRC	(89,739)	(48,463)	(99,153)
Other jurisdictions	—	—	—
Total deferred tax benefits	<u>(89,739)</u>	<u>(48,463)</u>	<u>(99,153)</u>
Total income taxes expenses	<u>120,778</u>	<u>242,461</u>	<u>276,235</u>

The actual income tax expense reported in the consolidated statements of operations differs from the amount computed by applying the PRC statutory income tax rate to loss before income taxes due to the following:

	Years ended December 31,		
	2020	2021	2022
PRC enterprise income tax rate	25.0 %	25.0 %	25.0 %
Non-PRC resident enterprises not subject to income tax	(27.6)%	0.0 %	(1.4)%
Tax differential for entities in non-PRC jurisdiction	(1.3)%	(0.2)%	(1.0)%
Preferential tax rate	(0.3)%	0.6 %	0.7 %
Tax effect of current year permanent differences	1.0 %	(5.4)%	(3.7)%
Expiration of unused net operating losses	(1.3)%	(1.5)%	(1.6)%
Non-taxable income and non-deductible expenses	0.0 %	(14.4)%	(14.1)%
Gain from purchase price adjustment	2.5 %	0.2 %	5.2 %
Change in valuation allowance	(21.3)%	(31.0)%	(34.0)%
Return to provision adjustment	1.3 %	1.1 %	(3.0)%
	<u>(22.0)%</u>	<u>(25.6)%</u>	<u>(27.9)%</u>

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The components of deferred tax assets and liabilities are as follows:

	As of December 31,	
	2021	2022
Deferred tax assets:		
Allowance for accounts receivable	2,858	4,209
Government subsidy	5,561	7,685
Accrued expenses	47,068	54,223
Asset retirement obligation	24,167	27,696
Operating lease liabilities	467,734	411,972
Finance lease and other financing obligations	1,636,506	1,587,137
Net operating losses carry forwards	713,135	993,062
Other non-current assets	41,853	40,644
Other non-current liabilities	26,621	19,101
Total gross deferred tax assets	2,965,503	3,145,729
Valuation allowance on deferred tax assets	(775,528)	(1,131,256)
Deferred tax assets, net of valuation allowance	2,189,975	2,014,473
Deferred tax liabilities:		
Property and equipment	(1,687,122)	(1,811,897)
Intangible assets	(319,037)	(260,519)
Prepaid land use rights	(1,532)	(1,491)
Operating lease right-of-use assets	(711,444)	(1,101,324)
Other current assets	(18,622)	(20,619)
Total deferred tax liabilities	(2,737,757)	(3,195,850)
Net deferred tax liabilities	(547,782)	(1,181,377)
Analysis as:		
Deferred tax assets	186,496	228,999
Deferred tax liabilities	(734,278)	(1,410,376)
Net deferred tax liabilities	(547,782)	(1,181,377)

The following table presents the movement of the valuation allowance for the deferred tax assets:

	Years ended December 31,		
	2020	2021	2022
Balance at the beginning of the year	205,976	328,821	775,528
Increase during the year	122,845	446,707	355,728
Balance at the end of the year	328,821	775,528	1,131,256

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As of December 31, 2022, the Company's net deferred tax assets were RMB228,999, which is net of a valuation allowance of RMB1,131,256. The deferred tax assets for net operating losses carry forwards and related valuation allowance were RMB993,062 and RMB922,240, respectively as of December 31, 2022. This valuation allowance was related to the deferred tax assets of certain subsidiaries and consolidated VIEs of the Company. These entities were in a cumulative loss position with net operating losses carry forwards which are subject to expiration. The Company evaluated the realizability of deferred tax assets associated with the Company's net operating losses carry forwards to determine whether there was more than a 50% likelihood that these deferred tax assets would be realized, based on the Company's expectations of future taxable income and timing of net operating losses carry forwards expirations. The ultimate realization of deferred income tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible or utilized. The Company considers the scheduled reversal of deferred income tax liabilities, projected future taxable income and tax planning strategies in making this assessment.

The net operating losses carry forwards of the Company's PRC subsidiaries and consolidated VIEs amounted to RMB3,770,802 as of December 31, 2022, of which RMB227,484, RMB274,836, RMB633,593, RMB1,237,229 and RMB1,397,660 will expire if unused by December 31, 2023, 2024, 2025, 2026 and 2027, respectively.

