CHINA TELECOM CORP LTD
Form 20-F
April 29, 2019
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 20-F

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, 2018

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

Date of event requiring this shell company report

For the transition period from to

Commission file number 1-31517

(Exact Name of Registrant as Specified in Its Charter)

China Telecom Corporation Limited

(Translation of Registrant s Name into English)

People s Republic of China

(Jurisdiction of Incorporation or Organization)

31 Jinrong Street, Xicheng District

Beijing, People s Republic of China 100033

(Address of Principal Executive Offices)

Ms. Wong Yuk Har, Rebecca

China Telecom Corporation Limited

28/F, Everbright Centre

108 Gloucester Road

Wanchai, Hong Kong

Email: rebecca.wong@chinatelecom-h.com

Telephone: (+852) 2582 5819

Fax: (+852) 2157 0010

(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	Name of Each Exchange On Which Registered
American depositary shares	New York Stock Exchange, Inc.
H shares, par value RMB1.00 per share	New York Stock Exchange, Inc.*

* Not for trading, but only in connection with the listing on the New York Stock Exchange, Inc. of American depositary shares, each representing 100 H shares.

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

None

(Title of Class)

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

None

(Title of Class)

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

As of December 31, 2018, 67,054,958,321 domestic shares and 13,877,410,000 H shares, par value RMB1.00 per share, were issued and outstanding. H shares are ordinary shares of the Company listed on The Stock Exchange of Hong Kong Limited.

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

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 definition 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 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 Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes No

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FORWARD-LOOKING STATEMENTS

This annual report contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These forward-looking statements are, by their nature, subject to significant risks and uncertainties, and include, without limitation, statements relating to:

- our business and operating strategies and our ability to successfully execute these strategies;
- our network expansion and capital expenditure plans;
- our operations and business prospects;
- the expected benefit of any acquisitions or other strategic transactions;
- our financial condition and results of operations;
- the expected impact of new services on our business, financial condition and results of operations;
- the future prospects of and our ability to integrate acquired businesses and assets;
- the industry regulatory environment as well as the industry outlook generally; and
- future developments in the telecommunications industry in the People s Republic of China, or the PRC.

The words anticipate, believe, could, estimate, expect, intend, may, plan, seek, will, would anc they relate to us, are intended to identify a number of these forward-looking statements.

These forward-looking statements are subject to risks, uncertainties and assumptions, some of which are beyond our control. In addition, these forward-looking statements reflect our current views with respect to future events and are not a guarantee of future performance. We are under no obligation to update these forward-looking statements and do not intend to do so. Actual results may differ materially from the information contained in the forward-looking statements as a result of a number of factors, including, without limitation, the following:

- any changes in the regulations or policies of the Ministry of Industry and Information Technology (prior to March 2008, the Ministry of Information Industry, or the MII), or the MIIT, and other relevant government authorities relating to, among other matters:

- the granting and approval of licenses;
- tariff or network speed policies;
- interconnection and settlement arrangements;
- capital investment priorities;
- the provision of telephone and other telecommunications services to rural areas in the PRC;
- the convergence of television broadcast, telecommunications and Internet access networks, or three-network convergence; and
- spectrum and numbering resources allocation;

the effects of competition on the demand for and price of our services;

any potential further restructuring or consolidation of the PRC telecommunications industry;

changes in the PRC telecommunications industry resulting from the issuance of licenses for telecommunications services by the MIIT;

changes in telecommunications and related technologies including the fifth generation mobile telecommunications, or 5G, and future generations of mobile technologies, and applications based on such technologies, including testing and monetization of 5G and future generations of mobile technologies;

the development of new technologies and applications or services affecting the PRC telecommunications industry and our current and future business;

the potential impact of restrictions, sanctions or other legal or regulatory actions under relevant laws and regulations in various jurisdictions on our telecommunications equipment suppliers and other business partners;

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changes in political, economic, legal and social conditions in the PRC, including changes in the PRC government s specific policies with respect to foreign investment in and entry by foreign companies into the PRC telecommunications industry, economic growth, inflation, foreign exchange and the availability of credit;

results and effects of any inspections by the relevant PRC regulatory authorities; and

the development of our mobile business is dependent on the Tower Company.

Please also see D. Risk Factors under Item 3.

CERTAIN DEFINITIONS AND CONVENTIONS

As used in this annual report, references to us, we, the Company, our Company and China Telecom are to China Telecom Corporation Limited and its consolidated subsidiaries except where we make clear that the term means China Telecom Corporation Limited or a particular subsidiary or business group only. References to matters relating to our H shares or American depositary shares, or ADSs, or matters of corporate governance are to the H shares, ADSs and corporate governance of China Telecom Corporation Limited. All references to China Telecom Group are to China Telecommunications Corporation, our controlling shareholder. Unless the context otherwise requires, these references include all of its subsidiaries, including us and our subsidiaries. Unless otherwise indicated, references to and statements regarding China and the PRC in this annual report do not apply to Hong Kong Special Administrative Region, Macau Special Administrative Region or Taiwan.

PART I

Item 1. Identity of Directors, Senior Management and Advisers.

Not applicable.

Item 2. Offer Statistics and Expected Timetable.

Not applicable.

Item 3. Key Information.

A. Selected Financial Data

The following table presents our selected financial data. The selected consolidated statements of financial position data as of December 31, 2017 and 2018, and the selected consolidated statements of comprehensive income (except for earnings per ADS) and consolidated cash flow data for the years ended December 31, 2016, 2017 and 2018, are derived from our audited consolidated financial statements included elsewhere in this annual report, and should be read in conjunction with those consolidated financial statements. The selected consolidated statements of financial position data as of December 31, 2014, 2015 and 2016 and the selected consolidated statements of comprehensive income (except for earnings per ADS) and consolidated cash flow data for the years ended December 31, 2014 and 2015 are derived from our consolidated financial statements which are not included in this annual report. Our consolidated financial statements are prepared in accordance with International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board.

The selected financial data reflect the establishment of new subsidiaries in 2014, the tower assets disposal in 2015, the disposal of Chengdu E-store Technology Co., Ltd., or E-Store, the establishment of Tianyi Capital Holding Co., Ltd., or Tianyi Capital, and the acquisitions of the satellite communications business and Shaanxi Zhonghe Hengtai Insurance Agent Limited, or Zhonghe Hengtai, in 2017 and the establishment of new subsidiaries in 2018 described under Item 4. Information on the Company A. History and Development of the Company Changes in Our Corporate Organization in 2014 , Establishment of the Tower Company and the Disposal and Lease of the Telecommunications Towers , Disposal of E-store and Establishment of Tianyi Capital and Establishment of China Telecom Leasing Corporation Limited and Item 5. Operating and Financial Review and Prospects .

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	As of or for the year ended December 31,					
	2014 RMB	**2015 RMB**	**2016 RMB**	**2017 RMB**	**2018 RMB**	**2018 US$**
	(in millions, except share numbers and per share and per ADS data)					
Consolidated Statements of Comprehensive Income Data:						
Operating revenues	324,755	331,517	352,534	366,229	377,124	54,850
Operating expenses	(296,239)	(305,070)	(325,314)	(339,009)	(348,410)	(50,674)
Operating income	28,516	26,447	27,220	27,220	28,714	4,176
Earnings before income tax	23,265	26,698	24,116	24,953	28,148	4,094
Income tax	(5,498)	(6,552)	(5,993)	(6,192)	(6,810)	(990)
Profit attributable to equity holders of the Company	17,688	20,058	18,018	18,617	21,210	3,085
Basic earnings per share(1)	0.22	0.25	0.22	0.23	0.26	0.04
Basic earnings per ADS(1)	21.86	24.78	22.26	23.00	26.21	3.81
Cash dividends declared per share	0.08	0.08	0.09	0.09	0.11	0.02

	As of or for the year ended December 31,					
	2014 RMB	**2015 RMB**	**2016 RMB**	**2017 RMB**	**2018 RMB**	**2018 US$**
	(in millions, except share numbers and per share and per ADS data)					
Consolidated Statements of Financial Position Data:						
Cash and cash equivalents	20,436	31,869	24,617	19,410	16,666	2,424
Accounts receivable, net	21,756	21,190	21,465	22,096	20,475	2,978
Total current assets	59,782	78,267	74,134	71,550	73,005	10,618
Property, plant and equipment, net	372,898	374,004	389,671	406,257	407,795	59,311
Total assets	561,537	629,747	652,558	661,194	663,382	96,485
Short-term debt	43,976	51,636	40,780	54,558	49,537	7,205
Current portion of long-term debt and payable	82	84	62,276	1,146	1,139	166
Accounts payable	88,587	118,128	122,493	119,321	107,887	15,692
Total current liabilities	206,553	256,074	319,133	275,408	258,920	37,658
Long-term debt and payable	62,494	64,830	9,370	48,596	44,852	6,523
Deferred revenues (including current portion)	1,858	2,482	3,558	3,061	1,829	266
Total liabilities	271,394	324,957	336,210	334,497	319,283	46,438
Equity attributable to equity holders of the Company	289,218	303,823	315,377	325,867	343,069	49,897
Consolidated Cash Flow Data:						
Net cash generated from operating activities	96,412	108,755	101,135	96,502	99,298	14,442
Net cash used in investing activities(2)	(81,715)	(102,255)	(99,043)	(85,263)	(85,954)	(12,501)
Capital expenditures(2)	(80,280)	(101,903)	(96,678)	(87,334)	(83,835)	(12,193)
Net cash (used in) / generated from financing activities	(10,327)	4,809	(9,555)	(16,147)	(16,283)	(2,368)

(1) The basic earnings per share have been calculated based on the respective net profit attributable to equity holders of the Company in 2014, 2015, 2016, 2017 and 2018 and the weighted average number of shares in issue during each of the relevant years of 80,932,368,321 shares. Basic earnings per ADS have been computed as if all of our issued and outstanding shares, including domestic shares and H shares, are represented by ADSs during each of the years presented. Each ADS represents 100 H shares.

(2) Capital expenditures are part of and not an addition to net cash used in investing activities.

Pursuant to the shareholders approval at the annual general meeting held on May 28, 2018, a final dividend of RMB7,568 million (RMB0.093512 per share equivalent to HK$0.115 per share, pre-tax) for the year ended December 31, 2017 was declared, all of which has been fully paid. Pursuant to a resolution passed at the Directors meeting on March 19, 2019, a final dividend of approximately RMB8,629 million (RMB0.106621 per share equivalent to HK$0.125 per share, pre-tax) for the year ended December 31, 2018 was proposed for shareholders approval at the forthcoming annual general meeting.

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Exchange Rate Information

Our business is primarily conducted in China and substantially all of our revenues are denominated in Renminbi. We present our historical consolidated financial statements in Renminbi. In addition, solely for the convenience of the reader, this annual report contains translations of certain Renminbi and Hong Kong dollar amounts into U.S. dollars at specific rates. For any date and period, the exchange rate refers to the exchange rate as set forth in the H.10 statistical release of the Federal Reserve Board. Unless otherwise indicated, conversions of Renminbi or Hong Kong dollars into U.S. dollars in this annual report are based on the exchange rate on December 31, 2018 (RMB6.8755 to US$1.00 and HK$7.8305 to US$1.00). We make no representation that any Renminbi or Hong Kong dollar amounts could have been, or could be, converted into U.S. dollars or vice versa, as the case may be, at any particular rate, or at all. For a detailed explanation of the risk of currency rate fluctuations, please see D. Risk Factors Risks Relating to the People s Republic of China Fluctuation of the Renminbi could materially affect our financial condition, results of operations and cash flows under this Item. The PRC government imposes controls over its foreign currency reserves in part through direct regulation of the conversion of Renminbi into foreign exchange. Examples of such government regulations and restrictions are set forth in D. Risk Factors Risks Relating to the People s Republic of China Government restriction on currency conversion may adversely affect our financial condition .

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Risks Relating to Our Business

We face increasing competition, which may materially and adversely affect our business, financial condition and results of operations.

The telecommunications industry in the PRC is rapidly evolving.

After the industry restructuring in 2008, China Unicom (Hong Kong) Limited (formerly known as China Unicom Limited), or China Unicom, and our Company have full-service capabilities and compete with each other in both wireline and wireless telecommunications services. China Mobile Limited, or China Mobile, continues to be the leading provider of mobile telecommunications services in the PRC and competes with us in mobile telecommunications services and other telecommunications services.

In December 2013, each of China Mobile Communications Group Co., Ltd. (formerly known as China Mobile Communications Corporation), or China Mobile Group, China Telecom Group and China United Network Communications Group Company Limited, or Unicom Group, was granted the permit to provide 4G services based on LTE/Time Division Duplex standard, or TD-LTE, technologies nationwide. In February 2015, China Telecom Group and Unicom Group were granted the permit to provide 4G services based on Frequency Division Long Term

Evolution standard, or LTE FDD, technologies nationwide. In April 2018, China Mobile Group was granted the permit to provide 4G services based on LTE FDD technologies pursuant to which China Mobile can develop mobile IoT and Industrial Internet services nationwide and LTE FDD services only in rural areas. In December 2018, China Telecom Group, China Mobile Group and Unicom Group were granted the approval from MIIT to utilize certain spectrum to conduct the fifth generation mobile communication pilot programs. We have been authorized by China Telecom Group to operate 4G business nationwide based on both TD-LTE technologies and LTE FDD technologies and to conduct 5G system scale trial in 17 cities. We cannot assure you that: (i) our 4G and 5G services will deliver the quality and levels of services currently anticipated; (ii) we will be able to provide all planned 4G and 5G services or we will be able to provide such services on schedule; (iii) there will be sufficient demand for 4G and 5G services for us to deliver these services profitably; (iv) our competitors 4G, 5G or newer technology based, services will not be more popular among potential subscribers; or (v) we will not encounter unexpected technological difficulties in providing 4G and 5G services. The failure of any of these possible developments to occur could impede our growth, which could have a material adverse effect on our business, financial condition and results of operations. We expect that the market competition will be further intensified as a result of our competitors obtaining permits and expanding their 4G and 5G services, which could materially and adversely affect our business and prospect.

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Prior to December 2013, China Unicom, China Tietong Telecommunications Corporation, or China Railcom, which is a wholly-owned subsidiary of China Mobile Group, CITIC NETWORKS Co., Ltd., and our Company were the only operators licensed by the MIIT to provide fixed-line telecommunications services in China. In December 2013, China Mobile Group received permission from the MIIT to authorize China Mobile to operate fixed-line telecommunications businesses. In December 2015, China Mobile completed its acquisition from China Mobile Group of the fixed-line telecommunications businesses operated by China Railcom. In May 2016, China Radio and Television Network Co. Ltd. received license from the MIIT to operate fixed-line broadband business. The entry of China Mobile and China Radio and Television Network Co. Ltd. has intensified and may further intensify the competition in this sector, which could have a material adverse effect on our business.

We also face increasing competition from other competitors outside the telecommunications industry, in particular, from Internet services providers and mobile software and application developers, such as Over-the-Top messaging or voice services providers who offer contents and services on the Internet without their proprietary telecommunications network infrastructure. These competitors are competing with us in information and application or voice services. During the past few years, some of our traditional revenue contributors have experienced a slowdown in the growth rate or negative growth, primarily due to the alternative means of communication offered by these Over-the-Top messaging or voice services becoming increasingly popular among the consumers. Though the increasing popularity of these Over-the-Top messaging or voice services has generally contributed to the increase in our Internet data traffic and Internet services revenues during the past few years, we cannot assure you that our Internet data traffic and Internet services revenue will continue to increase in the future or such increase could fully offset the negative effect of these Over-the-Top services on our voice services or short message services, or SMS. In addition, we expect that competition from competitors outside the telecommunications industry will intensify and the strategic cooperation between these competitors and telecommunications operators may even reshape the competitive landscape of the telecommunications industry in which we operate. Though we strive to maintain our competitiveness through our comprehensive transformation and upgrades strategy, we may encounter difficulties and challenges in addressing changing consumer needs and responding to the evolving competitive landscape.

In addition, the PRC government has taken various initiatives to encourage competition in the telecommunications industry, such as the three-network convergence policy and the policy encouraging private capital to enter the industry. For more details of the three-network convergence policy, please see Item 4. Information on the Company B. Business Overview Regulatory and Related Matters Three-Network Convergence Policy . For a series of government measures to encourage private capital to invest in telecommunications services that could compete with our services, see Item 4. Information on the Company B. Business Overview Competition . In 2018, MIIT further opened up broadband access markets to private capital in 17 provinces on a province-wide basis and an additional 39 pilot cities. In April 2018, the MIIT approved the commercialization of mobile telecommunication resale business, effective from May 2018. As of January 31, 2019, among the 42 mobile virtual network operators who had been approved by the MIIT to conduct resale business on a pilot basis, 32 of which had been granted commercial operation licenses; and among the 25 companies who signed resale agreements with us, 12 companies had been granted commercial operation licenses and the other companies are all in the process of applying for such licenses. As of December 31, 2018, there were a total of approximately 77.0 million users of mobile virtual network. Additionally, the PRC government had started mobile number portability pilot programs in five direct-controlled municipalities and provinces, and on March 5, 2019, the Government Work Report presented in the second plenary session of the 13th National People s Congress of the PRC specified that the mobile number portability services will be implemented nationwide in 2019. As a result, the competitive landscape in the PRC telecommunications industry may further diversify, causing more intensified competition.

Increasing competition from other existing telecommunications services providers, including China Mobile and China Unicom, as well as competition from new competitors, could materially and adversely affect our business and prospect by, among other factors, forcing us to lower our tariffs, reducing or reversing the growth of our customer base and reducing usage of our services. Any of these developments could materially and adversely affect our revenues and profitability. We cannot assure you that the increasingly competitive environment and any change in the competitive landscape of the telecommunications industry in the PRC would not have a material adverse effect on our business, financial condition or results of operations.

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Our operations and further development of our mobile business is dependent on the Tower Company.

In July 2014, the Company, China United Network Communications Corporation Limited (CUCL) and China Mobile Communication Company Limited (CMCL) made the decision to jointly establish China Communications Facilities Services Corporation Limited (currently known as China Tower Corporation Limited, the Tower Company), and carried out the establishment of Tower Company and the transfer of certain tower assets. Upon completion of the transfer of tower assets by the Company to the Tower Company, the Company and the Tower Company entered into the Lease Agreement on July 8, 2016 that sets forth the pricing and related arrangements in relation to the lease of telecommunications towers and related assets (including both acquired towers and new towers). On February 1, 2018, the Company and the Tower Company entered into a supplemental agreement, effective from January 1, 2018, on the basis of the original Lease Agreement mainly to adjust the relevant pricing arrangement of tower products under the Lease Agreement. See Item 4. Information on the Company A. History and Development of the Company Establishment of the Tower Company and the Disposal and Lease of the Telecommunications Towers .

The Tower Company has been and will continue to be of significant importance to the operations and further development of our mobile business and our results of operations. Construction of new tower assets has been carried out by the Tower Company since the completion of the transfer of tower assets and, in principle, we expect the Tower Company will continue to carry out the construction of new tower assets in the future. Therefore, our mobile business has depended on and will continue to depend on the lease arrangement between us and the Tower Company. However, since we do not control the Tower Company, we cannot assure you that it will act in the best interests of us or the services of the Tower Company can sufficiently support our business needs and future plans.

The Lease Agreement, as may be further supplemented and amended from time to time, provides for pricing adjustment mechanism under which the fees may be further negotiated or agreed upon after considering effects of inflation, significant fluctuations in the real estate market or the steel price, many of which are beyond our control, and such pricing adjustment mechanism may result in a further adjustment of the fees charged to us by the Tower Company in the future. Furthermore, prior to the expiration of lease periods of individual towers, we have to negotiate with the Tower Company new leases of such tower, we cannot assure you that we will be able to enter into new leases at all or on favorable terms with the Tower Company. Due to our reliance on Tower Company for tower assets, if we fail to use the relevant tower assets at our desired locations and on terms and conditions that are favorable to us to maintain or expand our mobile network coverage, or if we cannot receive quality and stable services in a timely and economically viable manner from the Tower Company, the operations and further growth of our mobile business as well as our financial condition and results of operations may be materially and adversely affected.

We will continue to be controlled by China Telecom Group, which could cause us to take actions that may conflict with the best interests of our other shareholders.

China Telecom Group, a state-owned enterprise owned by the State-owned Assets Supervision and Administration Commission of the State Council, or the SASAC, owned approximately 70.89% of our outstanding shares as of April 23, 2019. Accordingly, subject to our Articles of Association and applicable laws and regulations, China Telecom Group, as our controlling shareholder, will continue to be able to exercise significant influence over our management and policies by:

- controlling the election of our Directors and, in turn, indirectly controlling the selection of our senior management;

- determining the timing and amount of our dividend payments;
- approving our annual budgets;
- deciding on increases or decreases in our share capital;
- determining issuance of new securities;
- approving mergers and acquisitions; and
- amending our Articles of Association.

The interests of China Telecom Group as our controlling shareholder could conflict with our interests or the interests of our other shareholders. As a result, China Telecom Group may take actions with respect to our business that may not be in our or our other shareholders best interests.

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We depend on China Telecom Group and its other subsidiaries to provide certain services and facilities for which we currently have limited alternative sources of supply.

In addition to being our controlling shareholder, China Telecom Group, by itself and through its other subsidiaries, also provides us with services and facilities necessary for our business activities, including, but not limited to:

- use of international gateway facilities;
- provision of services in areas outside our service regions necessary to enable us to provide end-to-end services to our customers;
- use of certain inter-provincial optic fibers; and
- lease of properties and assets.

