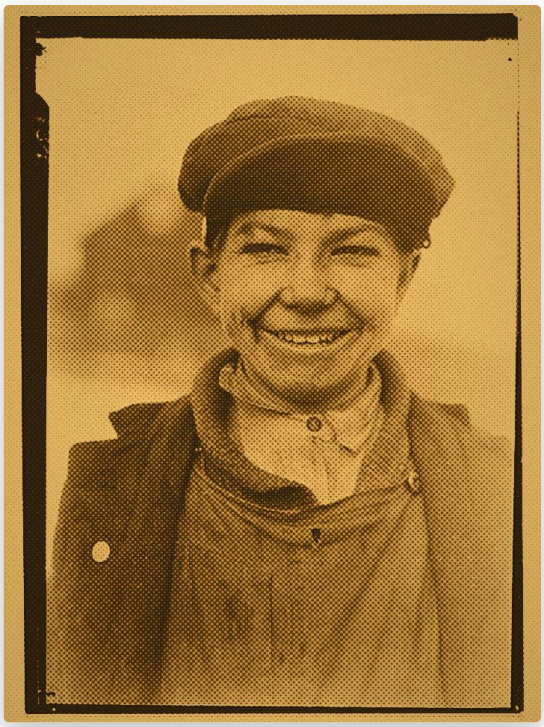
FORM S-1 · REGISTRATION STATEMENT

Canaan Inc

IPO priced 2019-11-21 · $9.00 a share · CAN



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AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON OCTOBER 28, 2019

REGISTRATION NO. 333-

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM F-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Canaan Inc.

(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Cayman Islands	**3674**	**Not Applicable**
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(PRIMARY STANDARD INDUSTRIAL CLASSIFICATION CODE NUMBER)	(I.R.S. EMPLOYER IDENTIFICATION NUMBER)

30/F, DICARA SILVER TOWER

29 JIEFANG EAST ROAD

JIANGGAN DISTRICT, HANGZHOU, 310016

PEOPLE'S REPUBLIC OF CHINA

+86-571-8999-5063

(ADDRESS AND TELEPHONE NUMBER OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

Cogency Global Inc.

10 E. 40TH STREET, 10TH FLOOR

NEW YORK

NY 10016, USA

+1-800-221-0102

(NAME, ADDRESS AND TELEPHONE NUMBER OF AGENT FOR SERVICE)

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Approximate date of commencement of the proposed sale to the public:

As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933.

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 7(a)(2)(B) of the Securities 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.

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED(1)(2)	PROPOSED MAXIMUM AGGREGATEOFFERING PRICE(3)	AMOUNT OF REGISTRATION FEE
Ordinary Shares, par value US$0.00000005 per share	US$400,000,000	US$51,920

(1) American depositary shares, or ADSs, evidenced by American depositary receipts issuable upon deposit of the ordinary shares registered hereby will be registered under a separate registration statement on Form F-6. Each ADS represents Class A ordinary shares.

(2) Includes (a) ordinary shares represented by ADSs that may be purchased by the underwriters pursuant to their option to purchase additional ADSs and (b) all ordinary shares represented by ADSs initially offered and sold outside the United States that may be resold from time to time in the United States either as part of the distribution or within 40 days after the later of the effective date of this registration statement and the date the securities are first bona fide offered to the public.

(3) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to such Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the United States Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated , 2019.

AMERICAN DEPOSITARY SHARES

Canaan Inc.

REPRESENTING CLASS A ORDINARY SHARES

This is the initial public offering of Canaan Inc., or Canaan.

We are offering American depositary shares, or ADSs. Each ADS represents Class A ordinary shares, par value US$0.00000005 per share.

Prior to this offering, there has been no public market for the ADSs or our shares. It is currently estimated that the initial public offering price per ADS will be between US$ and US$. We will apply for listing of the ADSs on the Nasdaq Global Market under the symbol “CAN.”

We are an “emerging growth company” under applicable U.S. federal securities laws and are eligible for reduced public company reporting requirements.

Investing in the ADSs involves risks. See “Risk Factors” beginning on page [16] to read about factors you should consider before buying the ADSs.

Neither the United States Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per ADS	Total
Initial public offering price	US$	US$
Underwriting discounts and commissions[(i)]	US$	US$
Proceeds, before expenses, to us	US$	US$

(i) See “Underwriting” for additional disclosure regarding compensation payable by us to the underwriters.