Uncertainties exist with respect to how the current income tax law in the PRC applies to the Company's overall operations, and more specifically, with regard to tax residency status. The 2008 Enterprise Income Tax Law (the "EIT Law") includes a provision specifying that legal entities organized outside the PRC are considered residents for Chinese income tax purposes if the place of effective management or control is within the PRC. The implementation rules to the EIT Law provide that non-resident legal entities are considered PRC residents if substantial and overall management and control over the manufacturing and business operations, personnel, accounting, properties, etc., occurs within the PRC. Despite the present uncertainties resulting from the limited PRC tax guidance on the issue, the Company does not believe that the legal entities organized outside the PRC should be treated as residents for EIT Law purposes. If the PRC tax authorities subsequently determine that GDS Holdings and its subsidiaries registered outside the PRC are deemed resident enterprises, GDS Holdings and its subsidiaries registered outside the PRC will be subject to the PRC income tax at a rate of 25%.

If the Company were to be non-resident for PRC tax purposes, dividends paid to it from profits earned by the PRC subsidiaries after January 1, 2008 would be subject to a withholding tax. The EIT Law and its relevant regulations impose a withholding tax at 10%, unless reduced by a tax treaty or agreement, for dividends distributed by a PRC-resident enterprise to its non-PRC-resident corporate investor for earnings generated beginning on January 1, 2008. Undistributed earnings generated prior to January 1, 2008 are exempt from such withholding tax. The Company has not recognized any deferred tax liability for the undistributed earnings of the PRC-resident enterprise as of December 31, 2021 and 2022, as the Company plans to permanently reinvest these earnings in the PRC. Each of the PRC subsidiaries does not have a plan to pay dividends in the foreseeable future and intends to retain any future earnings for use in the operation and expansion of its business in the PRC. As of December 31, 2022, the total amount of undistributed earnings from the PRC subsidiaries and the VIEs for which no withholding tax has been accrued and the unrecognized deferred tax liabilities were RMB1,853,885 and RMB279,873, respectively.

22 RESTRICTED NET ASSETS

Pursuant to the laws and regulations of the PRC, the PRC entities are required to allocate at least 10% of their after-tax profits, after making good of accumulated losses as reported in their PRC statutory financial statements, to the general reserve fund and have the right to discontinue allocations to the general reserve fund if the balance of such reserve has reached 50% of their registered capital. The general reserves are not available for distribution to the shareholders (except in liquidation) and may not be transferred in the form of loans, advances, or cash dividend.

These PRC entities are restricted in their ability to transfer the registered capital and general reserve fund to GDS Holdings in the form of dividends, loans or advances. The restricted portion amounted to RMB20,939,896 and RMB24,955,657 as of December 31, 2021 and 2022, respectively, including non-distributable general reserve fund of RMB66,098 and RMB146,856 as of December 31, 2021 and 2022, respectively.

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23 LOSS PER CLASS A and CLASS B ORDINARY SHARE

The computation of basic and diluted loss per share is as follows:

	Years ended December 31,		
	2020	2021	2022
Net loss	(669,214)	(1,191,213)	(1,266,118)
Net loss (income) attributable to non-controlling interests	—	1,403	(3,427)
Net loss attributable to redeemable non-controlling interests	2,807	2,592	655
Accretion to redemption value of redeemable non-controlling interests	(18,627)	(77,644)	(10,801)
Adjustment to the redemption value of redeemable non-controlling interests	—	—	(178,982)
Cumulative dividend on redeemable preferred shares	(52,709)	(49,073)	(51,212)
Net loss available to GDS Holdings Limited ordinary shareholders	(737,743)	(1,313,935)	(1,509,885)
Weighted average number of ordinary shares outstanding - basic and diluted	1,253,559,523	1,452,906,722	1,464,447,843
Loss per ordinary share - basic and diluted	(0.59)	(0.90)	(1.03)

The following table sets forth the computation of basic and diluted loss per Class A and Class B ordinary share:

	Years ended December 31,					
	2020		2021		2022	
	Class A	Class B	Class A	Class B	Class A	Class B
Allocation of net loss available to GDS Holdings Limited ordinary shareholders	(697,965)	(39,778)	(1,252,810)	(61,125)	(1,440,198)	(69,687)
Weighted average number of ordinary shares outstanding - basic and diluted	1,185,969,187	67,590,336	1,385,316,386	67,590,336	1,396,857,507	67,590,336
Loss per ordinary share - basic and diluted	(0.59)	(0.59)	(0.90)	(0.90)	(1.03)	(1.03)

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During the years ended December 31, 2020, 2021 and 2022, the Company issued 32,592,288, nil and 29,252,600 ordinary shares, respectively, to its share depository bank, which have been and will continue to be used to settle stock option and restricted share awards upon their exercise. 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 ordinary share. Any ordinary shares not used in the settlement of stock option and restricted share awards will be returned to the Company.