The interests of China Telecom Group and its other subsidiaries as providers of these services and facilities may conflict with our interests. We currently have limited alternative sources of supply for these services and facilities. Therefore, we have limited leverage in negotiating with China Telecom Group and its other subsidiaries over the terms for the provision of these services and facilities. Termination or adverse changes of the terms for the provisions of these services and facilities could materially and adversely affect our business, results of operations and financial condition. See Item 4. Information on the Company A. History and Development of the Company Industry Restructuring and Our Acquisition of the CDMA Business in 2008 and Our Acquisition from China Telecom Group of the CDMA Network Assets and Associated Liabilities and Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions for a description of the services and facilities provided by China Telecom Group and its other subsidiaries.

Since our services require interconnection with networks of other operators, disruption in interconnections with those networks could have a material adverse effect on our business and results of operations.

Under the relevant telecommunications regulations, telecommunications operators are required to interconnect with networks of other operators. China Telecom Group entered into interconnection settlement agreements with other telecommunications operators, including Unicom Group and China Mobile Group. We entered into an interconnection settlement agreement, as amended, with China Telecom Group, which allows our networks to interconnect with China Telecom Group s networks as well as networks of the other telecommunications operators, with whom China Telecom Group had interconnection arrangements. The effective provision of our voice, Internet and other services requires interconnection between our networks and those of China Telecom Group, Unicom Group, China Mobile Group and other telecommunications operators. Any interruption in our interconnection with the networks of those operators or other international telecommunications carriers with which we interconnect due to technical or competitive reasons may affect our operations, service quality and customer satisfaction, and, in turn, our business and results of operations. In addition, any obstacles in existing interconnection arrangements and leased line agreements or any change in their terms, as a result of natural events, accidents, or for regulatory, technological, competitive or other reasons, could lead to temporary service disruptions and increased costs that may seriously jeopardize our operations and adversely affect our profitability and growth.

We may be unable to obtain sufficient financing to fund our capital requirements, which could limit our growth potential and prospects.

We believe that cash from operations, together with any necessary borrowings, will provide sufficient financial resources to meet our projected capital and other expenditure requirements. However, we may require additional funds to the extent we have underestimated our capital requirements or overestimated our future cash from operations. In addition, a significant feature of our business strategy is to transform our Company into a leading integrated intelligent information services provider, which may require additional capital resources. The cost of implementing new technologies, upgrading our networks, expanding capacity or acquisitions of businesses or assets may be significant. Furthermore, in order for us to effectively respond to technological changes and more intensive competition, we may need to make substantial investments in the future.

Financing may not be available to us on acceptable terms or at all. In addition, any future issuance of equity securities, including securities convertible or exchangeable into or that represent the right to receive equity securities, may require approval from the relevant government authorities. Our ability to obtain additional financing will depend on a number of factors, including:

- our future financial condition, results of operations and cash flows;
- general market conditions for financing activities by telecommunications companies; and
- economic, political and other conditions in the markets where we operate or plan to operate.

We cannot assure you that we can obtain sufficient financing at commercially reasonable terms or at all. If adequate capital is not available on commercially reasonable terms, our growth potential and prospects could be materially and adversely affected. Furthermore, additional issuances of equity securities will result in dilution to our shareholders. Incurrence of debt would result in increased interest expense and could require us to agree to restrictive operating and financial covenants.

If we are not able to respond successfully and cost-efficiently to technological or industry developments, our business may be materially and adversely affected.

The telecommunications market is characterized by rapid advancements in technology, evolving industry standards and changes in customer needs. We cannot assure you that we will be successful in responding to these developments. In addition, new services or technologies, such as mobile Internet, the three-network convergence, cloud computing and Internet of Things, may render our existing services or technologies less competitive. In the event we do take measures to respond to technological developments and changes in industry standards, the integration of new technology or industry standards or the upgrading of our networks may require substantial time, effort and capital investment. Moreover, the successful deployment and application of such cutting edge technologies depend on a number of factors, including the integration of legacy networks and cloud security related challenges. We cannot assure you that we will succeed in integrating these new technologies and industry standards or adapting our network and systems in a timely and cost-effective manner, or at all. Our inability to respond successfully and cost-efficiently to technological or industry developments may materially and adversely affect our business, results of operations and competitiveness.

Our ability to respond to technological developments in a cost-efficient manner may also be adversely affected by external factors, some of which are beyond our control. For example, the development in 5G technology is expected to have a major impact on our services. We have been engaged in standards formulation, network technology trial runs as well as planning of the application of 5G services towards commercialization. In December 2018, China Telecom Group was granted the approval from the MIIT to utilize the 3400-3500MHz spectrum nationwide for 5G system trial until June 30, 2020. In addition, we have been taking the initiatives to explore the feasibility of collaborative development of 5G and 4G. We have devoted, and will continue to devote, substantial resources in the development of 5G technology. However, various details concerning 5G services are still uncertain, including the timing of the issuance of 5G permits, the frequency bands allocated to 5G services and relevant regulations. In addition, there is no assurance that we will be able to roll out 5G services in an economically viable manner to gain favorable market share based on reasonable commercial terms with business partners without undue delay. Furthermore, the 5G industry chain is still under development, and we continue to explore 5G services business model and commercial applications. If we are unable to respond to these uncertainties, the expected benefits from our investment in development of 5G technology would not be fully realized or at all and such inability to respond to these uncertainties may materially and adversely affect our business in the future.

We are subject to risks associated with our telecommunications equipment suppliers and other business partners which could be adversely affected by restrictions, sanctions or other legal or regulatory actions under relevant laws and regulations in various jurisdictions which in turn could adversely affect the supply chain and our business operations.

We procure our telecommunications network equipment and related maintenance and technical support from certain PRC and overseas telecommunications equipment suppliers. See Item 4. Information on the Company B. Business Overview Network System . We also transact business with our business partners who may operate globally. As these parties operate globally and are therefore subject to the laws and regulations in various jurisdictions, any restrictions, sanctions or other legal or regulatory actions could cause disruptions or other material difficulties in their business activities to the extent any government of the relevant jurisdictions imposes any restrictions on their import and export activities, or sanctions or other legal or regulatory actions against the suppliers and other business partners in connection with their business activities. The relevant jurisdictions include, among others, the United States, the European Union and the United Nations. Furthermore, as the supply of our telecommunications equipment relies on a global supply chain, which is vulnerable to significant disruptions in the supply of parts and other items that are necessary for the relevant manufacturing activities. Such disruptions could prevent those affected suppliers from delivering equipment and services to us in accordance with the agreed terms of supply, which in turn could negatively affect our business operations. For example, we may not be able to find suitable alternative suppliers for the affected equipment in a timely manner. Even if we are able to find alternative suppliers, the commercial terms may not be comparable, and we could therefore be subject to a higher procuring cost. Furthermore, if any of our suppliers raises their prices due to an increase in international trade tariffs, we could be subject to a higher cost in procuring the relevant products. We may experience a significant delay in implementing the part of our business plans that relies on delivery of the affected network equipment and difficulties in timely improving our services that rely on those suppliers for upgrading our networks and related software and applications. Any of these and other consequences could materially adversely affect our business, results of operations, financial condition and prospect and cause a significant volatility in and a decline in our share price.

Cyber security breaches could have a material adverse effect on our operations.

We rely on information technology systems to process, transmit, store, and protect electronic information. As a telecommunications operator, we are considered a critical information infrastructure operator under the relevant PRC law and therefore are subject to the regulations designed to protect critical information infrastructure and therefore may be more likely to be targeted by cyber attack activities. Our information technology systems may be vulnerable to a variety of interruptions due to events beyond our control, including, but not limited to, cyber attacks, computer viruses, hackers, telecommunications failures, natural disasters, terrorist attacks, and other security issues. We have technology and information security processes and disaster recovery plans in place to mitigate our risks to these vulnerabilities. However, these measures may not be adequate to ensure that our operations will not be disrupted, should such an event occur.

Increasing regulatory focus on personal information protection could impact our business and expose us to increased liability.

Regulators in various jurisdictions are increasingly scrutinizing how companies collect, process, use, store, share and transmit personal data. This increased scrutiny may result in new interpretations of existing laws, thereby further impacting our business. Recent regulations, such as the General Data Protection Regulation (GDPR), which went into effect in the European Union (EU) on May 25, 2018, applies to the collection, use, retention, security, processing, and transfer of personally identifiable information of residents of EU countries. The GDPR created a range of new compliance obligations, and imposes significant fines and sanctions for violations. Although we have not been subject to any GDPR sanctions , it is possible that the GDPR or other emerging regulations may be interpreted or applied in a manner that is adverse to us. Any failure, or perceived failure, by us to comply with any applicable regulatory requirements or orders, including but not limited to privacy, data protection, information security, or consumer protection-related privacy laws and regulations, could result in proceedings or actions against us by governmental entities or individuals, subject us to fines, penalties, and/or judgments, or otherwise adversely affect our business, as our reputation could be negatively impacted.

We face a number of risks relating to our Internet-related services.

We currently provide a range of Internet-related services, including dial-up and broadband Internet access, and Internet-related applications. We face a number of risks in providing these services.

Our network may be vulnerable to cyber attacks, including, among others, unauthorized access, denial of service and use of malicious software. In addition, cyber attacks may cause equipment failures, loss of information, including confidential or otherwise protected information stored in our customers computer systems and mobile phone systems, failure or perceived failure to comply with applicable privacy, security, or data protection laws or regulations, as well as disruptions to our operations or our customers operations. We have devoted significant resources to network security, data security and other security measures to protect our systems and data, but we cannot assure you that the security measures we have implemented will not be circumvented or otherwise fail to protect the integrity of our network, including our mobile network. Furthermore, it is difficult to estimate or calculate the economic costs caused by potential cyber security incidents and maintain sufficient insurance coverage relating to them at commercially reasonable rates and terms, as the costs may differ based on the identity and motive of the programmer or hacker, which are often difficult to identify. Thus, the economic costs to us to eliminate or alleviate cyber attacks could be significant. Eliminating computer viruses and other security problems may also require interruptions, delays or suspension of our services, reduce our customer satisfaction and cause us to incur costs. Cyber attacks may also subject us to litigations, liabilities for information loss, breach of confidentiality of private information, and/or reputational damage. While, to date, we have not been subject to cyber attacks which, individually or in the aggregate, have been material to our operations or financial condition, we cannot assure you that we will not experience them in the future. Due to the evolving nature of cyber security threats, the scope and impact of any future incident cannot be predicted. While we continually work to safeguard our systems and mitigate potential risks, there is no assurance that such actions will be sufficient to prevent cyber attacks or security breaches that manipulate or improperly use our systems or networks, compromise confidential or otherwise protected information, destroy or corrupt data, or otherwise disrupt our operations. The occurrence of such events could have a material adverse effect on our financial condition and results of operations.

In addition, because we provide connections to the Internet and host websites for customers and develop Internet information and applications, we may be perceived as being associated with the content carried over our network or displayed on websites that we host. We are not able to screen all of this content and may face litigation claims due to a perceived association with this content. These types of claims have been brought against other providers of online services in the past. Regardless of the merits of the lawsuits, these types of claims can be costly to defend, divert management resources and attention, and may damage our reputation.

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Any failure to achieve and maintain effective internal controls could have a material adverse effect on our reputation, business, results of operations and the market prices of our shares and ADSs.

Effective internal controls are necessary for us to provide reasonable assurance with respect to our financial reports and to prevent fraud. We are required to comply with various PRC, U.S. and Hong Kong laws, rules and regulations on internal controls, including the Sarbanes-Oxley Act of 2002. In particular, Section 404 of the Sarbanes-Oxley Act of 2002 requires that we include a report of management on our internal control over financial reporting in our annual reports on Form 20-F that contains an assessment by our management of the effectiveness of our internal control over financial reporting. In addition, our independent registered public accounting firm must issue an auditor s report on the effectiveness of our internal control over financial reporting.

Internal controls may not prevent or detect misstatements because of their inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. As a result, even effective internal controls are able to provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. Any of the possible failure in maintaining the effective internal control over financial reporting could result in a decline of investor confidence in the reliability of our consolidated financial statements, which could cause the market prices of our ordinary shares and ADSs to fluctuate.

Revenues derived from our voice services may continue to decline, which may adversely affect our results of operations, financial condition and prospects.

Revenues from our voice services continued to decline during the past several years. Our revenues from voice services decreased by 12.1% from RMB70,185 million in 2016 to RMB61,678 million in 2017 and further decreased by 17.6% to RMB50,811 million in 2018. Percentage of revenues derived from our voice services out of our total operating revenues also continued to decrease, from 19.9% in 2016 to 16.8% in 2017 and 13.5% in 2018.

Of revenues from our voice services, revenues from wireline voice services decreased by 14.3% in 2017 compared to 2016 and further decreased by 11.4% in 2018 and the percentage of revenues derived from our wireline voice services out of our total operating revenues also continued to decrease, from 7.4% in 2016 to 6.1% in 2017 and 5.2% in 2018. This is primarily due to the fact that we continued to lose wireline telephone subscribers resulting from the increasing popularity of mobile voice services and other alternative means of communication, such as Over-the-Top messaging services. The number of our wireline telephone subscribers decreased by 4.0% at the end of 2017 compared to that at the end of 2016 and further decreased by 4.4% at the end of 2018.

Revenues from our mobile voice services decreased by 10.8% in 2017 compared to 2016 and further decreased by 21.1% in 2018 and the percentage of revenues derived from our mobile voice services out of our total operating revenues also continued to decrease, from 12.5% in 2016 to 10.7% in 2017 and 8.3% in 2018. In recent years, while the number of subscribers of our mobile services and mobile voice usage have continued to grow, due to the increasing popularity of alternative means of communication and the continued decrease in our tariffs for mobile voice services, revenues from our mobile voice services still continued to decrease.

We cannot assure you that we will be successful in slowing down the decline of our revenues generated from voice services. Migration from voice services to other alternative means of communication may further intensify and tariffs for voice services may further decrease in the future, which may affect the financial performance of our voice services and thus adversely affect our results of operations, financial condition and prospects as a whole.

We may suffer damage to our reputation due to communications fraud carried out on our network.

Communications fraud, in which a person defrauds another by means of telecommunications technologies including SMS, telephone, and Internet, poses a risk to us. If communications fraud is committed over our network, we may incur liability as a result of the inadequacy in our measures to prevent such fraud. On September 23, 2016, six departments including the Supreme People s Court, the Supreme People s Procuratorate, the Ministry of Public Security, the MIIT, the People s Bank of China and the China Banking Regulatory Commission jointly released the Announcement on Preventing and Cracking Down on Telecom and Internet Frauds (的通
and on December 19, 2016, the Supreme People s Court, the Supreme People s Procuratorate and the Ministry of Public Security jointly issued the Opinions on Several Issues concerning the Application of Law to the Handling of Criminal Cases Involving Telecom and Internet Frauds
(办理 等刑事案件适用法律&#

We have implemented various measures, including, strictly demanding real name registration and strengthening business management, among others, to prevent and crack down on communications fraud. However, there is no assurance that such measures will prevent communications fraud effectively. Communications fraud as a result of our failure in implementing the real name registration measure may result in claims being brought against us and may damage our reputation and could have an adverse effect on our business and results of operations.

Our success depends on the continued services of our senior management team and other qualified employees.

Our continued success and growth depends on our ability to identify, hire, train and retain suitably skilled and qualified employees, including management personnel, with relevant professional skills. The services of our directors and members of senior management are essential to our success and future growth. As we have to compete for a limited supply of qualified employees, such as managerial, sales, administration, research and development and operating personnel with adequate skills and experience, in China, we may not be able to successfully attract, assimilate or retain all of the personnel we need. We may also need to offer superior compensation and other benefits to attract and retain key personnel and therefore cannot assure you that we will have the resources to fully achieve our staffing need. Due to the intense competition for management and other personnel and qualified employees in the telecommunications industry in mainland China, any failure to recruit and retain the necessary management personnel and other qualified employee could have a material adverse effect on our business and prospects.

Risks Relating to the Telecommunications Industry in the PRC

The current and future government regulations and policies that extensively govern the telecommunications industry may limit our flexibility in responding to market conditions as well as competition, and may have a material adverse effect on our profitability and results of operation.

Our business is subject to extensive government regulation. The MIIT, which is the primary telecommunications industry regulator under the PRC s State Council, regulates, among other things:

- industry policies and regulations;
- licensing;
- competition;
- telecommunications resource allocation;
- service standards;
- technical standards;

tariff policies;

interconnection and settlement arrangements;

enforcement of industry regulations;

universal service obligations;

network information security;

network access license approval for telecom equipment and terminals; and

network construction plans.

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Other PRC governmental authorities also take part in regulating tariff policies, capital investment and foreign investment in the telecommunications industry. The regulatory framework within which we operate may constrain our ability to implement our business strategies and limit our flexibility to respond to market conditions. For example, the PRC governmental authorities have promulgated various regulations, rules, guidance opinions and other directives regarding network speed upgrade and tariff reduction. On May 20, 2015, the office of the State Council promulgated the Guidance Opinions Regarding Expediting the Development of the High-Speed Broadband Network and Promoting the Speed Upgrade and Tariff Reduction, calling for the telecommunications operators to reduce the data tariffs. As a result, we carried out a series of measures, including launching the upgrade service in October 2015 which allowed handset data subscribers who subscribe to our monthly data packages to rollover the unused data remaining in the monthly packages to the next month. In addition, we ceased to charge handset subscribers domestic long distance and roaming fees on and from September 1, 2017. Meanwhile, we have significantly reduced the fees of international, Hong Kong, Macau and Taiwan long distance calls since May 1, 2017 and also have reduced the tariff of Internet dedicated line access for small and medium enterprises.

On March 5, 2018, the Government Work Report presented in the first plenary session of the 13th National People s Congress of the PRC included certain policy requirements regarding network speed upgrade and tariff reduction, including requirements to: (i) increase efforts in implementing network speed upgrade and tariff reduction measures; (ii) achieve full coverage of high-speed broadband in cities and rural areas; (iii) expand the coverage of free Wifi Internet access in public areas; (iv) substantially reduce the tariffs of household broadband, corporate broadband and dedicated leased line; (v) cancel data roaming fee; and (vi) reduce mobile data tariff by at least 30% in 2018. In 2018, we implemented corresponding measures in due course to meet such policy requirements, including (i) starting July 1, 2018, we cancelled data roaming fee within mainland China; (ii) we launched large data traffic packages to reduce the unit price of data traffic products; (iii) we further reduced the tariff for international roaming charges in various countries and regions; (iv) we carried out broadband upgrade by promoting Hundred-Mbps broadband; and (v) we reduced the tariff of Internet dedicated line access and commercial dedicated line access for small and medium enterprises.

On March 5, 2019, the Government Work Report presented in the second plenary session of the 13th National People s Congress of the PRC included policy requirements regarding further promotion of network speed upgrade and tariff reduction. Such requirements include a 15% further reduction in the average broadband tariff for small and medium enterprises and a more than 20% reduction in the average tariff of mobile network in 2019. We will take appropriate measures to meet policy requirements in due course.

Though we strive to sustain our competitive advantages through various initiatives, our revenues and profitability may be affected by these requirements on network speed upgrade and tariff reduction. We may also have to devote substantial resources, incur significant expenses and make strategic adjustment of business and operation strategies in order to meet these requirements and maintain our competitive advantages. Failure to effectively respond to such evolving standards in a timely and cost-efficient manner may materially and adversely affect our business, financial condition and results of operations. In addition, we may face further policy requirements imposed by the PRC government on network speed upgrade and price adjustment in the future. Any such requirements could materially and adversely affect our revenues, profitability and results of operations.

In China, the regulatory framework governing the collection, processing, storage and use of business information and personal data is rapidly evolving. For example, the Cyber Security Law of the PRC (Cyber Security Law) came into force on June 1, 2017, which sets forth the general framework regulating network products, equipment and services, as well as the operation and maintenance of information networks, the protection of personal data, and the supervision and administration of cyber security in China. In 2018, the PRC Government also published Information Security Technology Personal Information Security Specification

(息安全技术个人 息安全规), setting forth detailed guidelines on the collection, utilization and retention of personal information and privacy protection. If we are unable to respond to changing laws, regulations, policies and guidelines related to privacy or cyber security, our business, financial condition, results of operations and prospects may be materially and adversely affected.

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Moreover, on January 6, 2016, the MIIT issued the Guidance on the Wholesale Price Adjustments of Mobile Telecommunication Resale Business (移动通 转售业务批发价格调 pursuant to which the MIIT required that the wholesale price for resale of mobile telecommunications services should be lower than the per unit price (or package price) for similar services of the mobile networks operators. On December 1, 2016, the amended PRC Regulations on the Management of Radio Operation (华人民共 无线 管理条例) came into effect. The amended provision provided that a permit is required for using certain radio frequencies, which may be obtained through a bidding process or auctions. As such, we may incur additional costs in the future when we need to obtain the permit to use certain radio frequencies, such as the frequency bands for 5G. In addition, the PRC government has taken various initiatives and promulgated a number of regulations to encourage private capital to invest in the telecommunications industry, all of which have intensified, and are expected to continue to intensify, the competition in the telecommunications industry in the PRC. See D. Risk Factors Risks Relating to our Business We face increasing competition, which may materially and adversely affect our business, financial condition and results of operations under this Item.