To the extent that the underwriters sell more than ADSs in this offering, the underwriters have a 30-day option to purchase up to an aggregate of additional ADSs from us at the initial public offering price less the underwriting discounts and commissions.

Immediately prior to the completion of this offering, our outstanding share capital will be re-designated into Class A ordinary shares and Class B ordinary shares. Holders of Class A ordinary shares and Class B ordinary shares have the same rights except for voting and conversion rights. Each Class A ordinary share is entitled to one vote and each Class B ordinary share is entitled to 15 votes and is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances. Nangeng Zhang, our Chairman and Chief Executive Officer, will beneficially own 100% of our issued Class B ordinary shares. These Class B ordinary shares will constitute approximately [●]% of our total issued and outstanding share capital and [●]% of the aggregate voting power of our total issued and outstanding share capital immediately after the completion of this offering, assuming the underwriters do not exercise their over-allotment option.

The underwriters expect to deliver the ADSs against payment in U.S. dollars to purchasers on or about , 2019.

Credit Suisse	*Citigroup*	*China Renaissance*	*CMBI*
GALAXY DIGITAL ADVISORS		*Huatai Securities*	*Tiger Brokers*

Prospectus dated , 2019.

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This prospectus contains estimates and information concerning our industry, including our market position and the size and growth rates of the markets in which we participate, that are based on industry publications and reports. This prospectus contains statistical data and estimates published by Frost & Sullivan (Beijing) Inc., Shanghai Branch Co., or Frost & Sullivan, an independent research firm, the China Internet Network Information Center, or CNNIC, and the National Bureau of Statistics of China, including a report titled "Global Integrated Circuit Chip Market Study in 2019", which we requested Frost & Sullivan to prepare, for which we paid a fee. This information involves a number of assumptions and limitations, and you are cautioned not to place undue reliance on these estimates. We have not independently verified the accuracy or completeness of the data contained in these industry publications and reports. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the "Risk Factors" section. These and other factors could cause results to differ materially from those expressed in these publications and reports.

No dealer, salesperson or other person is authorized to give any information or to represent as to anything not contained in this prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. You must not rely on any unauthorized information or representations. In particular, we have made previous listing applications, including to China's National Equities Exchange Quotations Co., Ltd. and The Stock Exchange of Hong Kong Limited. The information contained in previous listing applications does not and will not form a part of this prospectus, and you should not place any reliance on any such information. This prospectus is an offer to sell, and we are seeking offers to buy, only the ADSs offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date, regardless of the time of delivery of this prospectus or any sale of the ADSs.

Neither we nor the underwriters have done anything that would permit this offering or the possession or distribution of this prospectus or any filed free writing prospectus in any jurisdiction where other action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus or any free writing prospectus filed with the United States Securities and Exchange Commission, or SEC, must inform themselves about, and observe any restrictions relating to, the offering of the ADSs and the distribution of this prospectus or any filed free writing prospectus outside of the United States.

Until , 2019 (the 25th day after the date of this prospectus), all dealers that buy, sell or trade ADSs, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Prospectus Summary

PROSPECTUS SUMMARY This summary highlights selected information contained in greater detail elsewhere in this prospectus. This summary may not contain all of the information that you should consider before investing in the ADSs. You should carefully read the entire prospectus, including "Risk Factors" and the financial statements, before making an investment decision. This prospectus contains information from an industry report commissioned by us and prepared by Frost & Sullivan, an independent research firm, to provide information regarding our industry and our market position in China.

Overview

We provide supercomputing solutions through our proprietary high performance computing ASICs. Our visionary management team has a clear strategy to commercialize supercomputing technology. In January 2013, Mr. Nangeng Zhang, our chairman and chief executive officer, and his team, invented and delivered one of the first cryptocurrency mining machines incorporating ASIC technology. We initially dedicated our research and development efforts to ASIC applications for Bitcoin mining, which rapidly built up our know-how of ASIC design. Such experience provided us with a solid foundation in terms of both technology and capital resources, which better prepared us for further research and development involving AI chips. We were the second largest designer and manufacturer of Bitcoin mining machines globally in terms of computing power sold in the six months ended June 30, 2019, according to Frost & Sullivan. During the same period, our Bitcoin mining machines sold accounted for 21.9% of the combined computing power of all the Bitcoin mining machines sold globally, according to Frost & Sullivan. In September 2018, we became the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture, which is a set of instructions that describes the way in which software talks to an underlying processor, and self-developed neural-network accelerator, which is a class of microprocessor designed as hardware acceleration for AI applications, with outstanding performance. As we are a fabless IC designer, the ICs that we design are manufactured, packaged and tested by industry-leading suppliers, including TSMC, Samsung, STATS ChipPac, ASE and SPIL.