The following securities were excluded from the computation of diluted loss per share as inclusion would have been either the performance condition relating to the securities have not been satisfied or anti-dilutive. The share options and restricted shares below represented the maximum number of shares to be issued.

	Years ended December 31,		
	2020	2021	2022
Share options/restricted shares	31,425,768	28,930,720	38,534,512
Convertible bonds payable	46,526,049	46,526,049	145,726,048
Total	77,951,817	75,456,769	184,260,560

24 SEGMENT INFORMATION

The Company has one operating segment, which is the design, build-out and operation of data centers. The Company's chief operating decision maker is the chief executive officer of the Company who reviews the Company's consolidated results of operations in assessing performance of and making decisions about resource allocations to this segment.

During the years ended December 31, 2020, 2021 and 2022, substantially all of the Company's operations are in the PRC. As of December 31, 2021 and 2022, the long-lived assets amounted to RMB2,670,937 and RMB4,406,267, respectively, were located in Hong Kong SAR; RMB167,818 and RMB141,333, respectively, were located in Singapore; nil and RMB531,477, respectively, were located in Malaysia; nil and RMB33,285, respectively, were located in Indonesia and substantially all of the remaining long-lived assets were in the PRC.

25 MAJOR CUSTOMERS AND SUPPLIERS

During the year ended December 31, 2020, the Company had three contracting customers, which generated over 10% of the Company's total revenues or RMB1,347,165, RMB847,620 and RMB674,621, respectively. During the year ended December 31, 2021, the Company had four contracting customers, which generated over 10% of the Company's total revenues or RMB1,736,295, RMB964,414, RMB873,378 and RMB785,528, respectively. During the year ended December 31, 2022, the Company had four contracting customers, which generated over 10% of the Company's total revenues or RMB1,895,877, RMB1,595,777, RMB1,130,799 and RMB1,031,102, respectively.

During the years ended December 31, 2020, 2021 and 2022, the numbers of major suppliers of the Company were two, one and one, respectively, from whom the purchase amounts from each of them accounted for over 10% of the Company's operating expenditures. Severe impact can result from total or partial loss of the business relationship.

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26 COMMITMENTS AND CONTINGENCIES

(a) Capital commitments

Capital commitments outstanding as of December 31, 2021 and 2022 not provided for in the financial statements were as follows:

	As of December 31,	
	2021	2022
Contracted for	3,790,769	5,241,586

In addition, commitment for purchase of land use rights was RMB90,938 and RMB516,061 as of December 31, 2021 and 2022, respectively.

(b) Lease commitments

The Company's lease commitments are disclosed in Note 12.

27 RELATED PARTY TRANSACTIONS

In 2020, 2021 and 2022, the related parties of the Company are as follows:

<i>Name of party</i>	<i>Relationship</i>
STT GDC	Principal ordinary shareholder of the Company
STT Singapore DC Pte. Ltd.	Subsidiary of STT GDC
STT DEFU 2 Pte. Ltd.	Subsidiary of STT GDC
OnePro Cloud Inc.	Entity over which the Company has significant influence

The Company entered into the following material related party transactions.

(a) Major transactions with related parties

	Years ended December 31,		
	2020	2021	2022
Commission income (Note i)			
STT Singapore DC Pte. Ltd.	553	546	564
STT DEFU 2 Pte. Ltd.	485	464	478
	1,038	1,010	1,042
Purchase of debt securities (Note ii)			
OnePro Cloud Inc.	—	—	2,840
	—	—	2,840
Interest income of convertible bonds (Note ii)			
OnePro Cloud Inc.	—	—	75
	—	—	75

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(b) Major balances with related parties

	As of December 31,	
	2021	2022
Amount due from a related party: (Note ii)		
OnePro Cloud Inc.	—	2,860
Amount due to related parties: (Note i)		
STT Singapore DC Pte. Ltd.	13,905	8,395
STT DEFU 2 Pte. Ltd.	10,239	8,600
	24,144	16,995

Note i: During the year ended December 31, 2020, the Company recognized RMB553 and RMB485, respectively, as commission income from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. Income earned is based on amount billed on behalf of these two related parties to the ultimate customer amounting to RMB40,503 and RMB40,256, respectively. As of December 31, 2020, amount due to related parties represents the service fee received on behalf of the related parties for one of their customers, which is recorded in accrued expenses and other payables.