The regulations and policies that govern the telecommunications industry in the PRC have experienced continuous changes in the past several years. Any significant future changes in regulations or policies that govern the telecommunications industry may have a material adverse effect on our business and operations.

The PRC government may require us, along with other providers in the PRC, to provide universal services with specified obligations, and we may not be compensated adequately for providing such services.

Under the Telecommunications Regulations promulgated by the State Council, telecommunications service providers in the PRC are required to fulfill universal service obligations in accordance with relevant regulations to be promulgated by the PRC government. The MIIT has the authority to delineate the scope of universal service obligations. The MIIT, together with other governmental authorities, is also responsible for formulating administrative rules relating to the establishment of a universal service fund and compensation schemes for universal services. The PRC government currently uses financial resources to compensate for the expenses incurred in the Coverage to All Villages and the Broadband China projects before the establishment of a universal service fund. See Item 4. Information on the Company B. Business Overview Regulatory and Related Matters Universal Services . However, the compensation from the PRC government may not be sufficient to cover all of our expenses for providing the telecommunications services under the Coverage to All Villages and the Broadband China projects.

Under the Telecommunications Regulations, all PRC telecommunications operators shall provide universal services, and we expect to perform our duties thereunder accordingly. We may not be able to realize adequate return on investments for expanding networks to, and providing telecommunications services in, those economically less developed areas due to potentially higher capital expenditure requirements, lower usage by customers and lack of flexibility in setting our tariffs. If we are required to provide universal services with specified obligations without proper compensation by the government, our business and profitability may be adversely affected.

We have experienced incidents of executive misconduct in the past, which could adversely impact our reputation, our financial condition and results of operations as well as the trading price of our securities.

According to the information disclosed on the website of Communist Party of China Central Commission for Discipline Inspection, or the CCDI, and Ministry of Supervision of the PRC, or the MOS, on December 27, 2015, Mr. Chang Xiaobing, the former Chairman of Unicom Group and the then Chairman of China Telecom Group was under investigation by such authorities for suspected serious disciplinary violations. Mr. Chang was appointed as the chief executive officer of the Company on September 1, 2015 and the director and chairman of the Company on October 23, 2015. On December 30, 2015, Mr. Chang resigned from his positions as the executive director, chairman and chief executive officer of the Company with effect from the same date. Prior to his resignation, Mr. Chang had worked at the Company for four months. Mr. Chang was sentenced to six years of imprisonment over corruption charges in May 2017. According to the information disclosed on the website of the CCDI and the MOS on September 29, 2017, Mr. Zhen Caiji, the former Party Secretary and President of China Academy of Telecommunications Technology was expelled from the Communist Party of China and dismissed from public service for serious disciplinary violations and was under investigation of suspected criminal violations. Mr. Zhen was appointed as an executive vice president of the Company on November 4, 2016 and resigned from the position of executive vice president of the Company on May 22, 2017. Prior to his resignation, Mr. Zhen had worked at the Company for seven months. The investigation and trial conducted by the PRC authorities on Mr. Chang and Mr. Zhen may harm our reputation and adversely affect our financial condition and results of operations as well as the trading price of our securities.

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Actual or perceived health risks associated with the use of mobile devices could impair our ability to retain and attract customers of our mobile services, reduce mobile service usage or result in litigation.

Concerns have been expressed in some countries that the electromagnetic signals emitted by wireless telephone handsets and base stations may pose health risks at exposure levels below existing guideline levels, and interfere with the operation of electronic equipment. While we comply with applicable standards for radio frequency emissions and we are not aware that such health risks have been substantiated, there can be no assurance that the actual, or perceived, risks associated with the transmission of electromagnetic signals will not impair our ability to retain customers and attract new customers, significantly reduce mobile service and wireless communications usage or result in litigation.

Risks Relating to the People s Republic of China

Substantially all of our assets are located in the PRC and substantially all of our revenues are derived from our operations in the PRC. Accordingly, our results of operations and prospects are subject, to a significant extent, to the economic, political and legal developments in the PRC.

The PRC s economic, political and social conditions, as well as government policies, could affect our business.

Substantially all of our business, assets and operations are located in the PRC. The PRC s economy differs from the economies of most developed countries in many respects, including without limitation:

- government involvement;
- level of development;
- growth rate;
- control of foreign exchange; and
- allocation of resources.

While the PRC s economy has experienced significant growth in the past 40 years, 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 benefit the overall economy of the PRC, but may also have a negative effect on us.

Economic developments in the PRC have a significant effect on our financial condition and results of operations. Although the PRC has been one of the world s fastest growing economies in terms of GDP growth in the past 40 years, the economic growth of the PRC has experienced a marked slowdown in the past few years and may continue to slow down. For example, the GDP growth rate of the PRC decreased from 11.4% in 2007 to 6.6% in 2018. There is no assurance that the GDP growth rate of the PRC will not further decline. A slowdown in economic growth could reduce business activities and demand for our services. The global economy may continue to deteriorate in the future and continue to have an adverse impact on the PRC economy. Any significant slowdown in the PRC economy could have a material adverse effect on the PRC telecommunications industry as well as our business and operations.

We are subject to reviews and inspections by governmental authorities and regulatory agencies.

Certain Chinese regulatory authorities may conduct compliance checks on us in accordance with relevant laws and regulations. These reviews and inspections could cover a broad range of aspects in relation to our business and operations. We cannot predict the impact of any findings of these reviews and inspections, and we cannot assure you that the outcome of any such reviews and inspections would not have a material adverse effect on our business, financial condition, results of operations and prospects.

In 2018, the National Audit Office of the People s Republic of China, or the NAO, conducted an audit on the financial revenues and expenditures of China Telecommunications Corporation, the controlling shareholder of our Company, and its certain subsidiaries (including us) for the year of 2016. We published an announcement on The Stock Exchange of Hong Kong Limited and filed a Form 6-K with the SEC on June 20, 2018 in relation to such audit and believe that the issues identified in the audit have no material impact on our overall operating results, financial statements and internal control of the Company.

Government restriction on currency conversion may adversely affect our financial condition.

We receive substantially all of our revenues in Renminbi, which currently is not a freely convertible currency. A portion of these revenues must be converted into other currencies to meet our foreign currency obligations. These foreign currency-denominated obligations include:

- payment of interest and principal on foreign currency-denominated debt;
- payment for equipment and materials purchased offshore; and
- payment of dividends declared, if any, in respect of our H shares.

Under the PRC s existing foreign exchange regulations, we will be able to pay dividends in foreign currencies without prior approval from the State Administration of Foreign Exchange, or SAFE, by complying with certain procedural requirements. However, the PRC government may take measures at its discretion in the future to restrict access to foreign currencies for both current account transactions and capital account transactions. We may not be able to pay dividends in foreign currencies to our shareholders, including holders of our ADSs, if the PRC government restricts access to foreign currencies for current account transactions.

Foreign exchange transactions under our capital account, including but not limited to foreign currency-denominated borrowings from foreign banks, issuance of foreign currency-denominated debt securities, if any, and principal payments in respect of foreign currency-denominated obligations, continue to be subject to significant foreign exchange controls and require the approval of or registration with SAFE or certain banks designated by SAFE, as applicable. These limitations could affect our ability to obtain foreign exchange through debt or equity financing, or to obtain foreign exchange to meet our payment obligations under the debt securities, if any, or to obtain foreign exchange for capital expenditures.

Fluctuation of the Renminbi could materially affect our financial condition, results of operations and cash flows.

We receive substantially all of our revenues, and our financial statements are presented, in Renminbi. The value of the Renminbi against U.S. dollar and other currencies fluctuates and is affected by, among other things, changes in the PRC s and international political and economic conditions. On July 21, 2005, the People s Bank of China introduced a managed floating exchange rate system to allow the value of the Renminbi to fluctuate within a regulated band based on market supply and demand and by reference to a basket of currencies. In April 2012, the People s Bank of China expanded the daily floating band of Renminbi trading prices against the U.S. dollar in the inter-bank spot foreign currency exchange market from 0.5% to 1.0%, which was further expanded to 2.0% in March 2014. On August 11, 2015, the People s Bank of China announced that the mid-point exchange rate for the floating range of Renminbi against the U.S. dollar will be determined based on market maker submissions that take into account the Renminbi-U.S. dollar exchange rate at the previous day s closing of the inter-bank spot foreign exchange market, the supply and demand dynamics and the movements of other major currencies. With the development of the foreign exchange market and progress towards interest rate liberalization and Renminbi internationalization, the People s Bank of China may in the future announce further changes to the exchange rate system and there is no guarantee that the Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. There is uncertainty in the exchange rate of the Renminbi against the U.S. dollar in the future.

Fluctuations in exchange rates may adversely affect the value, translated or converted into U.S. dollars or Hong Kong dollars, of our net assets, earnings and any declared dividends payable on our H shares in foreign currency terms. Our financial condition and results of operations may also be affected by changes in the value of certain currencies other than the Renminbi, in which our obligations are denominated. For further information on our foreign exchange risks and certain exchange rates, see Item 3. Key Information A. Selected Financial Data Exchange Rate Information and Item 11. Quantitative and Qualitative Disclosures about Market Risk Foreign Exchange Rate Risk . We cannot assure you that any future movements in the exchange rate of the Renminbi against the U.S. dollar or other foreign currencies will not adversely affect our results of operations and financial condition.

The PRC legal system has inherent uncertainties that could limit the legal protections available to you.

We were incorporated under PRC laws and are governed by our Articles of Association. The PRC legal system is based on written statutes. Prior court decisions may be cited for reference but have limited precedential value. Since 1979, the PRC government has promulgated laws and regulations dealing with economic matters such as foreign investment, corporate organization and governance, commerce, taxation and trade. However, because these laws and regulations are relatively new, and because of the limited number of published cases and their non-binding nature, interpretation and enforcement of these laws and regulations involve uncertainties.

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The ability of our shareholders to enforce their rights in respect of violations of corporate governance procedures may be limited. In this regard, our Articles of Association provide that most disputes between holders of H shares and our Company, directors, supervisors, officers or holders of domestic shares, arising out of our Articles of Association or the PRC Company Law and related regulations concerning the affairs of our Company, are to be resolved through arbitration by an arbitration tribunal in Hong Kong or the PRC, rather than by a court of law. Awards that are made by PRC arbitral authorities recognized under the Arbitration Ordinance of Hong Kong can be enforced in Hong Kong. Hong Kong arbitration awards are also enforceable in the PRC. However, to our knowledge, no action has been brought in the PRC by any holder of H shares to enforce an arbitral award, and we are uncertain as to the outcome of any action, if brought in the PRC to enforce an arbitral award made in favor of holders of H shares. See Item 10. Additional Information B. Memorandum and Articles of Association .

To our knowledge, there has not been any published report of judicial enforcement in the PRC by holders of H shares of their rights under the Articles of Association of a PRC company or the PRC Company Law.

Unlike in the United States, the applicable PRC laws did not specifically allow shareholders to sue the directors, supervisors, senior management or other shareholders on behalf of the corporation to enforce a claim against such party or parties that the corporation has failed to enforce itself until January 1, 2006, when the amendments to the PRC Company Law passed on October 27, 2005 became effective. The amended PRC Company Law provides that shareholders, under certain circumstances, may sue the directors, supervisors and senior management on behalf of the corporation. Furthermore, the Supreme People s Court issued judicial interpretations on the aforementioned provisions in the PRC Company Law, i.e., Provisions of the Supreme People s Court on Issues Concerning the Application of the PRC Company Law (I) and (IV)
(最高人民法院 适用《 华人民
in April 2006 and August 2017, respectively. However, our minority shareholders may not be able to enjoy protections to the same extent as to shareholders of companies incorporated under the state laws of the United States.

Although we are subject to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the Listing Rules) and the Hong Kong s Codes on Takeovers and Mergers and Share Buy-backs (the Takeovers Codes), the holders of H shares are not able to bring actions solely on the basis of violations of the Listing Rules or the Takeovers Codes, and must rely on the Hong Kong Stock Exchange and the Securities and Futures Commission of Hong Kong to enforce the Listing Rules or the Takeovers Codes, as the case may be.

You may experience difficulties in effecting service of legal process and enforcing judgments against us and our management.

We are a company incorporated under PRC laws, and substantially all of our assets and our subsidiaries are located in the PRC. In addition, most of our directors and officers reside within the PRC, and substantially all of the assets of our directors and officers are located within the PRC. As a result, it may not be possible to effect service of process within the United States or elsewhere outside the PRC upon most of our directors or officers, including with respect to matters arising under applicable laws and regulations. Moreover, our PRC counsel has advised us that the PRC does not have treaties providing for the reciprocal recognition and enforcement of judgments of courts with the United States, the United Kingdom or most other Western countries. Our Hong Kong counsel has also advised us that Hong Kong has no arrangement for the reciprocal enforcement of judgments with the United States.

As a result, recognition and enforcement in the PRC of judgments of a court in the United States and any of the other jurisdictions mentioned above in relation to any matter not subject to a binding arbitration provision may be difficult or impossible.

Holders of H shares may be subject to PRC taxation.

Under the Enterprise Income Tax Law of the PRC, or the EIT Law, and its implementing regulations, holders of our H shares or ADSs which are non-resident enterprises for the EIT Law s purpose are subject to enterprise income tax at the rate of 10.0% with respect to dividends paid by us and income derived from sale of our H shares or ADSs, unless reduced under an applicable tax treaty. In addition, a resident enterprise, including a foreign enterprise whose de facto management body is located in the PRC, is not subject to any PRC income tax with respect to dividends paid to it by us. The capital gains realized by such resident enterprise are subject to the PRC enterprise income tax. Specifically, according to the Notice of the PRC State Administration of Taxation Concerning the Withholding Enterprise Income Tax on Dividend Distributed by PRC Resident Enterprises to Overseas Non-Resident Enterprise Holders of H shares issued in November 2008 and the Approval of the PRC State Administration of Taxation Concerning the Collection of Enterprise Income Tax on Dividend from B-shares Received by Non-Resident Enterprise issued in July 2009, when PRC resident enterprises distribute dividend to overseas non-resident enterprise holders of H shares for the year 2008 and the years thereafter, the 10.0% enterprise income tax will be withhold. The Company will withhold the 10.0% enterprise income tax when it pays dividend to holders of H shares or ADSs who are non-resident enterprises. See Item 10. Additional Information E. Taxation People s Republic of China .

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Furthermore, dividends paid by us to holders of our H shares or ADSs who are individuals outside the PRC are subject to a withholding tax of 20.0% unless reduced by an applicable tax treaty. For example, Hong Kong and Macau individual residents are subject to a withholding tax of 10.0% on dividends paid to them. In addition, gains realized by individuals upon the sale or other disposition of our H shares or ADSs are temporarily exempted from PRC capital gains tax. If the exemptions are withdrawn in the future, holders of our H shares or ADSs who are individuals may be required to pay PRC capital gains tax upon the sale or other disposition of our H shares. See Item 10. Additional Information E. Taxation People s Republic of China .

Natural disasters and health hazards in the PRC may severely disrupt our business and operations and may have a material adverse effect on our financial condition and results of operations.

Several natural disasters and health hazards have struck mainland China in recent years. In 2014, three major earthquakes registering 6.1, 6.5 and 6.6, respectively, on the Richter scale struck Yunan Province and another major earthquake registering 6.3 on the Richter scale struck Sichuan Province, causing severe damages to telecommunications equipment as well as disruptions to telecommunications services in the affected areas. In July 2016, southern China suffered severe rainstorms and flooding, which resulted in significant damages to the telecommunications equipment in the affected areas. In 2017, several natural disasters struck mainland China, including the heaviest rainfall ever recorded hitting Hunan Province, a major earthquake registering 7.0 on the Richter scale struck Jiuzhaigou County, Sichuan Province and typhoons Heavenly Pigeon and Paka successively hit Guangdong and Guangxi Provinces, causing severe damages to the telecommunications equipment in the affected areas. We are unable to predict the effect, if any, that any future natural disasters and health hazards may have on our business. Any future natural disasters and health hazards may, among other things, significantly disrupt our ability to adequately staff our business, and may generally disrupt our operations. Furthermore, such natural disasters and health hazards may severely restrict the level of economic activity in affected areas, which may in turn materially and adversely affect our business and prospects. As a result, any severe natural disasters or health hazards may have a material adverse effect on our financial condition and results of operations.

The audit reports included in this annual report have been prepared by our independent registered public accounting firm whose work may not be inspected fully by the Public Company Accounting Oversight Board and, as such, you may be deprived of the benefits of such inspection.

Our independent registered public accounting firm that issues the audit reports included in our annual reports filed with the U.S. Securities and Exchange Commission, as auditors of companies that are traded publicly in the United States and a firm registered with the Public Company Accounting Oversight Board (United States), or the PCAOB, is required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and professional standards.

Because we have substantial operations within the PRC and the PCAOB is currently unable to conduct inspections of the work of our independent registered public accounting firm as it relates to those operations without the approval of the Chinese authorities, our independent registered public accounting firm is not currently inspected fully by the PCAOB. This lack of PCAOB inspections in the PRC prevents the PCAOB from regularly evaluating our independent registered public accounting firm s audits and its quality control procedures. As a result, investors may be deprived of the benefits of PCAOB inspections.

On December 7, 2018, the SEC and the PCAOB issued a joint statement highlighting continued challenges faced by the U.S. regulators in their oversight of financial statement audits of U.S.-listed companies with significant operations in China. However, it remains unclear what further actions the SEC and PCAOB will take to address the problem.

Inspections of other firms that the PCAOB has conducted outside the PRC have identified deficiencies in those firms audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. The inability of the PCAOB to conduct full inspections of auditors in the PRC makes it more difficult to evaluate the effectiveness of our independent registered public accounting firm s audit procedures or quality control procedures as compared to auditors outside the PRC that are subject to PCAOB inspections. Investors may lose confidence in our reported financial information and procedures and the quality of our financial statements.

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If the settlement reached between the SEC and the Big Four PRC-based accounting firms (including the Chinese affiliate of our independent registered public accounting firm), concerning the manner in which the SEC may seek access to audit working papers from audits in China of U.S.-listed companies, is not or cannot be performed in a manner acceptable to authorities in China and the U.S., we could be unable to timely file future financial statements in compliance with the requirements of the Exchange Act.

In late 2012, the SEC commenced administrative proceedings under Rule 102(e) of its Rules of Practice and also under the Sarbanes-Oxley Act of 2002 against the mainland Chinese affiliates of the Big Four accounting firms (including the mainland Chinese affiliate of our independent registered public accounting firm). A first instance trial of the proceedings in July 2013 in the SEC s internal administrative court resulted in an adverse judgment against the firms. The administrative law judge proposed penalties on the Chinese accounting firms including a temporary suspension of their right to practice before the SEC, although that proposed penalty did not take effect pending review by the Commissioners of the SEC. On February 6, 2015, before a review by the Commissioner had taken place, the Chinese accounting firms reached a settlement with the SEC whereby the proceedings were stayed. 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 Chinese accounting firms will receive requests matching those under Section 106 of the Sarbanes-Oxley Act of 2002, 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 specified criteria, the SEC retains authority to impose a variety of additional remedial measures on the Chinese accounting 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 recently-stayed proceeding against all four firms. The SEC also reserves the right to resume those proceedings in circumstances where, notwithstanding the accounting firms compliance with the procedures in the settlement agreement, the SEC does not receive a production of documents which it considers satisfactory (for example because of action or inaction by the Chinese authorities). Under the terms of the settlement, the underlying proceeding against the four PRC-based accounting firms was deemed dismissed with prejudice at the end of four years starting from the settlement date, which was February 6, 2019. We cannot predict if the SEC will further challenge the four PRC-based accounting firms compliance with U.S. law in connection with U.S. regulatory requests for audit work papers or if the results of such a challenge would result in the SEC imposing penalties such as suspensions. If additional challenges are imposed on the Chinese affiliates of the big four accounting firms, we could be unable to timely file future financial statements in compliance with the requirements of the 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 Exchange Act. In addition, if the Chinese affiliate of our independent registered public accounting firm were denied, even temporarily, the ability to practice before the SEC and we were unable to timely find another registered public accounting firm to audit and issue an opinion on our financial statements, our financial statements could be determined not to be in compliance with the requirements of the Exchange Act. These could lead to possible delisting of our ordinary shares from the NYSE or deregistration from the SEC, or both, which would substantially reduce or effectively terminate the trading of our ADSs in the United States. Moreover, any negative news about any such future proceedings against these accounting firms may cause investor uncertainty regarding China-based, United States-listed companies and the market price of our ADSs may be adversely affected.

Item 4. Information on the Company.

A. History and Development of the Company

Our Restructuring and Initial Public Offering in 2002

We were incorporated under PRC laws on September 10, 2002 as a joint stock company with limited liability under the name China Telecom Corporation Limited . As part of our initial restructuring, China Telecom Group s telecommunications operations in Shanghai Municipality, Guangdong Province, Jiangsu Province and Zhejiang Province, together with the related assets and liabilities, were transferred to us in consideration of 68,317,270,803 of our shares.

Following our restructuring, China Telecom Group continues to be the holder of the licenses required for operating our telecommunications business. In accordance with the approval of the MIIT, we derive our exclusive rights to operate basic telecommunications business and the rights to operate related value-added telecommunications business from our status as a subsidiary controlled by China Telecom Group, and China Telecom Group must hold and maintain all licenses received from the MIIT in connection with our business for our benefits. The government currently does not charge license fees for the telecommunications licenses held by China Telecom Group.