We have developed significant advantages in our business and technological capabilities, including the following:

- Our mastery of the whole IC design process;
- Our years of accumulated engineering experience in applying theoretical research to the mass production of new products, producing in aggregate over 130 million ASICs in 2017, 2018 and the six months ended June 30, 2019;
- Our ability to achieve a fast time-to-market with our products and our successful early monetization of the ASIC design in blockchain applications have provided us with an early advantage with respect to both technology and capital reserve to pursue our strategic initiatives;
- Our breakthroughs in various technological fields to improve ASIC performance, such as low voltage and high power efficiency operations and high computing density, all of which are crucial features for blockchain and AI solutions;
- Our ownership of most of the intellectual property we employ, and our accumulation of valuable know-how and multiple generations of proprietary silicon data through our years of ASIC design experience;
- Our ability to provide a holistic AI solution to our customers, including AI chips, algorithm development and optimization, hardware module, end-product and software services; and
- Our close and trusted partnerships with leading global suppliers, which have enabled us to achieve high-quality, high yield rate and stable production, with a 100% success rate for all of our seven tape-outs.

The price of Bitcoin experienced a significant drop in 2018 and remained relatively low through the end of the first quarter of 2019, while experiencing some recovery starting from the second quarter of 2019. The price of Bitcoin has a direct impact on the market demand for our Bitcoin mining machines, in terms of both the price and the quantity, and we expect this trend to continue. Furthermore, the significant drop in the Bitcoin price has had a negative effect on the value of our Bitcoin mining machine inventory. We expect our results of operations to improve along with the recovery of the Bitcoin price, but our results of operations generally lag behind the increase in the Bitcoin price. Furthermore, fluctuation in Bitcoin price can have direct impact on the trading price of the ADSs.

Our total revenues increased by 106.8% from RMB1,308.1 million in 2017 to RMB2,705.3 million (US$394.1 million) in 2018. During the same period, our net income decreased by 67.4% from RMB375.8 million to RMB122.4 million (US$17.8 million). Our total revenues decreased by 85.2% from RMB1,947.1 million in the six months ended June 30, 2018 to RMB288.8 million (US$42.1 million) in the six months ended June 30, 2019. Our net income was RMB216.8 million in the six months ended June 30, 2018 and our net loss was RMB330.9 million (US$48.2 million) in the six months ended June 30, 2019. Our adjusted net income (loss), a non-GAAP measure defined as net income (loss) excluding share-based compensation, was RMB471.3 million of adjusted net income in 2017 as compared to RMB141.0 million (US$20.5 million) of adjusted net income in 2018, and RMB226.2 million of adjusted net income in the six months ended June 30, 2018 as compared to RMB109.9 million (US$16.0 million) of adjusted net loss in the six months ended June 30, 2019. See "Summary Consolidated Financial and Operating Data—Non-GAAP Financial Measures."

Our Competitive Strengths

We believe that the following strengths contribute to our success and differentiate us from our competitors:

- We are a leading provider of supercomputing solutions.
- We are able to achieve a fast time-to-market.

- We were the first in the industry to deliver commercial edge computing AI chips on Risc-V architecture and self-developed neural-network accelerator with outstanding performance.
- Our outstanding production track record and strong supply chain management ensure our product quality and production capability.
- Our ability to make sustainable investments in AI technology.
- We have a visionary management team, as well as a talented research and development team.

Our Growth Strategies

We intend to grow our business using the following key strategies:

- Strengthen our leadership position in supercomputing solutions.
- Continue to invest in high power efficiency IC design.
- Continue to introduce new AI products.
- Enhance our AI platform business model to build on our AI products.
- Continue to enhance our supply chain management.
- Continue to expand our overseas operations.

Our Challenges

Our ability to execute our strategies is subject to risks and uncertainties, including:

- Fluctuation of the Bitcoin price.
- Acceptance and regulation of Bitcoins and Bitcoin mining.
- The classification of cryptocurrency mining as an eliminated industry by PRC government authority.
- The significant revenue contribution from our Bitcoin mining machines.
- Our ability to succeed in the AI market.
- Constant technological changes in the industries we operate in.
- Uncertainties in our research and development activities.
- Our reliance on limited suppliers.