During the year ended December 31, 2021, the Company recognized RMB546 and RMB464, respectively, as commission income from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. Income earned is based on amount billed on behalf of these two related parties to the ultimate customer amounting to RMB45,345 and RMB39,818, respectively. As of December 31, 2021, amount due to related parties represents the service fee received on behalf of the related parties for one of their customers, which is recorded in accrued expenses and other payables.

During the year ended December 31, 2022, the Company recognized RMB564 and RMB478, respectively, as commission income from STT Singapore DC Pte. Ltd. and STT DEFU 2 Pte. Ltd. Income earned is based on amount billed on behalf of these two related parties to the ultimate customer amounting to RMB42,792 and RMB43,896, respectively. As of December 31, 2022, amount due to related parties represents the service fee received on behalf of the related parties for one of their customers, which is recorded in accrued expenses and other payables.

These amounts due to related parties are trade in nature and are settled on a recurring basis.

Note ii: On September 2, 2022, the Company subscribed convertible bonds of US\$400 thousand issued by OnePro Cloud Inc. The convertible bond has a term of 12 months with interest rate of 8% per annum and is convertible into Series A Preferred Shares of OnePro Cloud Inc. at the option of holders under certain conditions.

28 PARENT ONLY FINANCIAL INFORMATION

The following condensed parent company financial information of GDS Holdings has been prepared using the same accounting policies as set out in the accompanying consolidated financial statements except that the equity method has been used to account for investments in its subsidiaries and the consolidated VIEs. As of December 31, 2022, there were no material contingencies, significant provisions of long-term obligations, mandatory dividend or redemption requirements of redeemable stocks or guarantees of GDS Holdings, except for those, which have been separately disclosed in the consolidated financial statements.

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Condensed Balance Sheets

Assets	As of December 31,	
	2021	2022
Assets		
Current assets		
Cash	3,288,955	760,716
Restricted cash	1,944,589	20,402
Prepaid expenses	10,836	9,698
Other current assets	4,720	2,422
Total current assets	5,249,100	793,238
Investment, loans and amounts due from subsidiaries and consolidated VIEs	25,260,616	30,891,361
Other non-current assets	777	184
Total assets	30,510,493	31,684,783
Liabilities, Mezzanine Equity and Shareholders' Equity		
Current liabilities		
Short-term borrowings	3,148,188	1,045,252
Convertible bonds payable, current	-	2,083,829
Accounts payable	899	1,188
Accrued expenses and other payables	32,395	49,670
Due to subsidiaries	849	141,798
Total current liabilities	3,182,331	3,321,737
Convertible bonds payable	1,895,846	4,294,985
Total liabilities	5,078,177	7,616,722
Mezzanine equity		
Redeemable preferred shares (US\$0.00005 par value; 150,000 shares authorized, issued and outstanding as of December 31, 2021 and 2022; Redemption value of RMB958,480 and RMB1,047,012 as of December 31, 2021 and 2022, respectively; Liquidation preference of RMB1,269,027 and RMB1,047,012 as of December 31, 2021 and 2022, respectively)	958,480	1,047,012
Total mezzanine equity	958,480	1,047,012
Shareholders' equity		
Ordinary shares (US\$0.00005 par value; 2,002,000,000 authorized; 1,427,590,059 and 1,456,842,655 Class A ordinary shares issued and outstanding as of December 31, 2021 and 2022, respectively; 67,590,336 Class B ordinary shares issued and outstanding as of December 31, 2021 and 2022)	507	516
Additional paid-in capital	28,983,330	29,048,598
Accumulated other comprehensive loss	(599,186)	(848,360)
Accumulated deficit	(3,910,815)	(5,179,705)
Total shareholders' equity	24,473,836	23,021,049
Commitments and contingencies		
Total liabilities, mezzanine equity and shareholders' equity	30,510,493	31,684,783

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Condensed Statements of Operations

	Years ended December 31,		
	2020	2021	2022
Net revenue	—	—	13,852
Cost of revenue	(94,312)	(116,151)	(102,565)
Gross loss	(94,312)	(116,151)	(88,713)
Operating expenses			
Selling and marketing expenses	(58,649)	(54,768)	(42,647)
General and administrative expenses	(224,934)	(285,077)	(232,832)
Research and development expenses	(4,596)	(8,096)	(5,294)
Loss from operations	(382,491)	(464,092)	(369,486)
Other income (expenses):			
Interest income	18,641	25,215	5,593
Interest expenses	(155,605)	(95,313)	(207,510)
Equity in loss of subsidiaries and consolidated VIEs	(144,153)	(653,251)	(697,277)
Others, net	(2,799)	223	(210)
Loss before income taxes	(666,407)	(1,187,218)	(1,268,890)
Income tax expenses	—	—	—
Net loss	(666,407)	(1,187,218)	(1,268,890)