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In 2002, we successfully completed our initial public offering of H shares and raised approximately RMB10,659 million in aggregate net proceeds for us. Upon completion of our initial public offering, our H shares have been listed for trading on the Hong Kong Stock Exchange, and ADSs representing our H shares have been listed for trading on the NYSE.

Industry Restructuring and Our Acquisition of the CDMA Business in 2008

Industry Restructuring in 2008

In 2008, pursuant to a joint announcement relating to the further reform of the telecommunications industry in the PRC issued by the MIIT, the NDRC and the MOF, the following restructuring transactions took place in the telecommunications industry: (a) the acquisition by China Telecom Group of the assets of the CDMA network and the acquisition by us of the subscriber base of the CDMA network then owned by China Unicom; (b) the acquisition by China Telecom Group of the basic telecommunications service business operated by China Satellite Communications Corporation, or China Satellite; (c) the merger between China Unicom and China Netcom; and (d) the acquisition of China Railcom by China Mobile.

Our Acquisition of the CDMA Business

On July 27, 2008, we, China Unicom and China Unicom Corporation Limited entered into an acquisition agreement, or the CDMA Acquisition Agreement, pursuant to which we agreed to acquire from China Unicom Corporation Limited the CDMA Business and related assets and liabilities (including the entire equity interest in China Unicom (Macau) Company Limited and 99.5% of the equity interest in Unicom Huasheng Telecommunications Technology Co. Ltd., or Unicom Huasheng) for a total consideration of RMB43,800 million. The cost of the acquisition had been fully paid by us by February, 2010.

Related Transactions

Lease of capacity on the CDMA Network by our Company from China Telecom Group

On July 27, 2008, China Telecom Group, Unicom Group, and Unicom New Horizon Mobile Telecommunications Company Limited, or Unicom New Horizon, a wholly-owned subsidiary of Unicom Group, entered into a CDMA network disposal agreement, pursuant to which Unicom Group and Unicom New Horizon sold the CDMA cellular telecommunications network constructed by Unicom New Horizon, or the CDMA Network, to China Telecom Group for a consideration of RMB66,200 million, or the CDMA Network Acquisition. On October 1, 2008, China Telecom Group completed the acquisition of the CDMA Network. On July 27, 2008, we entered into a CDMA network capacity lease agreement with China Telecom Group to lease the capacity on the CDMA Network from China Telecom Group. As we acquired from China Telecom Group certain assets and associated liabilities relating to the CDMA network in 2012, we did not renew the CDMA network capacity lease agreement with China Telecom Group after it expired on December 31, 2012.

Our Acquisition from China Telecom Group of the CDMA Network Assets and Associated Liabilities

On August 22, 2012, we and China Telecom Group entered into an acquisition agreement, or CDMA Network Acquisition Agreement, pursuant to which we agreed to purchase from China Telecom Group certain assets and associated liabilities relating to the CDMA network located in 30 provinces, municipalities and autonomous regions in the PRC for an initial consideration of RMB84,595.41 million, subject to an adjustment based on the change in the value of such assets and associated liabilities from March 31, 2012 to the completion date, or the Mobile Network

Acquisition. The Mobile Network Acquisition was completed on December 31, 2012, or the Completion Date, and the final consideration of the Mobile Network Acquisition was agreed to be RMB87,210.35 million, or the Final Consideration.

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Pursuant to the CDMA Network Acquisition Agreement, (i) RMB25,500 million of the Final Consideration was paid in January 2013 and (ii) the balance of the Final Consideration, or the Deferred Payment, will be payable at any time on or before the fifth anniversary of the Completion Date. Payment of the Final Consideration was and will be funded from our internal resources and relevant debt financing sources. The Company may, from time to time, prepay all or part of the Deferred Payment at any time after the Completion Date without any penalty until the fifth anniversary of the Completion Date. The Company will pay interest on the outstanding amount of the Deferred Payment to China Telecom Group at half-yearly intervals and the interest will accrue from the day following the Completion Date. The interest rate will be set at a five basis points premium to the yield of the five-year super AAA rated Medium Term Notes most recently published by the National Association of Financial Market Institutional Investors before the Completion Date and will be adjusted once a year in accordance with the last yield of the five-year super AAA rated Medium Term Notes published by the National Association of Financial Market Institutional Investors at the end of each year. The interest rates for the first year, the second year, the third year, the fourth year and the fifth year after the Completion Date are 4.83%, 6.25%, 5.11%, 4.00% and 4.11%, respectively. In the event any amount payable by the Company under the CDMA Network Acquisition Agreement is not paid when due, the Company will be subject to liquidated damages on such amount at a daily rate of 0.03% of the arrears from the date following the applicable due date to the date when such amount has been paid in full. As of December 31, 2017, the Deferred Payment had been paid off and the last payment was made on December 26, 2017.

Changes in Our Corporate Organization in 2013

On April 26, 2013, the Company entered into a disposal agreement with China Telecom Group, pursuant to which the Company agreed to sell to China Telecom Group an 80% equity interest in E-surfing Media Co., Ltd., or E-surfing Media, a subsidiary of the Company primarily engaging in providing platform operating services for mobile Internet video and Internet video and offering video services for subscribers through cooperation with content providers, for an initial consideration of RMB1,195 million. The initial consideration was subject to an adjustment based on 80% of the change in the book value of the net assets of E-surfing Media during the period from December 31, 2012 to the completion date of the disposal. The risks and rewards of the ownership of the equity interest in E-surfing Media were transferred to China Telecom Group on June 30, 2013. The final consideration was arrived at RMB1,248 million and received by the Company by December 31, 2013.

On June 9, 2013, we set up a wholly-owned subsidiary, iMUSIC Culture & Technology Co., Ltd., or iMUSIC, which engages in the provision of music production and related information services. The registered capital of iMUSIC is RMB250 million.

On August 19, 2013, we set up a subsidiary, Zhejiang Yixin Technology Co., Ltd., or Zhejiang Yixin, with Netease, Inc., a leading Internet technology company in China, to launch YiChat, a mobile Internet multimedia instant messaging application for smartphones. As of December 31, 2018, Zhejiang Yixin had a registered capital of RMB11.23 million, of which 65% is owned by us and the remaining 35% is owned by Netease, Inc.

On December 16, 2013, China Telecom Global Limited, or China Telecom Global, a wholly-owned subsidiary of the Company primarily engaged in the provision of international value-added network services, entered into an acquisition agreement with China Telecom Group, pursuant to which China Telecom Global agreed to purchase from China Telecom Group 100% of the equity interest in China Telecom (Europe) Limited, or China Telecom Europe, for an initial consideration of RMB261 million. The consideration was subject to an adjustment based on the change in the net asset value of China Telecom Europe from June 30, 2013 to the completion date. The initial consideration was paid within 15 business days upon the completion of the acquisition. The acquisition was completed on December 31, 2013, and the final consideration was RMB278 million, which was paid by June 30, 2014.

Changes in Our Corporate Organization in 2014

On June 17, 2014, we set up a wholly-owned subsidiary, E-Store, which engages in software technology development. The registered capital of E-store is RMB45 million.

Establishment of the Tower Company and the Disposal and Lease of the Telecommunications Towers

On July 11, 2014, the Company, CUCL and CMCL entered into a Promoters Agreement for China Communications Facilities Services Corporation Limited to jointly establish the Tower Company. The registered capital of the Tower Company was RMB10 billion. The Company, CUCL and CMCL subscribed for 2.99 billion shares, 3.01 billion shares and 4.00 billion shares, respectively, of the Tower Company in cash at a par value of RMB1.00 per share, representing a shareholding percentage of 29.9%, 30.1% and 40.0%, respectively. The Tower Company was registered on July 15, 2014 and was renamed as China Tower Corporation Limited on September 2, 2014. We had paid in our subscription of the registered capital of the Tower Company by December 31, 2014.

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On October 14, 2015, the Company entered into the Transfer Agreement with (i) CMCL and related subsidiaries (together, Mobile), (ii) CUCL and Unicom New Horizon Telecommunications Company Limited (New Horizon , together with CUCL, Unicom), (iii) China Reform Holding Company Limited (CRHC) and (iv) the Tower Company. Pursuant to the Transfer Agreement, the Company agreed to sell certain telecommunications towers and related assets in an aggregate amount of RMB30,131 million and inject cash in the amount of RMB2,966 million to the Tower Company in exchange for 33,097 million new shares, with a par value of RMB1.00 per share, issued by the Tower Company. The cash injected by the Company into the Tower Company under the Transfer Agreement was funded by the Company using its internal cash resources. All conditions precedent to the completion of the transactions contemplated under this agreement were fulfilled and completion of the transactions contemplated under this agreement occurred on October 31, 2015. As a result, the Company, Mobile, Unicom and CRHC own 27.9%, 38.0%, 28.1% and 6.0%, respectively, of the share capital of the Tower Company. On January 29, 2016, the Company and the Tower Company entered into a Share Subscription Agreement to acknowledge the number and price of the shares issued by the Tower Company to the Company.

The Company realized a gain (subject to deduction of relevant expenses and taxes) from the tower assets disposal described above, which was calculated based on the surplus of the final consideration for the tower assets disposal over the book value of such assets as of the completion date. The total gain from the tower assets disposal was RMB7,231 million. As the Company holds 27.9% of the share capital of Tower Company following the completion of such tower assets disposal, 72.1% of the aforesaid gain has been recognized at the completion date of such tower assets disposal in the Company s consolidated statement of comprehensive income for 2015 and the remaining 27.9% of the aforesaid gain is deferred over the remaining useful life of the tower assets. Upon completion of the disposal of tower assets by the Company to the Tower Company, the Company and Tower Company entered into the Lease Agreement on July 8, 2016 that sets forth the pricing and related arrangements in relation to the lease of telecommunications towers and related assets (including both acquired towers and new towers). On February 1, 2018, the Company and Tower Company entered into a supplemental agreement on the basis of the original Lease Agreement mainly to adjust the relevant pricing arrangement of tower products under the Lease Agreement and such adjustment was effective from January 1, 2018 and expiring on December 31, 2022. Our telecommunications towers and related assets lease and related fee increased from RMB15,389 million in 2017 to RMB16,063 million in 2018, representing an increase of 4.4%.

In August 2018, the Tower Company completed its H shares global offering and was listed on the Main Board of The Stock Exchange of Hong Kong Limited. As a result, our equity interest in the Tower Company is diluted from 27.9% to 20.5%.

The Tower Company is primarily engaged in the construction, maintenance and operation of telecommunications towers as well as ancillary facilities. The Tower Company will have a significant effect on the growth of our mobile business and our results of operations, please see Item 3. Key Information D. Risk Factors - Risk Relating to Our Business Our operations and further development of our mobile business is dependent on the Tower Company . We have leveraged the rich towers resources of the Tower Company to promptly and effectively expand our 4G network coverage and density, and improve our network competitive strength; in the long term, we would benefit from the operations of the Tower Company in the following aspects: (i) we would enhance our long-term profitability by leveraging on the existing tower assets as well as the cooperation made possible by the Tower Company; and (ii) as one of the major shareholders of the Tower Company, we would benefit from its future earnings and value enhancement.

Disposal of E-store and Establishment of Tianyi Capital

On September 25, 2017, the Company entered into a disposal agreement with Besttone Holding Co., Ltd., or Besttone Holding, a subsidiary of China Telecom Group, pursuant to which the Company agreed to sell to Besttone Holding the 100% equity interest in E-store for an initial consideration of RMB249 million, which was concluded based on the valuation of the equity interest in E-store as of March 31, 2017. In addition, an adjustment was made to the initial consideration to arrive at the final consideration based on the change in the book value of the net assets of E-store during the period from March 31, 2017 to the completion date of the disposal. The control of the equity interest in E-store was transferred to Besttone Holding on October 31, 2017. The final consideration was arrived at RMB251 million, among which the initial consideration amounting to RMB249 million was received by us on November 16, 2017.

On November 30, 2017, we set up a wholly-owned subsidiary, Tianyi Capital, which engages in capital investment activities and provision of consulting services. The registered capital of Tianyi Capital is RMB5,000 million.

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Establishment of China Telecom Leasing Corporation Limited

On November 30, 2018, we and China Telecom Global jointly established China Telecom Leasing Corporation Limited, which engages in telecommunications equipment procurement, financial leasing and related fund raising operations. The registered capital of China Telecom Leasing Corporation Limited is RMB5,000 million with 75% and 25% equity interest held by us and China Telecom Global, respectively.

Establishment of China Telecom Group Finance Co., Ltd.

On June 22, 2018, we, China Telecommunications Corporation and China Communications Services Corporation Limited (CCS , a subsidiary of China Telecommunications Corporation) entered into a capital contribution agreement to jointly establish China Telecom Group Finance Co., Ltd. (China Telecom Finance). China Telecom Finance, a non-banking financial institution legally established with the approval of China Banking and Insurance Regulatory Commission, is a limited liability company incorporated in the PRC on January 8, 2019 with the purpose of providing capital and financial management services to the member units of China Telecommunications Corporation. Pursuant to the capital contribution agreement, the registered capital of China Telecom Finance is RMB5,000 million. The Company, China Telecommunications Corporation and CCS respectively contributed RMB3,500 million, RMB750 million and RMB750 million, which respectively represent 70%, 15% and 15% of the total registered capital of China Telecom Finance. Upon its establishment, China Telecom Finance becomes a non-wholly owned subsidiary of the Company.

On February 1, 2019, China Telecom Finance entered into financial services framework agreements with the Company, China Telecommunications Corporation and CCS, respectively, pursuant to such agreements China Telecom Finance agreed to provide financial services, including deposit services, loan services and other financial services to the Company and its subsidiaries (the Group), China Telecommunications Corporation, its associates and its commonly held entity held with the Group, excluding the Group and the CCS Group (the China Telecom Group), and CCS and its subsidiaries (the CCS Group). Copies of the English summary of such financial services framework agreements are filed as exhibits to this annual report.

Establishment of E-surfing Smart Home Technology Co., Ltd.

On February 1, 2019, we set up a wholly owned subsidiary, E-surfing Smart Home Technology Co., Ltd. (Smart Home Company), which engages in e-surfing HD, smart home, home gateway and intelligent WiFi networking services targeting the Smart Family Ecosphere. The registered capital of Smart Home Company is RMB1,000 million.

Establishment of E-surfing Internet of Things Technology Co., Ltd.

On February 2, 2019, we set up a wholly owned subsidiary, E-surfing Internet of Things Technology Co., Ltd. (IoT Company), which engages in the IoT and Internet of Vehicles services targeting IoT Ecosphere. The registered capital of IoT Company is RMB1,000 million.

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Organizational Structure

Set out below is a chart illustrating our corporate structure and significant subsidiaries as of April 23, 2019:

(1) Formerly known as China Telecom (Hong Kong) International Limited
(2) Formerly known as China Unicom (Macau) Company Limited.
(3) Formerly known as Unicom Huasheng Telecommunications Technology Co., Ltd.
(4) Formerly known as Bestpay Co., Ltd.

In addition, our Company has a branch in each of 22 provinces, five autonomous regions and four centrally administered municipalities in the PRC.

General Information

Our principal executive offices are located at 31 Jinrong Street, Xicheng District, Beijing, PRC 100033 and our telephone number is (+86-10) 5850-1800. Our website address is www.chinatelecom-h.com. The information on our website is not a part of this annual report. We have appointed CT Corporation System at 28 Liberty St., New York, New York 10005 as our agent for service of process in the United States.

Our U.S. public filings are available at the website maintained by the SEC at www.sec.gov, which contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

B. Business Overview

We are an integrated intelligent information service provider in the PRC with full-service capabilities. Following our acquisition of the CDMA Business in 2008, we began to offer a comprehensive range of telecommunications services, including Internet services, information and application services, voice services, telecommunications network resource and equipment service and other related services. See A. History and Development of the Company Industry Restructuring and Our Acquisition of the CDMA Business in 2008 under this Item.

Since 2005, we have started to implement our business strategy of transformation from a traditional basic telecommunications service provider to a leading integrated intelligent information services operator. Specifically, we have enhanced our efforts in developing our non-voice services, such as Internet services, and information and application services, in achieving optimization of business structure and enhanced competitive strength. We aim to provide differentiated and innovative services to create value for customers by leveraging on our integrated resources.

In January 2009, the MIIT issued to China Telecom Group, our controlling shareholder, a license to operate 3G business nationwide based on CDMA2000 technology. We have been authorized by China Telecom Group to operate CDMA2000 3G mobile business in the PRC. We launched our CDMA2000 3G mobile services in March 2009.

In December 2013 and February 2015, the MIIT issued to China Telecom Group, our controlling shareholder, a license to operate 4G business nationwide based on TD-LTE technology and LTE FDD technology, respectively. We have been authorized by China Telecom Group to operate 4G mobile business in the PRC.

In December 2018, China Telecom Group, our controlling shareholder, was granted the approval from the MIIT to permit China Telecom Group to utilize the 3400-3500MHz spectrum nationwide to conduct fifth generation mobile communication pilot programs. We have been authorized by China Telecom Group to conduct 5G system scale trial in the PRC.

Our Operation Strategy

In 2018, taking advantage of the historical opportunities brought about by industrial integration, consumption upgrade and new technological breakthroughs, we advanced our transformation and upgrades strategy. By focusing on our three major goals of construction of Cyberpower, building a first-class enterprise, co-establishing better living , we expedited step-up transformation on all fronts of, and further promoted reform and innovation of our business. We strived to strengthen our capabilities at all levels, while planning future developments from all angles envisioned. In particular:

Propelling intelligent upgrade of network in response to customer needs. Focusing on user experience, business scale expansion and value management, we pushed forward the construction and intelligent upgrade of our network to build up comprehensive network advantages.

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Integration and mutual development: Supporting the swift expansion of service ecology. We accurately grasped changing market demand and expanded the market by leveraging our data traffic and cloud products, cultivating convergence operation, and effectively bundling our services. The overall competitiveness of our bundled products was significantly strengthened, which facilitated rapid breakthroughs in expanding market scale, thereby creating new avenues for value growth. The synergies that resulted from the integration and mutual development of our five ecospheres enabled us to explore new paths towards future sustainable development.

Higher efficiency from intelligent and data-driven operation. Following the consolidation of our IT infrastructure and the greater adoption of new technologies such as Big Data and artificial intelligence, we injected more intelligent elements into operation, leading to efficiency improvement and productivity enhancement. Our data operational capability was also enhanced considerably.

In 2018, we sought to implement reform and foster innovation in all parts of our operation, constantly enhancing the vitality of corporate development and operational capability. We continued deepening the three-dimensional inter-driven reform and mixed ownership reform and stimulated the development vitality. We also intensified the reform of Sub-dividing Performance Evaluation Units, Professional Operation, and Top-Down Service Support System , through which we built up a mechanism focusing on market-oriented recruitment, incentivisation and resource allocation.

In 2018, we focused on developing our 4G business by leveraging terminal-driven and large data traffic strategies to rapidly expand our 4G users base and increase the consumption of 4G data traffic. We continued to expand our optic fiber broadband services to promote intelligent upgrade in broadband. We reinforced our efforts in developing and promoting information and application services to attract more customers. We accelerated the transformation of marketing channels, promoted the synergy among different channels and improved marketing capabilities and efficiency. With multi-mode handsets became the international standard in 2017 and its continuous popularization, the sales channels of our terminals and services were further expanded. We focused on improving service quality to enhance customer experience through various measures such as the commitment of same-day installation, same-day maintenance service guarantee, compensation for service delay for broadband service.

Subscribers and Service Usage

Our operating revenues depend largely on the size of our customer base, usage volume and the level and structure of our tariffs. The following table shows our selected operating data as of the dates and for the periods indicated.

	As of or for the year ended December 31,		
	2016	**2017**	**2018**
Mobile subscribers (in millions)	215.0	250.0	303.0
of which: 4G users (in millions)	121.9	182.0	242.4
Mobile voice usage (in billion minutes)	720.6	769.2	827.7
Handset data traffic (in kTB)	1,277.0	3,597.0	14,073.0
4G users DOU (in megabyte)	1,029	2,012	5,680
Wireline broadband subscribers (in millions)	123.1	133.5	145.8
of which: Fiber-to-the-Home (FTTH) subscribers (in millions)	106.0	126.2	140.7
Access lines in service (in millions)	126.9	121.8	116.5

Wireline local voice usage (in billion pulses)	93.4	75.1	60.2
e-Surfing HD subscribers (in millions)	61.3	85.8	105.3
BestPay average monthly active users (in millions)	16.2	33.0	43.4
Internet of Things connected devices (in millions)	14.2	44.3	106.9

Our Products and Services

Internet Services

Our Internet services consist of wireline Internet access services, including dial-up and broadband services, and mobile Internet access services. Internet services have become increasingly important in our revenue structure. We offer Internet services through integrated and customizable service plans along with various other business models, which create the synergy that mutually benefits our Internet, mobile and other services.

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In 2018, by insisting on the positioning of Gbps service as our top broadband product and a convergence-driven development approach, we fulfilled the needs of individual and family consumers with convergence packages that feature high-speed premium broadband, large data traffic, e-Surfing HD, and Smart Family applications. We also maintained our leading edge in broadband services, sped up the upgrade of installation and maintenance systems and capabilities, and promoted services and products upselling on top of installation and maintenance. The success rate for honoring our same-day installation, same-day maintenance service guarantee, compensation for service delay was significantly improved, while the satisfaction rate for broadband services continued to outperform the industry. The number of our wireline broadband subscribers reached 145.8 million as of December 31, 2018, representing an increase of 9.2% from 133.5 million as of December 31, 2017. The net increase of our wireline broadband subscribers in 2018 recorded a six year high. Among these subscribers, Fiber-to-the-Home subscribers, or FTTH subscribers, reached 140.7 million, accounting for approximately 96.5% of the total wireline broadband subscribers as of December 31, 2018, representing an increase of 11.5% over the number of FTTH subscribers as of December 31, 2017.