Our History and Corporate Structure

We are a Cayman Islands holding company and conduct our operations in China through our PRC subsidiaries. We first started our business developing Bitcoin mining machines incorporating ASIC technology in 2013 through Beijing Canaan Creative Information Technology Co., Ltd., which was subsequently renamed Hangzhou Canaan Creative Information Technology Co., Limited, or Hangzhou Canaan, in September 2015. Empowered by the academic training and technical expertise of our co-founders, we have focused on the design of high performance, repeated computing ICs since our inception. As we further developed, Hangzhou Canaan went through a series of capital injections and became a holding company for our PRC operating subsidiaries.

With the growth of our business and in order to facilitate international capital investment in us, we underwent an offshore reorganization in the first quarter of 2018. In February 2018, Canaan Cayman Holdings Ltd. was incorporated under the laws of the Cayman Islands as an exempted company with limited liability. It was later renamed Canaan Inc. in April 2018. In March 2018, in order to mirror the shareholding structure of the then shareholders of Hangzhou Canaan, we issued and allotted our ordinary shares at par value to investment holding companies held by the then shareholders of Hangzhou Canaan. Further, an intermediate holding company, Canaan Creative (HK) Holdings Limited, or Canaan HK, our wholly-owned subsidiary, was also established in Hong Kong in February 2018. In March 2018, Canaan HK acquired a 100% equity interest in Hangzhou Canaan and Canaan Inc. became our ultimate holding company.

The following diagram illustrates our corporate structure as of the date of this prospectus. It omits certain entities that are immaterial to our results of operations, business and financial condition. Unless otherwise indicated, equity interests depicted in this diagram are 100%-owned.

Our Corporate Information

Our principal executive offices are located at 30/F, Dicara Silver Tower, 29 Jiefang East Road, Jianggan District, Hangzhou, People's Republic of China. Our telephone number at this address is +86-571-8999-5063. Our registered office in the Cayman Islands is located at the offices of Sertus Chambers, Suite #5-204, 23 Lime Tree Bay Avenue, P.O. Box 2547, Grand Cayman, KY1-1104, Cayman Islands. Investors should submit any inquiries to the address and telephone number of our principal executive offices set forth above.

Our corporate website is www.canaan-creative.com, and the information contained on our website is not a part of this prospectus. Our agent for service of process in the United States is Cogency Global Inc.

Implications of Being an Emerging Growth Company

As a company with less than US$1.07 billion in revenue for the last fiscal year, we qualify as an "emerging growth company" pursuant to the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other requirements that are otherwise not applicable generally to public companies. These provisions include an exemption from the auditor attestation requirement under Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, related to the assessment of the effectiveness of the emerging growth company's internal control over financial reporting. The JOBS Act also provides that an emerging growth company does not need to comply with any new or revised financial accounting standards until such date that a private company is otherwise required to comply with such new or revised accounting standards. We intend to avail ourselves of the extended transition period for complying with new or revised accounting standards provided under the JOBS Act. As a result, as we are an emerging growth company, we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies.

We will remain an emerging growth company until the earliest of (a) the last day of our fiscal year during which we have total annual gross revenues of at least US$1.07 billion; (b) the last day of our fiscal year following the fifth anniversary of the completion of this offering; (c) the date on which we have, during the previous three year period, issued more than US$1.0 billion in non-convertible debt; or (d) the date on which we are deemed to be a "large accelerated filer" under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of ADSs that are held by non-affiliates exceeds US$700 million as of the last business day of our most recently completed second fiscal quarter. Once we cease to be an emerging growth company, we will not be entitled to the exemptions provided in the JOBS Act discussed above.