Condensed Statements of Comprehensive Loss

	Years ended December 31,		
	2020	2021	2022
Net loss	(666,407)	(1,187,218)	(1,268,890)
Other comprehensive loss:			
Foreign currency translation adjustments, net of nil tax	(386,951)	(159,551)	(249,174)
Comprehensive loss	(1,053,358)	(1,346,769)	(1,518,064)

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Condensed Statements of Cash Flows

	Years ended December 31,		
	2020	2021	2022
Operating activities:			
Net cash used in operating activities	(45,269)	(83,019)	(68,391)
Investing activities:			
Investment, loans and advances to subsidiaries	(4,940,005)	(9,935,432)	(6,312,513)
Net cash used in investing activities	(4,940,005)	(9,935,432)	(6,312,513)
Financing activities:			
Proceeds from short-term borrowings	—	3,187,850	4,218,790
Repayment of short-term borrowings	—	—	(6,555,105)
Payment of issuance cost and commitment cost of debts	(56,587)	(40,645)	(26,465)
Repayment of long-term borrowings	(657,820)	—	—
Proceeds from exercise of stock options	78,748	2,082	—
Net proceeds from issuance of ordinary shares	15,974,517	—	—
Proceeds from issuance of convertible bonds	—	—	3,917,036
Payment of redeemable preferred shares dividends	(65,489)	(49,221)	(51,578)
Net cash provided by financing activities	15,273,369	3,100,066	1,502,678
Effect of exchange rate changes on cash and restricted cash	(563,459)	(160,320)	425,800
Net increase (decrease) in cash and restricted cash	9,724,636	(7,078,705)	(4,452,426)
Cash and restricted cash at beginning of year	2,587,613	12,312,249	5,233,544
Cash and restricted cash at end of year	12,312,249	5,233,544	781,118
Supplemental disclosures of cash flow information			
Interest paid	92,509	38,243	143,847
Supplemental disclosures of non-cash investing and financing activities			
Settlement of liability-classified restricted share award	10,089	11,147	13,719
Conversion of convertible bonds	65	—	—

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29 SUBSEQUENT EVENTS

(a) Private Placement of Convertible Senior Notes

On January 20, 2023, the Company completed the private placement of convertible senior notes due 2030 (the “Notes”) with aggregate principal of US\$ 580,000 thousand to certain investors. The Notes bore an annual interest rate of 4.50% and are convertible into ADSs or Class A ordinary shares of the Company at the option of the holders, at any time prior to the close of business on the third scheduled trading day (or the fifth scheduled trading day, if the converting holder elects to receive Class A ordinary shares in lieu of ADSs) immediately preceding the maturity date at a conversion price initially being US\$ 24.50 per ADS, subject to customary anti-dilution adjustments. The Company has the right to force a conversion by the holders of all (but not some only) of the Notes at any time on or after the third anniversary of the issuance of the Notes in exchange for ADSs or Class A ordinary shares at the then-prevailing conversion rate, provided certain conditions are met. The holders of the Notes have the right to require the Company to repurchase all or part of their Notes in cash on January 31, 2028, or in the event of certain fundamental changes, in each case at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the repurchase date.

(b) Waiver of Vesting Condition for Certain Restricted Share Units for William Wei Huang

William Wei Huang informed the Company that certain variable pre-paid forward sale contract transactions in respect of 42,457,504 ordinary shares beneficially owned by him, which transactions he originally entered into between May 2020 and June 2022, would expire between March 2023 and December 2023. As a result, his beneficial ownership interest in the Company’s total issued share capital may decrease to below 5% if he choose to settle these transactions by transferring ownership of the ordinary shares, which would trigger an automatic conversion event as mentioned in Note 18.

On March 30, 2023, to prevent the Automatic Conversion and the corresponding potential implication of the change of control, the vesting conditions of 3,888,000 restricted share units (“RSUs”) (equivalent of 486,000 ADSs) granted to William Wei Huang under the 2016 Plan were waived and the vesting of such RSUs was accelerated. The ordinary shares William Wei Huang received upon the accelerated vesting of the foregoing RSUs are subject to a lock-up (including a prohibition on pledges, transfer or derivative transactions) as well as a claw-back arrangement with the Company. As of date of this report, William Wei Huang’s beneficially ownership interest in the Company’s total issued share capital including Class A, Class B ordinary shares and redeemable preferred shares was above 5%.