Moreover, we further enhanced the coverage and access capabilities of our wireless broadband network by focusing on developing our 4G services. In 2018, we continuously optimized in-depth coverage of 4G networks for key scenes including high-speed rail and high-density business districts and applied dynamic bandwidth expansion in accordance with the increase of users and data traffic. We built approximately 210,000 new 4G base stations, reaching a total of 1.38 million 4G base stations as of December 31, 2018. We insisted on the multi-mode handset strategy, promoted industry chain development, and published the industry s first white paper on multi-mode artificial intelligence handsets. In 2018, the number of our self-registered multi-mode handsets reached 160 million, representing an increase of 23% over the previous year. While maintaining the strategy to position large data traffic packages as the key products, we optimized our package portfolio and reduced the quantity of package plans. Focusing on cooperation with leading video and consumption typed Internet companies, we promoted the convergence of large data traffic, content, applications and user rights. Leveraging on differentiated advantages of our innovative products, such as BestPay red packet and Orange Instalment Payment Service, we strengthened the coordination among channels and enhanced user experience to drive the enhancement of data traffic value and the consumption of data traffic. As of December 31, 2018, the number of our 4G users reached 242.4 million, up by 33.2% from 182.0 million as of December 31, 2017 and accounting for 80.0% of our mobile subscribers. In 2018, our total handset Internet data traffic reached 14,073.0 kTB, representing a significant increase of 291.2% over 2017, and the monthly average mobile data traffic per 4G user reached 5,680 MB, representing an increase of 182.3% over 2017 and significantly contributing to the volume and revenue of our data services.

Furthermore, in 2018, the Company started 5G system scale trial in 17 cities and built 1,000 5G base stations to commence the system development of 5G ecosystem and promote business model innovations with 5G technology, such as autonomous driving bus, smart water treatment and mobile remote medical service.

Information and Application Services

Our information and application services include several core applications namely Internet protocol TV (e-Surfing HD), or IPTV (e-Surfing HD), intelligent WiFi networking, family cloud and smart home appliances as well as Internet data center, or IDC, services, cloud computing services and content delivery networks, or CDN, services which are based on Internet related services. In addition, we have caller display which is based on wireline voice related services, SMS, multimedia messaging services, or MMS and email services, content based and applications services, such as content services relating to music, and industry applications services for government and enterprises, such as government administration and supervision, transport and logistics, digital hospital, Global Eye, which is a video surveillance solution based on IP technology, and integrated e-Surfing Push-To-Talk services.

We strengthened our research and development capability in relation to the emerging businesses with prominent results. In developing Smart Family products, we leveraged our resources advantage to implement centralized and efficient operations on a full-scale to form and operate the Smart Family alliance, and developed four core applications, namely e-Surfing HD, intelligent WiFi networking, family cloud and smart home appliances, achieving stable expansion in the subscriber base. In 2018, we scaled up the introduction of Smart Family applications, built a nationwide centralized platform for value-added services, and unified previously separate accounts for broadband and e-Surfing HD services. We also firmly followed popular contents to create members-only packages of e-Surfing HD with movies and TV shows, education and sports. By the end of 2018, the number of e-Surfing HD subscribers reached approximately 105.3 million, representing a net increase of 19.5 million over last year. The proportion of our broadband subscribers who also subscribed our mobile and e-Surfing HD services at the same time reached 65%, representing an increase of 13 percentage points over last year. Following such increase, the penetration rate of e-Surfing HD subscribers over our broadband subscribers reached 72%. With respect to the development of internet finance, we leveraged the advantages offered by offline traditional channels to widely expand consumption scenarios, while our innovative integration of payment channels provided one-for-all receipt and payment solution. The number of average monthly active users of BestPay reached 43.4 million in 2018, representing an increase of 31.5% over last year and the number of BestPay active participating merchants more than doubled. In addition, we developed red packet and instalment payment platforms, which significantly boosted the loyalty of mobile subscribers and drove strong subscriber growth, while also effectively promoted the expansion of new retail and integrated retail channel. Furthermore, we promoted our New ICT Applications, or DICT services, which are the converged intelligent application services integrating communications technology, information technology and cloud & Big Data technology. With respect of the development of DICT, we strengthened our cloud-network integration advantages, and continued to drive the development of dedicated line, DICT and IoT services through cloudification . With respect to the development of Internet of Things (IoT), leveraging on our first-mover advantages on NarrowBand-IoT (NB-IoT) network, our IoT business has entered high-speed phase of development. Based on the framework of Cloud Pipes Devices Applications , we continued to focus on developing our core IoT capabilities and providing one-stop solutions for industrial IoT applications. Net addition of IoT users doubled year on year, with the number of connected devices exceeding 100 million.

In 2018, with accelerated promotion of enhanced Machine-Type Communications (eMTC) pilot launch, we basically accomplished the whole-range speed rate IoT structure combining high, medium and low speed of 4G, eMTC and NB-IoT, respectively and offered differentiated services capabilities on demand. We accelerated cloud-network integration, and carried out coordinated deployment of IDC and cloud resources to persistently enhance its service capability. The Company connected cloud resource pools with the carrying network, enabling a cloud-led network. Furthermore, by introducing new technologies such as Software-Defined Networking (SDN) and Network Functions Virtualisation (NFV), we accelerated the re-constitution of our networks, and rolled out scale promotion of intelligent self-selecting bandwidth network products for government and enterprise customers as well as home gateway products based on SDN technology, which allows our network products to be activated within minutes. We also launched a VoLTE virtual IP Multimedia Subsystem (vIMS) core network with software and hardware decoupling to facilitate the progress of cloudification and virtualisation.

We experienced rapid growth in our IDC services in 2018. Revenue from IDC services was RMB23,380 million, representing an increase of 22.4% over last year, while revenue from cloud service was RMB4,480 million, representing an increase of 85.9% over last year. Revenue from Big Data services was RMB865 million, representing an increase of 12.5% over last year. IDC serves as important network foundation to cloud and Big Data services. We have leveraged on the advantage of convergence of cloud and network and optimized our cloud and IDC resource layout by constructing the 2+31+X framework in China. In 2018, based on a new generation of IoT with nationwide coverage as foundation, we successfully constructed Connectivity Management Platform and enriched terminals products, endeavoring to expand connection scale.

Voice Services

Our voice services include mobile voice services and wireline voice services.

Prior to September 1, 2017, our mobile voice services included local calls, domestic long distance calls, international long distance calls, intra-provincial roaming, inter-provincial roaming and international roaming. We ceased to charge mobile voice services subscribers the domestic long distance and roaming fees on and from September 1, 2017. In 2018, we insisted on the multi-mode handset strategy, promoted industry chain development, and published the industry s first white paper on multi-mode artificial intelligence handsets.

Amid the intense market competition in 2018, the number of subscribers of our mobile services grew by 21.2% from 250.0 million as of December 31, 2017 to 303.0 million as of December 31, 2018. The mobile voice usage increased to 827.7 billion minutes in 2018 from 769.2 billion minutes in 2017.

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Our wireline voice services include local wireline services, domestic long distance wireline services and international, Hong Kong, Macau and Taiwan long distance wireline services. The total number of wireline telephone subscribers decreased to 116.5 million as of December 31, 2018 from 121.8 million as of December 31, 2017. The total wireline local voice usage decreased by approximately 19.9% from 75.1 billion pulses in 2017 to 60.2 billion pulses in 2018.

The decrease in the number of wireline telephone subscribers and wireline voice service usage was primarily attributable to the increasing penetration of mobile voice and other alternative communication means, such as Over-the-Top messaging services and the migration of some of our wireline telephone subscribers to our mobile services.

In addition, we continued to enhance the scale development of industry applications to attract government and enterprise subscribers.

Telecommunications Network Resource and Equipment Services

Our telecommunications network resource and equipment services primarily include services relating to our optic fiber and circuits, such as the use of optic fiber and circuit; virtual private network, or VPN, and use of bandwidth. We offer telecommunications network resource and equipment services as certain of our overall telecommunications solutions to large enterprise customers, including government authorities, large corporations and institutions. Many of these customers choose to use our circuits to form VPNs based on various technologies, and links their local area networks at different locations. We also collaborate with a number of international telecommunications service providers to provide global communications services for multinational corporations. In addition, we provide network equipment to large enterprise customers.

In 2018, we continued to focus on government, financial and large enterprise customers. Our marketing efforts focused on providing global one-stop services, tailored services and comprehensive solutions to these customers. These customers can enjoy a full range of consulting and technical support and services by contacting any of our designated account managers.

Others

Our other services primarily include sales and repairs and maintenance of equipment, resale of mobile services and property rental.

Our Customers and Brand Management

In 2018, we continued to promote our full-service brand names under the brand China Telecom , and further enhanced the brand image of China Telecom as an integrated intelligent information service operator through, among others, promoting our e-Surfing 4G, China Telecom broadband, e-Surfing cloud, multi-mode artificial intelligence handsets, IPTV as well as intelligent Wifi networking services and products. Through providing contents to our services on a multi-dimensional level and our coordinated marketing efforts, we continue to enhance the brand recognition and market influence for China Telecom .

Tariffs

Prior to May 2014, the levels and categorization of most of our current tariffs were subject to regulation by various government authorities. As a result of the governmental effort to gradually ease the regulations on the tariffs, the MIIT and the NDRC issued the Notice on Implementing the Market Based Tariffs for Telecommunications Services, pursuant to which, effective from May 10, 2014, telecommunications operators are permitted to set the tariffs of all telecommunications services based on the cost, customers demand and market conditions. See Regulatory and Related Matters Tariff Setting included elsewhere under this Item.

Wireline Voice Services

For our local wireline telephone services, we charge usage fees based on call usage.

Currently, all domestic long distance wireline services using public switched telephone network, or PSTN, are charged at the unified rate with a discount rate during off-peak hours.

We offer international, Hong Kong, Macau and Taiwan long distance wireline services through the international gateways of China Telecom Group. China Telecom Group negotiates bilateral settlement arrangements and rates based on the international settlement standards in the telecommunications industry, and we follow those settlement arrangements and rates.

Mobile Voice Services

Generally we charge subscribers of our mobile voice services the following categories of tariffs: local usage charges, long-distance call charges and roaming charges. However, in 2016, we waived domestic long distance call charges and roaming charges for voice services in our new 4G subscription plans. By the end of 2016, we stopped offering subscription plans with separate billing for long distance call charges and roaming charges, and all new plans had nationally uniform prices for voice services domestically. In addition, we ceased to charge handset subscribers domestic long distance and roaming fees on and from September 1, 2017.

With respect to international, Hong Kong, Macau and Taiwan roaming of our mobile voice services, we provide roaming services to our customers and determine the roaming charges in accordance with roaming agreements between China Telecom Group and the international, Hong Kong, Macau and Taiwan operators.

Internet Services and Information and Application Services

We determine tariffs for these services according to market conditions. In addition, pursuant to the policy requirements of the PRC government regarding network speed upgrade and tariff reduction, in 2018, we rolled out corresponding measures in due course to meet the policy requirements, including (i) starting July 1, 2018, we cancelled mobile data roaming charges within mainland China; (ii) we reduced the tariff for international roaming charges in various countries and regions; and (iii) we reduced the tariff of Internet dedicated line access and commercial dedicated line access for small and medium enterprises.

Telecommunications Network Resource and Equipment Services

We determine the tariffs for our telecommunications network resource and equipment services according to market conditions. We generally charge a fee for installation of our telecommunications network resource services and a fixed monthly fee. We offer various promotion discounts for our customers who wish to upgrade to higher bandwidth services. These promotion discounts have stimulated demand for our telecommunications network resource services in recent years. Besides, we generally charge monthly fees for our network equipment service on a discount basis and the tariff for network equipment service have generally decreased in recent years. We provide different discounts to our customers on a case by case basis.

Interconnection and Roaming Arrangements

Interconnection

Interconnection refers to various arrangements that permit the connection of our networks to other mobile, fixed-line networks or Internet backbone networks. These arrangements provide for the sharing and settlement of revenues from the base usage charges and, if applicable, roaming charges and domestic and international long distance charges as well as the interconnection arrangement and settlement of Internet backbone networks.

China Telecom Group entered into interconnection settlement agreements with other telecommunications operators, including Unicom Group, China Mobile Group and China Transport Telecommunication Information Center. We entered into an interconnection settlement agreement, as amended, with China Telecom Group, which allows our networks to interconnect with China Telecom Group s networks as well as networks of the other telecommunications operators, with whom China Telecom Group had interconnection arrangements. Our interconnection arrangements with China Telecom Group and other telecommunications operators enable our subscribers to communicate with the subscribers of those operators and to make and receive local, domestic and international long distance calls and to access the Internet backbone networks. All interconnection and settlement arrangements among public wireline telephone, mobile, and Internet networks in the PRC are governed by the Telecommunications Regulations promulgated by the State Council and the Telecommunications Regulations and the Administrative Rules on Interconnection between the Public Telecommunications Networks promulgated by the MIIT. See Regulatory and Related Matters Interconnection included elsewhere under this Item.

International Roaming

As for voice and data services, we provide international roaming services to our subscribers, which allow them to access mobile telecommunications services and use voice, SMS and data services while they are physically outside of their registered service area but in the coverage areas of other mobile telecommunications networks in other countries and regions with which we or our roaming sponsor have roaming arrangements.

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As of December 31, 2018, subscribers of our mobile services can roam on mobile networks in more than 200 countries and regions based on international roaming agreements between China Telecom Group and the local operators or roaming providers. A mobile service subscriber using roaming services is charged at our roaming usage rates for both incoming and outgoing calls, plus applicable long distance tariffs. With respect to international roaming, we settle roaming revenues and expenses with international operators in accordance with roaming agreements between China Telecom Group and the international operators. China Telecom Group has also agreed to arrange for us to participate in its future international roaming arrangements.

Marketing, Sales, Distribution and Customer Services

Marketing, Sales and Distribution

Our marketing strategy is to establish our image as an intelligent full-service telecommunications service provider and utilize our comprehensive services platform and nationwide marketing and distribution network. We have devoted substantial efforts in advertisements to promote recognition of and loyalty to our products and services. In order to respond to market competition as well as attract and motivate customers to use our services, we have also combined certain voice and data products into one integrated service plan to targeted customers to address their telecommunications needs.

We continue to build three systems in terms of ecosphere products, customer management and integrated sales channels, surrounding the Trinity value management system featuring convergence for scale expansion, integration for application development and intelligentisation for efficiency enhancement . In terms of the construction of an ecosphere products system, we accelerated the consolidation of our resources and mechanism innovation, formed capability development centers for cloud, DICT applications, Smart Family and IoT. We also fostered high-quality products and enhanced its supply-side capability. In terms of the construction of a customer lifecycle management system, we focused on user experience and value management, injected intelligent elements to and provided ecological endowment for our channels through precision marketing leveraging Big Data. We propelled the process of existing customers upgrading to multi-featured convergence packages as well as large data traffic packages, and commenced ongoing uplift of our customer service quality. In terms of the construction of an integrated sales channel system, we built channels comprising self-owned + third-party , online + offline and platform + sales reach , in order to adapt to the trend of sales channels step-up transformation in the new retail era, and to bolster efficiency and effectiveness. The intelligent upgrade of our self-owned outlets set a new industry benchmark, while innovative collaborations with third-party channels expanded our sales reach. Through extensive cooperation with new retail stores, we also scaled up the expansion of our integrated sales channels. The operational capability of our sales channels was continuously enhanced, while the establishment of a corporate core was further promoted, injecting intelligent elements to our marketing and operational management. As a result, average system processing time for services was greatly reduced, and operational efficiency and customer experience were significantly enhanced.

Furthermore, we have adopted various marketing approaches and initiatives, such as customer experience, customer relationship management, SMS, telesales, sales plans and joint promotion with our business partners such as Internet portal companies and software development companies, to promote our products and services, in particular, our information and application services.

Customer Service

We provide customer services through all channels on our integrated sales and distribution channel network. Our customer services typically include service inquiries, service applications, customers complaints, product and service promotions, service initiation and termination, payment reminder services and emergency services. Through establishing and implementing our customer full-service standard, we have significantly improved our basic customer services, such as service processing time, request responding time and providing service related and other information to customers through text messages.

In 2018, we made the following enhancements to our customer service:

- Making efforts to improve the service capabilities on Internet access, cloud computing and IoT business of government and enterprise customers by shortening installation, transfer and repair time of broadband and dedicated lines, improving the punctuality of group network line access and improving the punctual repair rate of IoT-related malfunction.

- Carrying out video quality monitoring and analysis of e-Surfing HD service to improve the experience and quality of video streaming.

- Leveraging artificial intelligence and Big Data technology to develop smart hotline 10000 and promote its operational artificial intelligence.

Developing internet-based self-service model and procedures to offer more convenience for our users.

Improving the customer service ability through new media to solve problems for customers in a direct and vivid way, such as introducing customer service robots to internet-based service and promoting live video chat.

In 2018, we continued to maintain leading position in the industry in terms of comprehensive customer satisfaction and customer satisfaction in mobile voice as well as mobile and wireline Internet access services according to assessment conducted by the MIIT.

Information Technology System

We employ our information technology, or IT, system to support our voice services and other services. In recent years, through continuous upgrading, our IT system has the capability to support our wireline, mobile and other services on an integrated basis and to support other services related operations such as account opening, billing and customer services.

Network System

Our network has extensive coverage and scale and employs a variety of advanced technologies and suitable architecture. It offers comprehensive functions and a reliable operation. In addition, it supports a comprehensive range of end-to-end telecommunications services and enables customized products to be delivered for a variety of telecommunications needs. Our network system is managed and operated by our experienced network management and maintenance teams and is supported by our strong research and development capabilities. And in light of future advances in technology, we have formulated viable plans to migrate our network system efficiently to the next generation. Furthermore, we procure our network equipment and related maintenance and technical support mainly from a number of PRC and overseas telecommunications network equipment manufacturers and suppliers including Huawei Technologies, Ericsson, Nokia and ZTE Corporation, among others.

On December 31, 2012, we completed the acquisition from China Telecom Group of certain assets and associated liabilities relating to the CDMA network located in 30 provinces, municipalities and autonomous regions in the PRC. In addition, we lease certain CDMA network facilities in Xizang Autonomous Region from China Telecom Group and have the exclusive right to use and operate such CDMA network to provide our CDMA mobile services. See Item 4. Information on the Company A. History and Development of the Company Our Acquisition from China Telecom Group of the CDMA Network Assets and Associated Liabilities and Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions for details.

Network Architecture

Our network system consists of access networks, data networks, core networks, transport networks, service networks and support networks.

Access networks: Access networks include wireline access network based on copper cables and optic fibers and wireless access network based on CDMA, TD-LTE and LTE FDD, which are directly connected to customers to provide wireline and wireless data and voice services.

Data networks: Data networks include Internet network and basic data network, and provide network support for all telecommunications services based on IP.

Core networks: Core networks include our wireline telephone network, mobile core network, and support our basic telecommunications services.

Transport networks: Transport networks provide electronic transmission of various service signals for access networks, data networks and core networks.

Service networks: The service networks provide the platform and ancillary systems for a variety of value-added services and application products.

Support networks: Support networks include signaling networks, digital synchronous networks and various network management systems, in order to support the safe, stable and effective operation of our networks and services at all levels.

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Low frequency refarming

We obtained permits from MIIT to refarm the 800MHz frequency resources and make use of the unoccupied frequency resources for 4G network construction. We have utilized the advantage in the coverage reach of the low frequency of 800MHz by rapidly finishing the construction of 4G network in rural areas at a low cost, achieving nationwide full coverage of 4G, as well as deepening the coverage and supplementing the volume of 4G data in urban areas.

With the support of our nationwide 4G network, we have established a NB-IoT network with broad coverage and high quality nationwide to support development of the ecosystems around our business and our Voice over LTE (VoLTE) network has begun commercialization.

Equipment procurement

We purchase most of our network equipment from leading international and domestic suppliers. We purchase a variety of network equipment from domestic suppliers, such as transport equipment and local switches. We make most of our purchases through competitive tenders primarily based on product and service quality, system compatibility and price.

Purchases from our five largest suppliers of telecommunications equipment accounted for approximately 29.7% of our total amount of annual purchases in 2018. Purchases from our single largest supplier of telecommunications equipment accounted for approximately 13.5% of our total amount of annual purchases in 2018.

Competition

Following the industry restructuring in 2008, China Unicom and our Company have full-service capabilities and compete with each other in both wireline and wireless telecommunications services. China Mobile continues to be the leading provider of mobile telecommunications services in the PRC and competes with us in mobile telecommunications services and other telecommunications services. In December 2013 and May 2016, China Mobile and China Radio and Television Network, respectively, received a license from the MIIT to operate fixed-line businesses, leading to intensified competition in this sector.

Since the PRC s accession to the WTO, foreign operators have been permitted to gradually increase their investments in the telecommunications industry in the PRC. Like domestic service providers, foreign operators are subject to the licensing requirements of the MIIT. In addition, investments by foreign operators may not exceed limits set forth in the relevant laws and regulations with respect to the amount of investment and percentage of total ownership interests that foreign operators are permitted to make in telecommunications enterprises in the PRC. For example, the foreign ownership in basic telecommunications services will be subject to a limit of 49.0%, and the foreign ownership in value-added telecommunications services other than e-commerce services will be subject to a limit of 50.0% except in the pilot free trade zones in China. See Regulatory and Related Matters Licensing included elsewhere under this Item.