Conventions That Apply to This Prospectus

Unless we indicate otherwise, references in this prospectus to:

- "ADRs" are to American depositary receipts, which, if issued, evidence the ADSs;
- "ADSs" are to the American depositary shares, each of which represents of our Class A ordinary shares;
- "ASE" are to Advanced Semiconductor Engineering, Inc.;
- "CAGR" are to compound annual growth rate;
- "China" and the "PRC" are to the People's Republic of China, excluding, for the purposes of this prospectus only, Taiwan, the Hong Kong Special Administrative Region and the Macao Special Administrative Region;
- "ordinary shares" are to, prior to the completion of this offering, our ordinary shares, par value US$0.00000005 per share; and immediately prior to and after the completion of this offering, are to our Class A and Class B ordinary shares, par value US$0.00000005 per share;
- "RMB" or "Renminbi" are to the legal currency of China;
- "SPIL" are to Silicon Precision Industries Co., Ltd.;
- "TSMC" are to Taiwan Semiconductor Manufacturing Company Limited and its various subsidiaries and associates, including Global Unichip Corporation, as required by the context;
- "US$," "U.S. dollars," or "dollars" are to the legal currency of the United States; and
- "we," "us," "our company," "our" and "Canaan" are to Canaan Inc. and its subsidiaries, as the context requires.

Our reporting currency is the Renminbi. This prospectus also contains translations of certain foreign currency amounts into U.S. dollars for the convenience of the reader. Unless otherwise stated, all translations of Renminbi into U.S. dollars were made at RMB6.8650 to US$1.00, the exchange rate set forth in the H.10 statistical release of the Federal Reserve Board on June 28, 2019. We make no representation that the Renminbi or U.S. dollars amounts referred to in this prospectus could have been or could be converted into U.S. dollars or Renminbi, as the case may be, at any particular rate or at all. On October 18, 2019, the noon buying rate for Renminbi was RMB7.0805 to US$1.00.

Except as otherwise indicated, all information in this prospectus assumes:

- the filing and effectiveness of our amended and restated memorandum and articles of association, which will occur immediately prior to the completion of this offering; and

- no exercise by the underwriters of their option to purchase up to an additional ADSs representing Class A ordinary shares from us.

Glossary of Technical Terms

This glossary contains explanations of certain terms used in this prospectus in connection with our company and our business. Unless we indicate otherwise, references in this prospectus to:

- "AI" are to artificial intelligence;
- "ASICs" are to application-specific ICs, meaning ICs designed for a specific application;
- "CPU" are to computing processing unit;
- "GPU" are to graphic processing unit;
- "edge computing" are to a method of optimizing cloud computing systems by performing data processing at the edge of the network, near the source of the data;
- "FPGA" are to field programmable gate array, an integrated circuit designed to be configured by a customer or a designer after manufacturing;
- "hash" are to a function used to map data of arbitrary size to data of fixed size and, in the context of Bitcoin mining, a function to solve the mining puzzle;
- "hash rate" are to the processing power of the Bitcoin network and represents the number of computations that is processed by the network in a given time period;
- "ICs" or "chips" are to integrated circuits;
- "IoT" are to Internet-of-Things, the extension of internet connectivity into physical devices and everyday objects;
- "ISO" are to the International Organization of Standardization;
- "network computing power" are to the processing power of all the machines in the Bitcoin network;
- "neural-network accelerator" are to a class of microprocessor designed as hardware acceleration for AI applications;
- "nm" are to nanometer;
- "PMU" are to power management unit, which is a microcontroller that governs power functions;
- "POW" are to proof-of-work;
- "Risc-V" are to an open source instruction set architecture, which is a set of instructions that describes the way in which software talks to an underlying processor, and Risc-V's open source nature means that anyone can build a processor to support it without paying high royalty fees;
- "SaaS" are to software as a service, which is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted;
- "SoC" are to a chip that integrates all components of a computer or other electronic systems;
- "tape-out" are to the final result of the design process for ICs when the graphic for the photomask of the IC is sent to the fabrication facility, and a successful tape-out means all the stages in the design and verification process of ICs have been completed;
- "Thash" are to Terahash, the measuring unit of the processing power of the Bitcoin mining machine;
- "Thash/s" or "TH/s", "GH/s", "Ehash/s" or "EH/s" are to the measuring unit of hash rate. 1 EH/s = 1,000,000 TH/s; 1 TH/s = 1,000 GH/s;
- "TOPS" are to tera-operations per second, which is a measurement of the computing performance of a chip; and
- "TPU" are to a tensor processing unit, which is an AI accelerator ASIC.

The Offering

THE OFFERING

ADSs Offered by Us	ADSs (or ADSs if the underwriters exercise in full the option to purchase additional ADSs).
Public Offering Price	We estimate that the initial public offering price will be between US$ and US$ per ADS.
ADSs Outstanding Immediately After This Offering	ADSs (or ADSs if the underwriters exercise in full the over-allotment option).
Ordinary Shares Outstanding Immediately After This Offering	Class A ordinary shares and 356,624,444 Class B ordinary shares (or Class A ordinary shares and 356,624,444 Class B ordinary shares if the underwriters exercise in full the over-allotment option).
Over-Allotment Option	We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional ADSs at the initial public offering price, less underwriting discounts and commissions, solely for the purpose of covering over-allotments.
The ADSs	Each ADS represents Class A ordinary shares.

The depositary will be the holder of the Class A ordinary shares underlying the ADSs and you will have the rights provided in the deposit agreement among us, the depositary and owners and holders of ADSs from time to time. You may surrender your ADSs for cancelation to the depositary to withdraw the Class A ordinary shares underlying your ADSs. The depositary will charge you a fee for such an exchange. We may amend or terminate the deposit agreement for any reason without your consent. Any amendment that imposes or increases fees or charges or which materially prejudices any substantial existing right you have as an ADS holder will not become effective as to outstanding ADSs until 30 days after notice of the amendment is given to ADS holders. If an amendment becomes effective, you will be bound by the deposit agreement as amended if you continue to hold your ADSs. To better understand the terms of the ADSs, you should carefully read the section in this prospectus entitled "Description of American Depositary Shares." We also encourage you to read the deposit agreement, which is an exhibit to the registration statement that includes this prospectus.

Ordinary Shares	Our ordinary shares will be divided into Class A ordinary shares and Class B ordinary shares immediately prior to the completion of this

offering. Holders of Class A ordinary shares and Class B ordinary shares will have the same rights except for voting and conversion rights. In respect of matters requiring a shareholder vote, each Class A ordinary share will be entitled to one vote, and each Class B ordinary share will be entitled to 15 votes. Each Class B ordinary share is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances. Upon any sale or transfer of Class B ordinary shares by a holder thereof to any person or entity which is not an affiliate of such holder, or upon a change of beneficial ownership of Class B ordinary shares as a result of which any person who is not an affiliate of the registered shareholder becomes a beneficial owner of such shares, such Class B ordinary shares shall be automatically and immediately converted into the same number of Class A ordinary shares. For a description of Class A ordinary shares and Class B ordinary shares, see "Description of Share Capital."

Use of Proceeds	We estimate that we will receive net proceeds of approximately US$ million from this offering, or approximately US$ million if the underwriters exercise their option to purchase additional ADSs from us in full, assuming an initial public offering price of US$ per ADS, the mid-point of the estimated range of the initial public offering price set forth on the cover of this prospectus, after deducting estimated underwriter discounts, commissions and estimated offering expenses payable by us. We plan to use the net proceeds for:

- research and development for ASICs related to AI algorithms and applications;
- research and development for ASICs related to blockchain algorithms and applications;
- expansion of our AI and blockchain business globally by making strategic investments and establishing overseas offices;
- supply chain optimization and repayment of debts incurred by us in connection with our reorganization; and
- general corporate purpose.

See "Use of Proceeds" for more information.

Risk Factors	See "Risk Factors" and other information included in this prospectus for a discussion of the risks relating to investing in the ADSs. You should carefully consider these risks before deciding to invest in the ADSs.
[Directed ADS Program]	[At our request, the underwriters have reserved up to % of the ADSs being offered by this prospectus for sale at the initial public offering price to our directors, officers, employees, business

associates and related persons through a directed share program. We do not know if these persons will choose to purchase all or any portion of these reserved ADSs, but any purchases they do make will reduce the number of ADSs available to the general public. Any reserved ADSs not so purchased will be offered by the underwriters to the general public on the same terms as the other ADSs.]

Listing	We will apply to list the ADSs on the Nasdaq Global Market.

Proposed Trading Symbol	CAN.
Depositary	The Bank of New York Mellon.
Lock-up	We, our executive officers, directors and certain option holders, have agreed with the underwriters not to sell, transfer or dispose of any ADSs, ordinary shares or similar securities for a period of 180 days after the date of this prospectus, subject to certain exceptions. See “Shares Eligible for Future Sale” and “Underwriting.”

Summary Consolidated Financial and Operating Data

SUMMARY CONSOLIDATED FINANCIAL AND OPERATING DATA The following summary consolidated statements of income and cash flows data for the years ended December 31, 2017 and 2018 and the summary consolidated balance sheet data as of December 31, 2017 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus.