We also face increasing competition from other competitors outside the telecommunications industry, in particular, from Internet services providers and mobile software and application developers, such as Over-the-Top messaging or voice services providers who offer contents and services on the Internet without their proprietary telecommunications network infrastructure. These competitors are competing with us in information and application or voice services. In recent years, the PRC Government has taken various initiatives to encourage competition in the telecommunications industry, such as the three-network convergence policy and the policy encouraging private capital to enter the industry, in addition to a series of guidance to such effect. Specifically, in May 2010, the PRC State Council issued

Certain Opinion on Encouraging and Guiding the Sound Development of Private Investment, encouraging private investment in industry sectors that are mainly state-controlled, such as basic telecommunications services. In June 2012, the MIIT issued Opinions on Encouraging and Guiding Private Investment in the Telecommunications Industry, encouraging private-sector investment in the telecommunications industry. On May 17, 2013, the MIIT issued the Trial Plan of Resale of Mobile Telecommunications Services, pursuant to which the MIIT would grant qualified companies mobile telecommunications resale business approvals on a pilot basis which would allow them to purchase mobile telecommunications services in bulk from mobile networks operators or resell such services to customers. On January 6, 2016, the MIIT issued the Guidance on the Wholesale Price Adjustments of Mobile Telecommunications Resale Business
(移动通 转售业务批发价格调
pursuant to which the MIIT required that the wholesale price for resale of mobile telecommunications services should be lower than the per unit price (or package price) for similar services of the mobile networks operators. On April 28, 2018, the MIIT issued the Circular on Commercialization of Mobile Telecommunications Resale Business
(移动通 转售业务正式商用的
pursuant to which the MIIT granted commercial operation approval to the mobile communication resale business, effective from May 1, 2018.

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In an effort to further encourage private-sector investment in the broadband network construction and business operation, as well as encourage private capital to enter into the telecommunications market through equity investment, the State Council issued the Notice on the Broadband China Policy and the Implementation Plan on August 1, 2013 and Certain Opinion on Promoting Information Consumption and Stimulating Domestic Demand on August 8, 2013, and the MIIT also issued the Informatization Development Plan on September 29, 2013, the Notice on Opening the Broadband Access Market to Private Capital on December 25, 2014 and three more Notices on Further Broadening the Scope of Trial Opening of the Broadband Access Business on September 23, 2015, October 13, 2016 and September 27, 2017, respectively. By the end of 2018, the broadband access market opened up to private capital in all the cities in 17 provinces in China on a province-wide basis and additional 39 pilot cities in other provinces. As a result, the competitive landscape in the PRC telecommunications industry may further diversify, causing more intensified competition. In April 2018, MIIT approved the commercialization of mobile telecommunication resale business, effective from May 2018. As of January 31, 2019, among the 42 mobile virtual network operators who had been approved by the MIIT to conduct resale business on a pilot basis, 32 of which had been granted commercial operation licenses; and among the 25 companies who signed resale agreements with us, 12 companies had been granted commercial licenses and the other companies are all in the process of applying for such licenses.

Trademarks

We conduct our business under the China Telecom brand name and logo. Currently, China Telecom Group owns certain trademarks in the PRC, some of which have been registered with the former Trademark Office of the PRC State Administration for Industry and Commerce, or the Trademark Office, and some of which are in the process of being registered with the Trademark Office. China Telecom Group has executed a trademark license agreement with us. Under this agreement, China Telecom Group agreed to grant to us and our subsidiaries the right to use these trademarks upon the completion of the registration on a royalty-free basis until December 31, 2021, which is automatically renewable for three more years as the parties may agree. See Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions Ongoing Related Party Transactions between Us and China Telecom Group and its affiliated companies Trademark License Agreement .

Regulatory and Related Matters

Overview

The PRC s telecommunications industry is subject to extensive government regulation. A number of central government authorities have regulatory responsibilities for various aspects of the telecommunications industry. These authorities primarily include:

- The MIIT, which is responsible for, among other things:
  - formulating and enforcing industry policies and regulations as well as technical standards;
  - granting telecommunications service licenses;
  - supervising the operations and quality of service of telecommunications service providers;

allocating and administering telecommunications resources such as spectrum and numbers;

together with other relevant regulatory authorities, including the NDRC, regulating tariff charging mechanisms for telecommunications services;

formulating interconnection and settlement arrangements between telecommunications networks; and

maintaining fair and orderly market competition among service providers.

Provincial communications administrations under the MIIT, which oversee the implementation of the Ministry s regulations and exercise regulatory authorities delegated by the Ministry within their respective provinces, autonomous regions and centrally administered municipalities.

The NDRC approves investment and finance projects exceeding certain capital expenditure amounts as well as foreign investment projects exceeding certain investment amounts.

In order to provide a uniform regulatory framework to encourage the orderly development of the telecommunications industry, the PRC government is in the process of drafting a telecommunications law. We expect that, if and when the telecommunications law is adopted by the National People s Congress or its Standing Committee, the highest state legislative body in the PRC, it will become the basic telecommunications statute and provide a regulatory framework for the telecommunications industry in the PRC.

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In addition, the Counterterrorism Law of the People s Republic of China has come into force on January 1, 2016. It requires telecommunications operators and Internet service providers to provide technical support and assistance such as technical interface and decryption to the public security authorities and national security authorities for their lawful prevention and investigation of terrorist activities; it requires telecommunications operators and Internet service providers to put into practice the network security, information content supervision system and technical measures for security protection in accordance with the laws and administrative regulations, in order to prevent the dissemination of information relating to terrorism and extremism; it requires telecommunications operators and Internet service providers to, where any information in relation to terrorism or extremism is detected, immediately cease the relevant transmission, keep the relevant records, delete the relevant information and report to the public security divisions or the relevant departments; it also requires telecommunications operators and Internet service providers to examine the identity of the users and not to provide services to any person of unknown identity or to persons who refuse to have their identity examined. Violation of the above provisions may result in fines and the relevant responsible persons may also be fined or detained.

On September 23, 2016, six departments including the Supreme People s Court, the Supreme People s Procuratorate, Ministry of Public Security, the MIIT, the People s Bank of China and China Banking Regulatory Commission jointly released the Announcement on Preventing and Cracking Down on Telecom and Internet Frauds. The Announcement requires telecom operators to strictly implement the real-name registration system of telephone subscribers. Services to those entities or individuals who have not registered in real names and could not complete the true identity information registration within the stipulated time will be terminated. It also requires telecommunications operators to immediately carry out measures to clean up user accounts that have registered multiple phone cards, and to block Internet publication, search, dissemination and sales channels of software that changes the number displayed by caller IDs. It also strictly prohibits the operation and any business that provides illegal services of changing phone numbers via Internet; strictly regulates the transmission of caller IDs of the Administration of International Communication Accesses; fully implements the regulation and cleaning up of private voice lines and caller authentication; strengthens the detection and interception of fake caller IDs within and between networks; and immediately bans and regulates telephone services such as one-number service , through which the user can combine his/her various communication numbers into one new phone number, business switchboard and 400 telephone switchboard. Furthermore, on November 7, 2016, the MIIT issued the Implementation Opinions on the Work of Further Prevention and Crack Down on Communications Fraud, which requires telecommunications operators to fully implement the real-name registration for telephone subscribers, rectify and standardize the key telecommunications services, rectify the issue of changing number via internet services and strengthen the protection of telephone subscribers personal data.

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On June 1, 2017, the Cyber Security Law of the People s Republic of China came into force. It stipulates relevant rules for personal data security protection, new types of cybercrime and network real name system; it specifies the principle of cyberspace sovereignty, the security obligations of network products and services providers as well as the security obligations of network operators; and it further enhances the protection of personal data, establishes the framework for the protection of critical information infrastructure facilities, and establishes rules regulating cross-border transmission of key data via critical information infrastructure facilities. In addition, it provides for the punishment for foreign organizations and individuals that attack and destroy China s critical information infrastructure facilities and establishes a system for monitoring, early warning and emergency response. Telecom operators shall comply with the requirements under the Cyber Security Law of the People s Republic of China in respect of network operating security and network information security. In addition, the Measures for the Security Review of Network Products and Services (Provisional) became effective on June 1, 2017. The Cyber Security Law of the People s Republic of China and the Measures for the Security Review of Network Products and Services (Provisional) require procurement of network products and services by operators in key industries or of critical information infrastructure facilities that may have national security concerns to go through a cyber security review. Relevant government authorities responsible for the protection of critical information infrastructure facilities will decide on whether such procurement would threat national security pursuant to the review. The security review of telecommunications industry would be organized and conducted by the MIIT. The security review may be initiated by the enterprises or by the relevant government authorities. The security review would focus on the security and controllability of network products and services. Operators of critical information infrastructure facilities use network products or services that have not conducted the security review or have not passed the security review, would face a fine of no less than one but no more than ten times of the amount of purchase. According to the Cyber Security Law, the Cyberspace Administration of China, or the CAC, has a central role in planning, coordination, supervision, and management of network security measures while the MIIT, the Ministry of Public Security and other relevant authorities are in charge of network security protection, supervision and management within the scope of their respective responsibilities. While several related regulations, including the Measures for the Security Review of Network Products and Services (for Trial Implementation) and the Provisions for the Administration of Internet News Information Services, published by the CAC came into effect on the same day as the Cyber Security Law, the implementation of the Cyber Security Law is still at an early stage. The PRC government may amend the relevant regulations or promulgate new regulations to clarify and further implement the Cyber Security Law. Although we expect that the Cyber Security Law will have a positive effect on the overall development of the telecommunications industry and enhance information protection in Mainland China, we currently cannot predict the scope of any specific requirements that may be imposed on us and their implications for our operations under the Cyber Security Law and relevant regulations. On January 1, 2018, the Measures for Monitoring and Management of Public Internet Cyber Security Threat issued by the MIIT came into force. It provided for the definition of public Internet cyber security threats, the relevant governing authorities, working principles and remedial measures in connection with the monitoring and management of public internet cyber security threats. Telecom operators are required to strengthen the monitoring and management of public Internet cyber security threats, notify the governing authorities in a timely manner after discovery of cyber security threats, and provide technical assistance to governing authorities in relation to inquiries into IP address attribution and domain name registration.

On May 1, 2018, the national standard on personal information protection, Information Security Technology Personal Information Security Specification GB/T 35273-2017 (《 息安全技术-个人 息安全规 35273-2017)), came into force. It provides specific examples on the scope and types of personal information and sensitive personal information; stipulates the basic principles on personal information security and regulates the collection, retention, use, sharing, transfer and public disclosure of personal information. It puts forward specific requirements on the methods and measures to handle personal information security incidents by personal information controllers, as well as the organization and management of personal information controllers. In addition, it provides implementation methods and privacy policy forms for the right of informed consent to be exercised.

Telecommunications Regulations

The PRC s State Council promulgated the Telecommunications Regulations, which became effective as of September 25, 2000 and were amended on July 29, 2014 and February 6, 2016, respectively, by the Decision of the State Council on Amending Certain Administrative Regulations. The Telecommunications Regulations are substantially consistent with, and are primarily intended to streamline and clarify, the then existing rules and policies for the telecommunications industry. The Telecommunications Regulations provide the primary regulatory framework for the PRC s telecommunications industry in the interim period prior to the adoption of the telecommunications law.

The Telecommunications Regulations are intended to develop a transparent and fair regulatory environment to encourage fair and orderly competition and development in the telecommunications industry. The Telecommunications Regulations address all key aspects of telecommunications operations, including, among others, entry into the telecommunications industry, network interconnection, telecommunications resource allocation, tariffs and service standards.

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Licensing

The Telecommunications Regulations adopt the existing regulatory distinction between basic and value-added telecommunications services, which are subject to different licensing requirements. On December 28, 2015, the MIIT promulgated the Telecommunications Service Catalogue (2015 edition) which took effect on March 1, 2016. Basic telecommunications services include, among others, wireline communications services, cellular mobile communications services, satellite communications services, data communications services, IP telephone services, trunking communications services, wireless paging services, network access facilities services, domestic communications facilities services and network hosting services. Value-added telecommunications services include, among others, internet data center services, content distribution network services, domestic Internet virtual private network services, Internet access services, online data processing and transaction processing services, domestic multi-communication services, storage and forwarding services, call center services, information services and coding and procedures conversion services.

Providers of any basic telecommunications services as well as providers of value-added services in two or more provinces, autonomous regions and centrally administered municipalities in the PRC must apply for licenses from the MIIT. In accordance with the approval of the MIIT, we derive our exclusive rights to operate basic telecommunications business from our status as a subsidiary controlled by China Telecom Group, which holds the licenses required for operating our telecommunications business. In January 2009, China Telecom Group received a license from the MIIT to operate 3G services nationwide, which permits China Telecom Group to provide 3G services based on CDMA2000 technology. We have been authorized by China Telecom Group to operate 3G services nationwide based on CDMA2000 technology. In December 2013, China Telecom Group, Unicom Group and China Mobile Group received licenses from the MIIT to operate 4G services nationwide based on TD-LTE technology. We have been authorized by China Telecom Group to operate 4G services nationwide based on TD-LTE technology. On February 27, 2015, China Telecom Group was granted by the MIIT the permit, and authorized us, to provide 4G services based on LTE FDD technologies nationwide.

After its accession to the WTO in December 2001, the PRC promulgated the Administrative Regulations on Telecommunications Companies with Foreign Investment, which became effective on January 1, 2002 and were subsequently amended in 2008 and 2016, implementing its commitments to the WTO. Those commitments include the gradual reduction of foreign ownership restrictions in the telecommunications industry and the step-by-step opening of the telecommunications market in the PRC to foreign operators. According to those regulations, enterprises with foreign investment may operate basic and value-added telecommunications services subject to the approval of the MIIT and the Ministry of Commerce (formerly the Ministry of Foreign Trade and Economic Cooperation). Certain limitations have been placed on the total registered capital of, and maximum foreign shareholdings in, such enterprises. However, the presence or absence of foreign investments in an applicant for telecommunications licenses will presumably bear no direct relation to the decision on whether to issue licenses, inasmuch as the issuance of new licenses is governed by a separate set of rules and regulations. In recent years, the PRC gradually fulfilled the market-opening commitments it made to the WTO and lifted many restrictions for foreign investors and service providers in respect of telecommunications services.

The remaining restrictions regarding mobile services, value-added telecommunications services and fixed line services are as follows:

For mobile voice and data services:

there is no longer any geographic restriction and the foreign ownership shall be no more than 49.0%.

For value-added telecommunications services:

there is no longer any geographic restriction and the foreign ownership generally shall be no more than 50.0%.

For fixed line services:

there is no longer any geographic restriction and the foreign ownership shall be no more than 49.0%.

The MIIT has promulgated the Administrative Measures for the Licensing of Telecommunications Business, which aims to strengthen the administration of licensing of telecommunications operations permits and became effective on September 1, 2017. It provides for the establishment of an integrated management platform for telecommunications business, the promotion of online application, approval and management of business license as well as publication, queries and co-sharing of related information, and enhancement of credit management by including credit conditions as a precondition to being granted a business license. The annual business license inspection system would be adjusted to a system of publication of annual reports and announcements. An illegal operations and dishonesty list for telecommunications operators would be established and maintained and the operators on such list would be subject to enhanced supervision from relevant telecommunications regulatory bodies. If a telecommunications business operator is requested by relevant telecommunications regulatory body to suspend operations, its business license is revoked or there are certain other circumstances as stipulated by the MIIT, such operator would be included in the dishonesty list and may not apply for telecommunications business license.

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Pursuant to the Circular on the Framework Plan for the China (Shanghai) Pilot Free Trade Zone issued by the State Council on September 18, 2013, qualified foreign investment enterprises will be permitted to provide specific value-added telecommunications services in the China (Shanghai) Pilot Free Trade Zone, subject to protections on Internet information security and approval by the State Council in case of a breakthrough in the limitations provided for under the administrative regulations. In April 2014, to further promote the pilot program of the value-added telecommunications business in the China (Shanghai) Pilot Free Trade Zone, the MIIT issued the Administrative Measures for the Pilot Operation of the Value-added Telecommunications Business by Foreign Investors in China (Shanghai) Pilot Free Trade Zone.

Tariff Setting

Prior to May 10, 2014, under the Telecommunications Regulations, telecommunications tariffs are categorized into government fixed tariffs, government guidance tariffs and market based tariffs. The telecommunications providers are permitted to set tariffs for certain services provided the tariff levels are below the tariff ceilings set by the MIIT and the NDRC.

As a result of the governmental effort to gradually ease the regulations on the tariffs, on May 5, 2014, the MIIT and the NDRC issued the Notice on Implementing the Market Based Tariffs for Telecommunications Services. Pursuant to this Notice, effective from May 10, 2014, the government fixed tariffs and the government guidance tariffs are abolished and telecommunications operators are permitted to set the tariffs of all telecommunications services based on the cost and market conditions. The Telecommunications Regulations were subsequently amended on July 29, 2014 by the Decision of the State Council on Amending Certain Administrative Regulations to reflect this policy change as well as other amendments.

On May 20, 2015, the office of the State Council promulgated the Guidance Opinions Regarding Expediting the Development of the High-Speed Broadband Network and Promoting the Speed Upgrade and Tariff Reduction, calling for the telecommunications operators to reduce the data tariffs. In addition, the Report on Work of Government in 2017 calls for the deepening of speed upgrade and tariff reduction, the cancellation of domestic long distance and roaming fee, the reduction of the tariff of Internet dedicated line access for small and medium enterprises and international long distance calls. Furthermore, the Report on Work of Government in 2018 calls for a further promotion of network speed upgrade and tariff reduction to reduce the average broadband tariff for small and medium enterprises and the average tariff of mobile network to a greater extent in 2019.

On August 23, 2018, the MIIT promulgated the Notice of the Ministry of Industry and Information Technology on Further Regulating the Marketing Behavior of Telecommunications Tariff, effective from August 23, 2018. This Notice encourages the fundamental telecommunications operators to offer tiered pricing scheme plans based on usage. Pursuant to this Notice, fundamental telecommunications operators should strive to simplify their pricing structures, offer corresponding service plans for each fee item if package plans are offered, specify the structure of fees, fee items and fee standards, and fulfill operators   obligations to remind its customers of the restrictive conditions, validity periods, charging principle of the plans, among other noteworthy matters, when promoting such plans. In addition, the operators shall ensure customers with the same trading conditions afforded identical rights to choose their tariff plan.

Interconnection

Under the Telecommunications Regulations and the Administrative Rules on Interconnection between the Public Telecommunications Networks promulgated by the MII in May 2001, as amended in September 2014, major telecommunications operators in the PRC cannot refuse requests for interconnection and must enter into interconnection agreements upon request by other service providers. Interconnection agreements must be reported to the MIIT. Telecommunications operators must ensure the smooth interconnection pursuant to the interconnection agreements as well as the applicable regulations and may not unilaterally terminate the interconnection.

The Telecommunications Regulations further provide that the technical standards and settlement methods for network interconnections be formulated by the MIIT. In accordance with these regulations, China Telecom Group has entered into various interconnection agreements with other telecommunications service providers, including China Mobile and China Unicom.

On December 30, 2013, the MIIT issued the Guidance Opinions on Building New National Internet Backbone Interconnection Points, pursuant to which seven new backbone interconnection points altogether have been built in Chengdu, Wuhan, Xi an, Shenyang, Nanjing, Chongqing and Zhengzhou, in addition to the three existing backbone interconnection points in Beijing, Shanghai and Guangzhou. The operations of these new backbone interconnection points have significantly improved the quality and speed of interconnection between the telecommunications networks. On November 9, 2016, the MIIT approved the addition of new national Internet backbone interconnection points in Hangzhou, Fuzhou and Gui an of Guiyang, achieving 13 Internet backbone interconnection points upon completion of such three new additions in June 2017.

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The MIIT issued the Notice on Public Telecommunications Network Interconnection Settlement and Relay Fees Allocation in October 2003 and two Notices on Adjustment to Settlement Standards for Interconnection Fees of Wireline Local Telephone Networks in October 2006 and April 2009, respectively, which provided for interconnection settlement arrangement standards for local inter-district calls between wireline local telephone operators as well as public telecommunications network. In November 2009, the MIIT issued the Notice on Adjustment to Settlement Standards for Interconnection Fees of Public Telecommunications Network and the Notice on the Settlement Standards for Interconnection Fees of TD-SCDMA, which provided for adjustments to certain interconnections settlement standards between telecommunications operators. Effective from January 1, 2014, some of the settlement standards have been further adjusted pursuant to the Notice on Adjustment to Settlement Standards for Interconnection Fees of Public Telecommunications Network issued by the MIIT on December 17, 2013. Prior to January 1, 2014, when a mobile user of a basic telecommunications operator (excluding China Mobile s TD-SCDMA 157 and 188 prefix numbers users) initiates a call to a mobile user of another basic telecommunications operator, the settlement charge is set uniformly at a rate of RMB0.06 per minute payable by the basic telecommunications operator originating the call to the basic telecommunications operator receiving the call. In the event a China Mobile s TD-SCDMA 157 and 188 prefix numbers user initiates a call to a user of our Company or China Unicom within the scope of local network, China Mobile will pay a settlement charge of RMB0.012 per minute to our Company or China Unicom. With effect from January 1, 2014, when a mobile users of our Company or China Unicom initiates a call to a mobile user of China Mobile (not including TD-SCDMA 157 and 188 prefix numbers users), the interconnection settlement charges payable by our Company or China Unicom to China Mobile is adjusted from then prevailing rate of RMB0.06 per minute to RMB0.04 per minute. Other existing voice interconnection settlement standards remain unchanged. Meanwhile, the SMS interconnection settlement standard is adjusted from RMB0.03 per message to RMB0.01 per message, and the MMS interconnection settlement standard is adjusted from RMB0.10 per message to RMB0.05 per message.