The following summary consolidated statements of income (loss) and cash flows data for the six months ended June 30, 2018 and 2019 and the summary consolidated balance sheet data as of June 30, 2019 have been derived from our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus.

Our consolidated financial statements are prepared and presented in accordance with U.S. GAAP. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements and include all normal recurring adjustments that we consider necessary for a fair statement of our financial position and operating results for the periods presented.

Our historical results are not necessarily indicative of results to be expected for any future period. The following summary consolidated financial data for the periods and as of the dates indicated are qualified by reference to, and should be read in conjunction with, our consolidated financial statements and related notes and the information under “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” both of which are included elsewhere in this prospectus.

Summary Consolidated Statements of Comprehensive Income (Loss):

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net revenues:						
Products revenue	1,303.1	2,698.6	393.1	1,941.7	287.6	41.9
Service revenue	4.7	6.0	0.9	5.3	0.4	0.1
Other revenues	0.3	0.7	0.1	0.2	0.7	0.1
Total net revenues	**1,308.1**	**2,705.3**	**394.1**	**1,947.1**	**288.8**	**42.1**
Cost of revenues	(703.7)	(2,197.2)	(320.1)	(1,499.4)	(277.5)	(40.4)
Gross profit	**604.4**	**508.1**	**74.0**	**447.7**	**11.2**	**1.6**
Operating expenses:						
Research and development expenses[(1)]	(99.8)	(189.7)	(27.6)	(70.8)	(67.2)	(9.8)
Sales and marketing expenses[(1)]	(20.7)	(38.7)	(5.6)	(27.2)	(7.9)	(1.2)
General and administrative expenses[(1)]	(125.3)	(146.7)	(21.4)	(73.7)	(263.0)	(38.3)
Total operating expenses	**(245.8)**	**(375.1)**	**(54.6)**	**(171.7)**	**(338.1)**	**(49.3)**
Income (loss) from operations:						
Interest income	0.2	4.2	0.6	0.6	0.9	0.1
Investment income	5.6	3.2	0.5	1.6	1.1	0.2
Interest expense and guarantee fee	–	(53.1)	(7.7)	(17.4)	(16.4)	(2.4)
Foreign exchange (loss) gain, net	(1.2)	(1.2)	(0.2)	(0.2)	3.7	0.5
Value added tax refunds	38.8	110.2	16.1	93.0	0.3	0.1
Other (loss) income, net	(1.1)	3.8	0.6	3.0	6.4	0.9
Income (loss) before income tax expenses	**401.0**	**200.2**	**29.2**	**356.4**	**(330.9)**	**(48.2)**
Income tax expense	(25.2)	(77.8)	(11.3)	(139.7)	–	–

Net income (loss)	**375.8**	**122.4**	**17.8**	**216.8**	**(330.9)**	**(48.2)**
Foreign currency translation adjustment, net of nil tax	–	(65.2)	(9.5)	(37.9)	16.4	2.4
Total comprehensive income (loss)	**375.8**	**57.2**	**8.3**	**178.9**	**(314.5)**	**(45.8)**

Note:

(1) Share-based compensation expenses were allocated to the following expense items:

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Research and development expenses	25.1	9.6	1.4	4.8	4.8	0.7
Sales and marketing expenses	0.1	1.1	0.2	0.6	0.2	0.0
General and administrative expenses	70.3	7.9	1.1	4.1	216.0	31.5

Summary Consolidated Statements of Financial Position:

	As of December 31,			As of June 30,	
	2017	2018		2019	
	RMB	RMB	US$	RMB	US$
	(in millions)				
Cash and cash equivalents	176.5	258.9	37.7	270.4	39.4
Restricted cash	–	286.3	41.7	–	–
Accounts receivable	1.3	23.7	3.5	20.0	2.9
Inventories	259.8	585.7	85.3	419.8	61.2
Prepayments and other current assets	636.4	186.7	27.2	532.9	77.6
Income tax receivable	–	27.1	3.9	30.0	4.4
Property, equipment and software	18.4	27.9	4.1	23.9	3.5
Total assets	**1,203.2**	**1,402.7**	**204.3**	**1,444.3**	**210.4**
Short-term debts	–	1,049.0	152.8	197.2	28.7
Contract liabilities	202.5	6.9	1.0	280.3	40.8
Accrued liabilities and other current liabilities	69.2	58.0	8.4	58.7	8.6
Total liabilities	**346.0**	**1,161.7**	**169.2**	**627.2**	**91.4**
Total shareholders' equity	**857.2**	**241.0**	**35.1**	**817.1**	**119.0**
Total liabilities and shareholders' equity	**1,203.2**	**1,402.7**	**204.3**	**1,444.3**	**210.4**