The following table sets forth selected interconnection revenues sharing and settlement arrangements for local calls and domestic long distance calls:

Network from Which Calls Originated	Network at Which Calls Terminated	Current Main Settlement Arrangement
Mobile operator	Wireline local operator or transferred through mobile operator s long distance network to wireline local operator	(1) Mobile operator collects the cellular usage charge from its subscribers
		(2) Mobile operator pays RMB0.06 per minute to wireline operator
		(3) Starting January 1, 2010, mobile operator (China Mobile) pays RMB0.012 per minute to wireline operator for calls originated from TD-SCDMA 157 or 188 prefix phone numbers in local areas
Wireline local operator	Mobile local operator	(1) Wireline operator collects the usage charge from its subscribers

		(2) No revenues sharing or settlement prior to June 1, 2010. Wireline operator pays RMB0.001 per minute to mobile operator after June 1, 2010
Wireline operator	Transferred through wireline operator s long distance network to mobile operator	(1) Wireline operator collects the usage charge from its subscribers
		(2) Wireline operator pays RMB0.06 per minute to mobile operator

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Network from Which Calls Originated	Network at Which Calls Terminated	Current Main Settlement Arrangement
Wireline local operator A	Wireline local operator B	(1) Operator A collects the usage charge from its subscribers
		(2) In the case of local calls from operator A not using operator B s local inter-district trunk circuit, operator A pays 50.0% of usage charge to operator B
		(3) In the case of local inter-district calls from operator A using operator B s local inter-district trunk circuit, operator A pays no more than RMB0.06 per minute to operator B
Mobile operator A	Mobile local operator B or transferred through mobile operator A s long distance network to mobile operator B	(1) Mobile operator A collects the cellular usage charge from its subscribers
		(2) Prior to January 1, 2014, mobile operator A pays RMB0.06 per minute to mobile operator B. Starting from January 1, 2010, mobile operator A (China Mobile) pays RMB0.012 per minute to mobile operator B for calls originated from TD-SCDMA 157 or 188 prefix phone numbers users in local areas. Starting from January 1, 2014, mobile operator A (China Telecom or China Unicom) pays RMB0.04 per minute to mobile operator B (China Mobile) for calls originated from a mobile user of operator A (China Telecom or China Unicom) to a mobile user of operator B (China Mobile) (not including TD-SCDMA 157 and 188 prefix numbers)

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The following table sets forth selected current main interconnection revenues sharing and settlement arrangements for PSTN international long distance calls, including calls originated from and terminated in Hong Kong, Macau and Taiwan:

Network from Which Calls Originated	Network at Which Calls Terminated	Current Main Settlement Arrangement
Domestic wireline local or mobile operator A	Without using the carrier identity code of operator B, through the domestic and international long distance network of operator B	(1) Operator A collects the tariff from the subscribers
		(2) Operator A retains RMB0.06 per minute, and operator B gets the rest of the international long distance tariff.
	Using the carrier identity code of operator B, through the domestic and international long distance network of operator B	(1) Operator B collects the tariff from the subscribers
		(2) Operator B pays operator A RMB0.06 per minute
International long distance operator	Operator B through domestic long distance network of operator C and international gateway of domestic operator A	(1) Operator A pays not more than RMB0.54 per minute to operator C, operator C pays not more than RMB0.06 per minute to operator B, where operator A and operator C, or operator B and operator C can be the same operator

The following table sets forth selected current main interconnection revenues sharing and settlement arrangements for SMS:

Network from Which SMS Originated	Network at Which SMS Terminated	Current Main Settlement Arrangement
Wireline or mobile operator A	Wireline or mobile operator B	(1) Operator A collects the tariff from its subscribers
		(2) Starting January 1, 2014, operator A pays RMB0.01 per SMS to operator B

The following table sets forth selected current main interconnection revenues sharing and settlement arrangements for MMS:

Network from Which MMS Originated	Network at Which MMS Terminated	Current Main Settlement Arrangement
Mobile operator A	Mobile operator B	(1) Operator A collects the tariff from its subscribers (2) Starting January 1, 2014, operator A pays RMB0.05 per MMS to operator B

The interconnection settlement arrangement for the Internet backbone networks in China is the interconnection settlement through the network access points, or the NAPs, and backbone interconnection points. The price of NAP settlement is determined by the MIIT, and the price of backbone interconnection points is decided by the Internet backbone networks participants with reference to the NAP settlement standards. Since 2013, the MIIT reduced the interconnection settlement charges for the Internet backbone networks each year and the interconnection settlement charges for the NAPs was reduced by the MIIT to RMB80,000 per gigabyte per month starting from November 1, 2018.

Technical Standards

The MIIT sets industry technical standards for telecommunications terminal and interconnection related equipment used in the public telecommunications networks. A network access license from the MIIT and other relevant regulatory authorities is required for all such equipment. Most of the standards set by the MIIT conform to standards recommended by the International Telecommunications Union and other international telecommunications standards organizations.

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Telecommunications Resources

The MIIT is responsible for the administration and allocation of telecommunications resources in the PRC, including radio frequencies and telecommunications network numbers. The use of these resources by telecommunications service providers is subject to the approval of the MIIT or the relevant provincial communications administrations and a usage fee payable to the PRC government.

In 2018, we paid approximately RMB98 million of usage fees for the telecommunications network numbers and approximately RMB1,797 million of frequency usage fees, respectively.

Quality of Service

Under the Telecommunications Regulations, the MIIT and the relevant provincial communications administration have the responsibility of supervising and monitoring the quality of services provided by telecommunications service providers in the PRC. Under the Telecommunications Regulations, customers of telecommunications service providers have the right to submit complaints to the MIIT and the relevant provincial communications administration or other relevant government authorities.

On March 13, 2005, the MII promulgated the Telecommunications Services Standards which were amended in September 2014. The Telecommunications Services Standards aim to protect the rights of the customers of telecommunications services and sets forth minimum quality requirements for telecommunications services provided by telecommunications operators.

The MII promulgated the Measures on the Supervision and Administration of Quality of Service of the Public Telecommunications Networks, or the Measures on Quality of Service, effective August 1, 2005. The Measures on Quality of Service provide the supervision and administration of services of public telecommunications networks, including, among others, wireline local telephone networks, domestic long distance telephone networks, international telephone networks, and IP telephone networks. Under the Measures on Quality of Service, telecommunications operators are required to set up a unit which is responsible for solving the problems with respect to the public telecommunications network services.

Under the PRC Consumer Protection Law, Consumers Associations can participate in the inspection and examination of goods and services by relevant governmental authorities; and customers can lodge their complaints with Consumers Associations, which can investigate the goods or services involved in the complaints, and mediate the complaints.

On December 28, 2016, the MIIT promulgated the Notice on Matters Relating to the Regulating of Telecommunications Services Agreements, effective on February 1, 2017, which specifies the standard of signing and record-keeping of telecommunication services agreements and emphasizes that the telecom operators should inform the telephone subscribers and carry out remedial work when some or all of the terms under the telecommunications services agreements could not be observed due to force majeure or adjustment of national policies.

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Universal Services

Under the Telecommunications Regulations, telecommunications service providers in the PRC are required to fulfill universal service obligations in accordance with relevant regulations promulgated by the PRC government, and the MIIT has been given authority by the PRC government to delineate the scope of its universal service obligations. The MIIT, together with other regulatory authorities, is also responsible for formulating administrative rules relating to the establishment of a universal service fund and compensation schemes for universal services. The State Council issued the Notice on the Broadband China Policy and the Implementation Plan on August 1, 2013, which included the provision of broadband services to remote villages as part of the universal service obligations of telecommunications service providers and mentioned improving the compensation scheme for the expenses incurred in the Broadband China projects undertaken by telecommunications service providers in the villages. In addition, the MOF and the MIIT jointly issued the Notice of Implementation of Telecommunications Universal Services Pilot Work in December 2015, which provided that the telecommunications universal services should take a market-oriented approach and that the telecommunications universal services providers should be selected through a public bidding process. This notice sets up certain goals for the telecommunications operators, including broadband coverage in 98% of the administrative villages and over 12Mbps broadband access capacity in rural villages, by 2020. Pursuant to the notice, the central government subsidies will be granted to the pilot areas determined by the MOF and the MIIT and the universal services providers will be selected through an open bidding process.

The PRC government used financial resources to compensate the expenses incurred in the Coverage to All Villages and the Broadband China projects before the implementation of universal services pilot projects in 2016. We, together with other telecommunications operators, have undertaken the Coverage to All Villages project since 2004. Since 2016, we have undertaken universal services pilot projects in accordance with the requirements of the Chinese government and in aggregate won the bids to undertake the construction of broadband network facilities in approximately 50,000 administrative villages in 19 provinces and autonomous regions. By the end of 2018, we had completed the construction of broadband networks in approximately 50,000 administrative villages. Since 2018, the PRC government included 4G network coverage into the scope of pilot projects for universal services. We have continuously promoted the construction of communication networks in rural areas and remote rural villages and strives to improve the broadband access coverage in rural areas. In addition, we have set up local service points for rural villages, actively promoted the development of e-commerce in rural areas, and strived to contribute to the informatization upgrade and revitalization of rural areas in various regions. The compensation from the PRC government may not be sufficient to cover all of our expenses for providing the telecommunications universal services. However, we believe the expenses for such operation and maintenance will not have a material effect on our financial condition.

State-Owned Assets Supervision

Under the PRC Company Law, PRC Enterprise State-Owned Assets Law, Interim Measures for the Supervision and Administration of State-Owned Assets of the Enterprises, and other administrative regulations, the SASAC, among others, supervises the preservation of the value of state-owned assets, guides the reform and restructuring of state-owned enterprises, and evaluates the performance of management executives of state-owned enterprises through legal procedures. Our controlling shareholder, China Telecom Group, is a state-owned enterprise owned by the SASAC and subject to the SASAC s supervision.

As part of the PRC government s efforts to reform state-owned enterprises and increase their competitiveness, the PRC government has selected certain enterprises of designated industries, including the telecommunications industry, as the first group of state-owned enterprises for a pilot program on state-owned enterprise mixed ownership reform. Unicom Group was selected among the operators of the telecommunications industry to join such mixed ownership reform.

Three-Network Convergence Policy

In January 2010, the PRC government announced its decision to accelerate the advancement of convergence of telecommunications, television broadcast and Internet access networks to realize interconnection and resource co-sharing among the three networks and further develop the provision of voice, data, television and other services. Specifically, the three-network convergence policy will be initially carried out on a trial basis in selective geographic locations during the period from 2010 to 2012 and further implemented across-the-board in the following three years. In June 2010, the State Council issued the Trial Plan for Three-Network Convergence and called for 12 volunteer regions (cities) and enterprises for the first trial. Following the completion of the first trial in December 2011, the State Council announced 42 additional regions (cities) for the second phase of the trial. In September 2012, we received the Information Network Communicated Audio-Video Program License from the State Administration of Press, Publication, Radio, Film and Television (the SARFT , formerly, the State Administration of Radio, Film and Television). In August 2015, the General Office of the State Council issued the Notice of Plan of Furthering the Three-Network Convergence, which marked the completion of the trial plan of the three-network convergence and called for furthering the three-network convergence nationwide.

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Broadband China Policy

In August 2013, the State Council issued the Notice on the Broadband China Policy and the Implementation Plan, which treats broadband as a strategic national infrastructure, strengthens the overall top-level design and planning, coordinates the research and development of the key technologies, formulation of the standard, the safety of the information technology and the construction of the emergency communication system, strengthens the synergy effect of website construction, application, innovative service and industry support, comprehensively utilizes the cable technology and the wireless technology to accelerate the convergence of telecommunications, television broadcast and Internet access networks, and accelerates the construction of the next generation national information infrastructures. In September 2013, the MIIT promulgated an Information-Based Development Plan to further elaborate the Broadband China Policy and to encourage private capital to enter into the telecommunications market through equity investment.

Mobile Telecommunications Resale Business

On May 17, 2013, the MIIT issued the Trial Plan of Resale of Mobile Telecommunications Services, pursuant to which the MIIT would grant qualified companies mobile telecommunications resale business approvals on a pilot basis which would allow them to purchase mobile telecommunications services in bulk from mobile networks operators or resell such services to customers. On January 6, 2016, the MIIT issued the Guidance on the Wholesale Price Adjustments of Mobile Telecommunications Resale Business (移动通 转售业务批发价格调 pursuant to which the MIIT required that the wholesale price for resale of mobile telecommunications services should be lower than the per unit price (or package price) for similar services of the mobile networks operators. On April 28, 2018, the MIIT issued the Circular on Commercialization of Mobile Telecommunications Resale Business, pursuant to which the MIIT granted commercial operation approval to mobile communication resale business, effective from May 1, 2018. For a series of government measures to encourage private capital to invest in telecommunications services that could compete with our services, see Item 4. Information on the Company B. Business Overview Competition .

VAT Reform Applicable to the Telecommunications Industry

On November 16, 2011, the Ministry of Finance, or the MOF, and the SAT, introduced a pilot tax program under which the PRC business tax would be replaced with a VAT. On April 29, 2014, the MOF and the SAT announced that the pilot program would be extended to cover the telecommunications industry. Effective from June 1, 2014, the pilot tax rate for basic telecommunications services is 11% and the pilot tax rate for value-added telecommunications services is 6%. On March 18, 2016, the State Council standing committee meeting resolved to expand the VAT pilot program to all other industries which were previously subject to the PRC business tax starting from May 1, 2016. On March 23, 2016, the MOF and the SAT issued the Notice on Expanding the Pilot Program of Replacing the Business Tax with VAT, promulgating the relevant implementing rules. On April 4, 2018, the MOF and the SAT issued the Notice on Adjustment of VAT Rates pursuant to which the 11% VAT rate applicable to basic telecommunications services would be reduced to 10% and the 17% VAT rate applicable to sales of goods would be reduced to 16%, with effect from May 1, 2018. On March 20, 2019, the MOF, the SAT, the General Administration of Customs issued the Notice on Deepening the Policies Related to Value-Added Tax Reform, pursuant to which the 10% VAT rate applicable to basic telecommunications services would be reduced to 9% and the 16% VAT rate applicable to sales of goods would be reduced to 13%, with effect from April 1, 2019.

Amended Employment Contract Law

The amended PRC Employment Contract Law, effective as of July 1, 2013, and the Interim Provisions on Labor Dispatch, effective as of March 1, 2014, focus on strengthening the administration of the employment practice involving dispatched employees, and provide that, among others, the dispatched employees shall have the right to receive the same compensation as that received by other employees hired by the employer for the same type of positions, shall account for no more than 10% of the total employees hired by an employer and shall only be employed for temporary, supporting or substitutive positions. The amended PRC Employment Contract Law and the Interim Provisions on Labor Dispatch have not had, and we do not believe they will have, a material adverse effect on our personnel expenses or number of employees.

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Sharing of Telecommunications Infrastructure

In June 2018, the MIIT and the SASAC jointly issued the 2018 Implementation Opinions of the Ministry of Industry and Information Technology and the State-owned Assets Supervision and Administration Committee on Promoting the Joint Construction and Sharing of Telecommunications Infrastructure, or the Opinions. The Opinions require that the supporting facilities for base stations, such as the telecommunications towers, and the indoor distribution systems for public transportation and buildings, shall generally be planned, constructed and delivered by the Tower Company, except that certain facilities may be constructed by a telecommunications operator if serving only such operators demand. The Opinions also set forth the sharing requirements in the construction of FTTH infrastructure. In newly-built residential areas, commercial areas and campus, FTTH construction must strictly observe the applicable national and local standards. Telecommunications operators are prohibited from entering into any exclusivity arrangement with real estate developers or property management companies. In the upgrading of FTTH for existing residential areas, commercial areas and campus, telecommunications operators and relevant stakeholders must cooperate with each other to comply with the joint construction and sharing requirements. Moreover, with respect to transmission facilities, sharing and joint construction of transmission poles and pipeline is mandatory whenever conditions so allow.

Anti-Unfair Competition Law

On January 1, 2018, the amended Anti-Unfair Competition Law of the People s Republic of China came into effect. It revised and expanded the scope of unfair competitive acts which include, among others, a network operator s interference with and destruction of products or services provided by other operators. It also further improved the provisions on confusing conducts and commercial bribery, strengthened the protection of trade secrets and enhanced supervision over and penalties on unfair competitive acts.

Mobile Number Portability Trial

In May 2014, the MIIT promulgated the Administration Measures on Mobile Number Portability Trial, effective as of May 17, 2014, which regulated the implementation measures for mobile number portability trials. Pursuant to the relevant policies issued by the MIIT, currently mobile users of China Mobile, China Unicom and our Company in Hainan, Jiangxi, Hubei, Yunnan and Tianjin may migrate among the networks of the three operators without changing their mobile numbers. In December 2018, these five provinces launched new and facilitated procedures to allow mobile users, starting from December 1, 2018, send text messages for qualification enquires and officially transfer to new operator in next hour after completing the procedures. The introduction of such policy allows mobile users to switch operator in a more efficient way and caused a larger number of switches. In addition, on March 5, 2019, the Government Work Report presented in the second plenary session of the 13th National People s Congress of the PRC specified that the mobile number portability services will be implemented nationwide in 2019. In response, we expect to roll out corresponding measures in due course to meet the policy requirements.

E-Commerce Law

On January 1, 2019, the E-Commerce Law of the People s Republic of China came into force. It stipulates relevant rules to require all e-commerce operators to fulfill their obligations to protect consumers rights and interests as well as personal information, intellectual property rights, cyberspace security and the environment. It clarifies e-commerce operators into e-commerce platform operators, merchants on e-commerce platforms, and those doing business on their own websites or via other web services. In addition, it specifically provides that an e-commerce platform operator will have joint and several liability with the merchants, where a platform operator knows, or should know, that a merchant has violated another s intellectual property rights and fails to take the necessary action such as deleting, blocking links or stopping transactions. Moreover, it covers the requirement for registration and licensing of e-commerce operators, taxation, electronic payment and e-commerce dispute resolution.

Disclosure of Iranian Activities under Section 13(r) of the Securities Exchange Act of 1934

Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 added Section 13(r) to the Exchange Act of 1934, as amended. Section 13(r) requires an issuer to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with designated natural persons or entities involved in terrorism or the proliferation of weapons of mass destruction. Disclosure is required even where the activities, transactions or dealings are conducted outside the U.S. by non-U.S. affiliates in compliance with applicable law, and whether or not the activities are sanctionable under U.S. law.

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As of the date of this report, we are not aware of any activity, transaction or dealing by us or any of our affiliates in 2018 that requires disclosure in this under Section 13(r) of the Exchange Act of 1934, as amended.

C. Organization Structure

See A. History and Development of the Company Our Restructuring and Initial Public Offering in 2002 included elsewhere under this Item.

D. Property, Plants and Equipment

Properties

Executive Offices

Our principal executive offices are located in Beijing and we obtained the right to occupy and use these offices pursuant to an agreement we entered into with China Telecom Group in September 2002 and supplemental agreements on October 26, 2003, April 13, 2004, December 15, 2005, December 26, 2007, March 31, 2008, August 25, 2010, August 22, 2012, September 23, 2015 and August 20, 2018, respectively. See Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions Ongoing Related Party Transactions between Us and China Telecom Group and its affiliated companies Centralized Services Agreement .

Properties

We conduct our business on land and premises either owned by ourselves or leased from China Telecom Group and/or its affiliates and third parties. As to our owned properties, although the land and building titles to a majority of these properties have been registered in our name after they were acquired by us as part of our restructuring, land and building titles to the remaining properties are still registered in the name of China Telecom Group. China Telecom Group has agreed to indemnify us against any loss or damage incurred by us caused by or arising from any challenge to, or interference with, our right to use these properties. As to our leased properties, China Telecom Group has undertaken to us that it will indemnify us against any loss or damage caused by or arising from any challenge to, or interference with, such right. See Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions Ongoing Related Party Transactions between Us and China Telecom Group and its affiliated companies Property Leasing Framework Agreement .

Item 4A. Unresolved Staff Comments.

None.

Item 5. Operating and Financial Review and Prospects.

You should read the following discussion and analysis in conjunction with our audited consolidated financial statements and our selected financial data, in each case included elsewhere in this annual report. Our consolidated financial statements have been prepared in accordance with IFRS, as issued by the International Accounting Standards Board.

Our audited consolidated financial statements included elsewhere in this annual report reflect the disposal of E-store, the establishment of Tianyi Capital and the acquisitions of the satellite communications business and Zhonghe Hengtai in 2017 and the establishment of a new subsidiary in 2018 described under Item 4. Information on the Company A. History and Development of the Company Establishment of the Tower Company and the Disposal and Lease of the Telecommunications Towers , Disposal of E-store and Establishment of Tianyi Capital and Establishment of China Telecom Leasing Corporation Limited .

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On October 14, 2015, the Company entered into the Transfer Agreement with the Tower Company and certain other parties thereto, pursuant to which the Company agreed to sell certain telecommunications towers and related assets and inject cash to the Tower Company in exchange for new shares. Upon completion of the disposal of tower assets by the Company to the Tower Company, the Company and Tower Company entered into the Lease Agreement on July 8, 2016 that sets forth the pricing and related arrangements in relation to the lease of telecommunications towers and related assets. On February 1, 2018, the Company and Tower Company entered into a supplemental agreement on the basis of the original Lease Agreement mainly to adjust the relevant pricing arrangement of tower products under the Lease Agreement. In August 2018, the Tower Company completed its H shares global offering and was listed on the Main Board of The Stock Exchange of Hong Kong Limited. As a result, our equity interest in the Tower Company is diluted from 27.9% to 20.5%. See Item 4. Information on the Company A. History and Development of the Company Establishment of the Tower Company and the Disposal and Lease of the Telecommunications Towers , and Note 37(b) to our consolidated financial statements included elsewhere in this annual report on Form 20-F.

On December 15, 2017, we and China Telecom Satellite Communication Co., Ltd., a wholly owned subsidiary of China Telecom Group entered into an acquisition agreement, pursuant to which we agreed to purchase from China Telecom Satellite Communication Co., Ltd. the satellite communications business for a consideration of RMB70 million. The consideration had been settled in full by June 30, 2018. On December 20, 2017, we, through E-surfing Pay Co., Ltd., entered into an acquisition agreement with Shaanxi Comservice, which is ultimately controlled by China Telecom Group, to acquire 100% of equity interest in Zhonghe Hengtai, from Shaanxi Comservice for a consideration of RMB17 million. Zhonghe Hengtai primarily engages in insurance agency business in the PRC. The consideration had been settled in full by June 30, 2018.

Because we and the acquired satellite communications business and Zhonghe Hengtai were under the common control of China Telecom Group, our acquisitions of the satellite communications business and Zhonghe Hengtai were accounted for as a combination of entities under common control in a manner similar to a pooling-of interests. Accordingly, the assets and liabilities of the acquired satellite communications business and Zhonghe Hengtai have been accounted for at historical amounts and our consolidated financial statements for periods prior to the respective acquisitions have been restated to include the financial position and results of operations of the acquired satellite communications business and Zhonghe Hengtai on a combined basis. The considerations for the acquisition of the acquired satellite communications business and Zhonghe Hengtai were accounted for as an equity transaction in the consolidated statement of changes in equity. Unless otherwise indicated in this section, our financial data for periods prior to the acquisition are presented based on those restated amounts. See Note 1 to our consolidated financial statements included elsewhere in this annual report on Form 20-F.

Overview

We are an integrated intelligent information service provider in the PRC. We offer a comprehensive range of telecommunications services, including Internet services, information and application services, voice services, telecommunications network resource and equipment services and other related services. We will continue to leverage our full-service capabilities to further enhance our integrated and differentiated development of operation of wireline, mobile and Internet services to achieve steady growth of our business.

Financial Overview

Our operating revenues increased by 3.0%, from RMB366,229 million in 2017 to RMB377,124 million in 2018. The increase was mainly attributable to revenue growth of Internet services, information and application services and telecommunications network resource and equipment services. Our total operating expenses increased by 2.8%, from RMB339,009 million in 2017 to RMB348,410 million in 2018. The increase in operating expenses was primarily due to increases in network operations and support expenses and personnel expenses. Our operating income in 2017 and 2018 was RMB27,220 million and RMB28,714 million, respectively. The profit attributable to equity holders of the Company increased by 13.9%, from RMB18,617 million in 2017 to RMB21,210 million in 2018.

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The table below sets forth a breakdown of our operating revenues in terms of amount and as a percentage of our total operating revenues for the periods indicated:

	Year Ended December 31,					
	2016		2017		2018	
	Amount	Percentage of Operating Revenues	Amount	Percentage of Operating Revenues	Amount	Percentage of Operating Revenues
	(RMB in millions, except percentage data)					
Operating Revenues:						
Voice services(1)	70,185	19.9%	61,678	16.8%	50,811	13.5%
Internet services(2)	150,449	42.7%	172,554	47.1%	190,871	50.6%
Information and application services(3)	66,881	19.0%	73,044	20.0%	83,478	22.1%
Telecommunications network resource and equipment services(4)	17,781	5.0%	19,125	5.2%	20,211	5.4%
Others(5)	47,238	13.4%	39,828	10.9%	31,753	8.4%
Total operating revenues	352,534	100.0%	366,229	100.0%	377,124	100.0%

(1) Represent the aggregate amount of voice usage fees, installation fees and interconnections fees charged to customers for the provision of telephony services.
(2) Represent amounts charged to customers for the provision of Internet access services.
(3) Represent primarily the aggregate amount of fees charged to customers for the provision of Internet data center service, system integration services, e-Surfing HD service, caller ID service and short messaging service and etc.
(4) Represent amounts charged to other domestic telecommunications operators and enterprise customers for the provision of telecommunications network resource and equipment services.
(5) Represent primarily revenue from sale, and repair and maintenance of equipment as well as the resale of mobile services (MVNO) and revenue from other sources, which primarily includes revenue from property rental and other revenues.

The following table sets forth a breakdown of our operating expenses in terms of amount and as a percentage of our total operating revenues for the periods indicated:

	Year Ended December 31,					
	2016		2017		2018	
	Amount	Percentage of Operating Revenues	Amount	Percentage of Operating Revenues	Amount	Percentage of Operating Revenues
	(RMB in millions, except percentage data)					

Operating Expenses:						
Depreciation and amortization	67,942	19.3%	74,951	20.5%	75,493	20.0%
Network operations and support expenses	94,156	26.7%	103,969	28.4%	116,062	30.8%
Selling, general and administrative expenses	56,426	16.0%	58,434	16.0%	59,422	15.8%
Personnel expenses	54,504	15.5%	56,043	15.3%	59,736	15.8%
Other operating expenses	52,286	14.8%	45,612	12.4%	37,697	10.0%
Total operating expenses	325,314	92.3%	339,009	92.6%	348,410	92.4%

The following table sets forth our operating revenues, operating expenses, operating income and profit attributable to equity holders of the Company in terms of amount and as a percentage of our total operating revenues, and cash flows from operating activities for the periods indicated:

	Year Ended December 31,					
	2016		**2017**		**2018**	
	Amount	**Percentage of Operating Revenues**	**Amount**	**Percentage of Operating Revenues**	**Amount**	**Percentage of Operating Revenues**
	(RMB in millions, except percentage data)					
Operating revenues	352,534	100.0%	366,229	100.0%	377,124	100.0%
Operating expenses	325,314	92.3%	339,009	92.6%	348,410	92.4%
Operating income	27,220	7.7%	27,220	7.4%	28,714	7.6%
Profit attributable to equity holders of the Company	18,018	5.1%	18,617	5.1%	21,210	5.6%
Net cash flow from operating activities	101,135		96,502		99,298	

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Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations contained elsewhere in this annual report are based on our consolidated financial statements include elsewhere in this annual report which have been prepared in accordance with IFRS. Our reported financial condition and results of operations are sensitive to accounting methods, assumptions and estimates that underlie the preparation of our consolidated financial statements. We base our assumptions and estimates on historical experience and on various other assumptions that we believe to be reasonable and which form the basis for making judgments about matters that are not readily apparent from other sources. On an ongoing basis, our management evaluates its estimates. Actual results may differ from those estimates as facts, circumstances and conditions change.

The selection of critical accounting policies, the judgments and other uncertainties affecting application of those policies and the sensitivity of reported results to changes in conditions and assumptions are factors to be considered when reviewing our financial statements. Our principal accounting policies are set forth in detail in Note 3 to our consolidated financial statements included elsewhere in this annual report. We believe the following critical accounting policies involve the most significant judgments and estimates used in the preparation of our financial statements.

Revenue from contract with customers (upon application of IFRS 15)

Under IFRS 15, we recognize revenue when (or as) a performance obligation is satisfied. i.e. when control of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognized over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by our performance as we perform;
- our performance creates and enhances an asset that the customer controls as we perform; or
- our performance does not create an asset with an alternative use to us and we have an enforceable right to payment for performance completed to date.

As such, revenues from contracts with customers of telecommunications services, including voice, Internet, information and application and telecommunications network resource and equipment services, resale of mobile services (MVNO) and repair and maintenance of equipment are generally recognized over time during which the services are provided to customers.

Otherwise, revenue is recognized at a point in time when the customer obtains control of the distinct good or service. As such, revenues from sales of equipment are recognize at a point in time when the equipment is delivered to the customers and when the control over the equipment have been transferred to the customers.

A contract asset represents our right to consideration in exchange for goods or services that we have transferred to a customer but the right is conditioned on our future performance. A contract asset is transferred to accounts receivable when the right becomes unconditional. A contract asset is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents our unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents our obligation to transfer goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. When we receive an advance payment before the performance obligation is satisfied, this will give rise to a contract liability, until the operating revenues recognized on the relevant contract exceed the amount of the advance payment.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

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Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligations, such as our direct sales of promotional packages bundling terminal equipment, e.g. mobile handsets, and the telecommunications services, we allocate the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which we would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, we estimate it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which we expect to be entitled in exchange for transferring the promised goods or services to the customer.

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

The progress towards complete satisfaction of a performance obligation is generally measured based on output method, which is to recognize revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract.

Principal versus agent

When another party is involved in providing goods or services to a customer, we determine whether the nature of our promise is a performance obligation to provide the specified goods or services ourselves (i.e. we are a principal) or to arrange for those goods or services to be provided by the other party (i.e. we are an agent).

We are a principal if we control the specified good or service before that good or service is transferred to a customer.

We are an agent if our performance obligation is to arrange for the provision of the specified good or service by another party. In this case, we do not control the specified good or service provided by another party before that good or service is transferred to the customer. When we act as an agent, we recognize revenue in the amount of any fee or commission to which we expect to be entitled in exchange for arranging for the specified goods or services to be provided by the other party.

Consideration payable to a customer

Consideration payable to a customer includes cash amounts that we pay, or expect to pay, to the customer, and also includes credit or other items that can be applied against amounts owed to us. We accounted for such consideration payable to a customer as a reduction of the transaction price and, therefore, of revenue unless the payment to the customer is in exchange for a distinct good or service that the customer transfers to us and the fair value of the good or service received from the customer can be reasonably estimated.

Certain subsidies payable to third party agent incurred by us in respect of customer contracts, which will be ultimately enjoyed by end customers, and other subsidies incurred by us directly payable to our customers, are qualified as consideration payable to a customer and accounted for as a reduction of operating revenues.

Incremental costs of obtaining a contract

Incremental costs of obtaining a contract are those costs that we incur to obtain a contract with a customer that we would not have incurred if the contract had not been obtained.

Certain commissions incurred by us paid or payable to third party agents, whose selling activities resulted in customers entering into sale agreements for our telecommunications service, are qualified as incremental costs. We recognize such costs as an asset, included in other assets, if we expect to recover these costs. The asset so recognized is subsequently amortized to profit or loss on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the assets relate.

We apply the practical expedient of expensing all incremental costs to obtain a contract if these costs would otherwise have been fully amortized to profit or loss within one year.

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Costs to fulfil a contract

When we incur costs to fulfil a contract, we first assess whether these costs qualify for recognition as an asset in terms of other relevant standards, failing which we recognize an asset for these costs only if they meet all of the following criteria:

the costs relate directly to a contract or to an anticipated contract that we can specifically identify;

the costs generate or enhance our resources that will be used in satisfying (or in continuing to satisfy) performance obligations in the future; and

the costs are expected to be recovered.

The asset so recognized is subsequently amortized to profit or loss on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the assets relate.

Revenue recognition (prior to January 1, 2018)

Before the application of IFRS 15, our revenue recognition methods are as follows:

Revenues from telecommunications services, including voice, Internet, information and application and telecommunications network resource and equipment services, resale of mobile services (MVNO) and repair and maintenance of equipment are recognized over time during which the services are provided to customers.

Revenue from information and application services in which no third party service providers are involved, such as caller display and Internet data center services, are presented on a gross basis. Revenues from all other information and application services are presented on either gross or net basis based on the assessment of each individual arrangement with third parties. The following factors indicate that we are acting as principal in the arrangements with third parties:

- We are primarily responsible for providing the applications or services desired by customers, and take responsibility for fulfillment of ordered applications or services, including the acceptability of the applications or services ordered or purchased by customers;

- We take title of the inventory of the applications before they are ordered by customers;

- We have risks and rewards of ownership, such as risks of loss for collection from customers after applications or services are provided to customers;

- We have latitude in establishing selling prices with customers;

- We can modify the applications or perform part of the services;

- We have discretion in selecting suppliers used to fulfill an order; and

- We determine the nature, type, characteristics, or specifications of the applications or services.

If majority of the indicators of risks and responsibilities exist in the arrangements with third parties, we are acting as a principal and have exposure to the significant risks and rewards associated with the rendering of services or the sale of applications, and revenues for these services are recognized on a gross basis. If majority of the indicators of risks and responsibilities do not exist in the arrangements with third parties, we are acting as an agent, and revenues for these services are recognized on a net basis.

Sale of equipment is recognized on delivery of the equipment to customers and when the significant risks and rewards of ownership and title have been transferred to the customers.

We offer promotional packages, which involve the bundled sales of terminal equipment, i.e. mobile handsets, and telecommunications services, to customers. The total contract consideration of a promotional package is allocated to revenues generated from the provision of telecommunications services and the sales of terminal equipment using the residual method. Under the residual method, the total contract consideration of the arrangement is allocated as follows: the undelivered component, which is the provision of telecommunications services, is measured at fair value, and the remainder of the contract consideration is allocated to the delivered component, which is the sales of terminal equipment. We recognize revenues generated from the delivery and sales of the terminal equipment when the title of the terminal equipment is passed to the customers whereas revenues generated from the provision of telecommunications services are recognized based upon the actual usage of such services.

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Accounting for goodwill and long-lived Assets

Depreciation. Property, plant and equipment are depreciated on a straight-line basis over the estimated useful lives of the assets after taking into account their estimated residual value. The following estimated useful lives are used for depreciation purposes. These estimated useful lives are based on our historical experience with similar assets and take into account anticipated technological changes.

	Depreciable lives primarily range from
Buildings and improvements	8 - 30 years
Telecommunications network plant and equipment	5 - 10 years
Furniture, fixture, motor vehicles and other equipment	5 - 10 years

We review the estimated useful lives of the assets regularly in order to determine the amount of depreciation expense to be recorded during any reporting period. The depreciation expense for future periods is adjusted if there are significant changes from previous estimates.

Impairment. The carrying amounts of long-lived assets, including property, plant and equipment, intangible assets with finite useful lives, construction in progress and contract costs are reviewed periodically in order to determine whether there is any indication of impairment. These assets are tested for impairment whenever events or changes in circumstances indicate that their recorded carrying amounts may not be recoverable. For goodwill, the impairment testing is performed annually at each year end.

The recoverable amount of an asset or a cash-generating unit is the greater of its fair value less costs of disposal and value in use. When an asset does not generate cash flows largely independent of those from other assets, the recoverable amount is determined for the smallest group of assets that generates cash inflows independently (i.e., a cash generating unit). In determining the value in use, expected future cash flows generated by the assets are discounted to their present value using a pre-tax discount rate that reflects current market assessments of time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. The goodwill arising from a business combination, for the purpose of impairment testing, is allocated to cash generating units that are expected to benefit from the synergies of the combination.

An impairment loss is recognized if the carrying amount of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment loss is recognized as an expense in the profit or loss. Impairment loss recognized in respect of cash-generating units is allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amounts of the other assets in the unit (group of units) on a pro rata basis.

For the year ended December 31, 2018, no provision for impairment losses were made against the carrying value of long-lived assets. For the year ended December 31, 2017, provision for impairment losses of RMB10 million were made against the carrying value of long-lived assets. For the year ended December 31, 2016, provision for impairment losses of RMB62 million were made against the carrying value of long-lived assets.

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Provision of expected credit losses (ECL) for accounts receivable

We use provision matrix to calculate ECL for the accounts receivable. The provision rates are based on customer s past history of making payments when due and current ability to pay by groupings of various debtors that have similar loss patterns. The provision matrix is based on our historical default rates taking into consideration reasonable and supportable forward-looking information that is available without undue cost or effort. The historical observed default rates are reassessed annually, and changes in the forward-looking information are considered. In addition, accounts receivable with significant balances and credit-impaired are assessed for ECL individually.

Amounts due from the provision of telecommunications services to residential and business customers are generally due within 30 days from the date of billing. Customers who have accounts overdue by more than 90 days will have their services disconnected.

Classification of lease arrangement with Tower Company

We entered into a lease arrangement with Tower Company regarding the lease of telecommunications towers and related assets, or Tower Assets on July 8, 2016, as further supplemented on February 1, 2018. We evaluated the detailed clauses of the lease agreements and determined such lease arrangements as operating leases according to the accounting policies on lease arrangements and based on the following judgments: (i) we do not expect any transfer of ownership of Tower Assets from Tower Company by the end of the lease term; (ii) we consider the current lease term of 5 years does not account for the major part of the economic lives of Tower Assets; (iii) the present value of minimum lease payment at the inception of the lease does not substantially account for all of the fair value of the Tower Assets; and (iv) Tower Assets are compatible with all telecommunications operators, and therefore are not of specialized nature that only we can use without major modifications.

Recently Issued International Financial Reporting Standards

Up to the date of issue of our 2018 financial statements, the International Accounting Standards Board has issued the following amendments to standards, new standards and interpretation which are not yet effective and not early adopted for the annual accounting period ended December 31, 2018:

	Effective for accounting period beginning on or after
IFRS 16, *Leases*	January 1, 2019
IFRIC 23, *Uncertainty over Income Tax Treatments*	January 1, 2019
Amendments to IFRS 9, *Prepayment Features with Negative Compensation*	January 1, 2019
Amendments to IAS 28, *Long-term Interests in Associates and Joint Ventures*	January 1, 2019
Amendments to IFRSs, *Annual Improvements to IFRS Standards 2015-2017 Cycle*	January 1, 2019
Amendments to IAS 19, *Plan Amendment, Curtailment or Settlement*	January 1, 2019
Amendments to IFRS 3, *Definition of a Business*	January 1, 2020
Amendments to IAS 1 and IAS 8, *Definition of Material*	January 1, 2020
IFRS 17, *Insurance Contracts*	January 1, 2021
Amendments to IFRS 10 and IAS 28, *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*	Postponed

We are in the process of making an assessment of the impact that will result from adopting the amendments to standards, new standards and interpretation issued by the International Accounting Standards Board, or IASB, which are not yet effective for the accounting period ended on December 31, 2018. Except for IFRS 16, *Leases*, so far we believe that the adoption of these amendments to standards, new standards and interpretation is unlikely to have a significant impact on our financial position and the results of operations.

IFRS 16, *Leases*

IFRS 16 introduces a comprehensive model for the identification of lease arrangements and accounting treatments for both lessors and lessees. IFRS 16 will supersede IAS 17, Leases and the related interpretations when it becomes effective.

IFRS 16 distinguishes lease and service contracts on the basis of whether an identified asset is controlled by a customer. Distinctions of operating leases and finance leases are removed for lessee accounting, and is replaced by a model where a right-of-use asset and a corresponding liability have to be recognized for all leases by lessees, except for short-term leases and leases of low value assets.

The right-of-use asset is initially measured at cost and subsequently measured at cost (subject to certain exceptions) less accumulated depreciation and impairment losses, adjusted for any remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at that date. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst others. For the classification of cash flows, we currently present upfront prepaid lease payments as investing cash flows in relation to land use rights while other operating lease payments are presented as operating cash flows. Upon application of IFRS 16, lease payments in relation to lease liability will be allocated into a principal and an interest portion which will be presented as financing and operating cash flows respectively, upfront prepaid lease payments will continue to be presented as investing or operating cash flows in accordance to the nature, as appropriate.

Under IAS 17, we have already recognized an asset and a related finance lease liability for finance lease arrangement and prepaid lease payments for land use rights where we are a lessee. The application of IFRS 16 may result in potential changes in classification of these assets depending on whether we present right-of-use assets separately or within the same line item at which the corresponding underlying assets would be presented if they were owned.

Other than certain requirements which are also applicable to lessor, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17, and continues to require a lessor to classify a lease either as an operating lease or a finance lease.

Furthermore, extensive disclosures are required by IFRS 16.

As of December 31, 2018, we had non-cancellable operating lease commitments of RMB65,805 million as disclosed in Note 33 to the consolidated financial statements included elsewhere in this annual report. A preliminary assessment indicates that majority of these arrangements will meet the definition of a lease. Upon application of IFRS 16, we will recognize a right-of-use asset and a corresponding liability in respect of these leases unless they qualify for low value or short-term leases.

The application of new requirements may result in changes in measurement, presentation and disclosure as indicated above. We intend to elect the modified retrospective approach for the application of IFRS 16 as lessee and will recognize the cumulative effect of initial application to opening reserves without restating comparative information.

A. Operating Results

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

Operating Revenues

Our operating revenues increased by RMB10,895 million, or 3.0% from RMB366,229 million in 2017 to RMB377,124 million in 2018. If excluding the impact of the application of IFRS 15 for the current year, it represented an increase of 4.2% over 2017. This increase was primarily driven by the revenues growth from Internet services, information and application services and telecommunications network resource and equipment services, which was partially offset by a decrease in revenues from voice