Summary Consolidated Statements of Cash Flow:

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net cash provided by (used in) operating activities	91.2	(12.7)	(1.9)	(170.7)	6.4	0.9
Net cash provided by (used in) investing activities	(86.8)	84.0	12.2	97.6	(112.2)	(16.3)
Net cash provided by (used in) financing activities	150.0	295.2	43.0	145.2	(169.1)	(24.6)
Net increase/(decrease) in cash and cash equivalents, restricted cash	**154.4**	**366.4**	**53.4**	**72.1**	**(274.9)**	**(40.0)**
Effect of exchange rate changes on cash and cash equivalents, restricted cash	(1.3)	2.3	0.3	0.3	0.1	0.0
Cash and cash equivalents, restricted cash at the beginning of year/period	23.4	176.5	25.7	176.5	545.2	79.4

Cash and cash equivalents, restricted cash at the end of year/period	176.5	545.2	79.4	248.9	270.4	39.4

NonGAAP Financial Measures:

In evaluating our business, we consider and use adjusted net income as a supplemental measures to review and assess our operating performance. The presentation of this non-GAAP financial measure is not intended to be considered in isolation or as a substitute for financial information prepared and presented in accordance with U.S. GAAP. We define adjusted net income as net income excluding sharebased compensation expense.

We believe that adjusted net income helps to identify underlying trends in our business that could otherwise be distorted by the effect of the expenses that we exclude in adjusted net income. We believe that adjusted net income provides useful information about our operating results, enhances the overall understanding of our past performance and future prospects and allows for greater visibility with respect to key metrics used by our management in its financial and operational decision-making.

The non-GAAP financial measure “adjusted net income” is not defined under U.S. GAAP, is not presented in accordance with U.S. GAAP and has limitations as an analytical tool. One of the key limitations of using adjusted net income is that it does not reflect all of the items of income and expense that affect our operations. Share-based compensation has been and may continue to be incurred in our business and is not reflected in the presentation of adjusted net income. Further, the non-GAAP financial measure “adjusted net income” may differ from the non-GAAP information used by other companies, including peer companies, and therefore their comparability may be limited.

We compensate for these limitations by reconciling the non-GAAP financial measure to the nearest U.S. GAAP performance measure, all of which should be considered when evaluating our performance. We encourage you to review our financial information in its entirety and not to rely on a single financial measure.

The table below sets forth a reconciliation of our net income to adjusted net income (loss) for the years/period indicated:

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net income (loss)	375.8	122.4	17.8	216.8	(330.9)	(48.2)
Add:						
Share-based compensation expenses	95.5	18.6	2.7	9.5	221.0	32.2
Adjusted net income (loss)	471.3	141.0	20.5	226.2	(109.9)	(16.0)

Summary Operating Data:

The following table sets forth the sales volume and average selling prices generated by our different Bitcoin mining machines for the periods indicated:

	Year ended December 31,				Six months ended June 30,			
	2017		2018		2018		2019	
	Volume	ASP	Volume	ASP	Volume	ASP	Volume	ASP
	set	RMB	set	RMB	set	RMB	set	RMB
A7 series[(1)]	294,523	4,402	20,576	3,710	20,576	3,710	–	–
A8 series[(2)]	–	–	503,237	4,842	245,735	7,449	212,000	1,008
A9 series[(3)]	–	–	35,324	3,665	–	–	40,862	1,526
A10 series[(4)]	–	–	–	–	–	–	490	7,038
Total	294,523	4,402	559,137	4,726	266,311	7,160	253,352	1,103

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The following table sets forth the total computing power sold and average selling prices of our Bitcoin mining machines expressed in terms of computing power for the periods indicated:

	Year ended December 31,				Six months ended June 30,			
	2017		2018		2018		2019	
	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash
	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB
A7 series[1]	2,114,637	613	151,131	505	151,131	505	–	–
A8 series[2]	–	–	6,305,119	386	2,941,301	622	3,098,145	69
A9 series[3]	–	–	702,416	184	–	–	780,513	80
A10 series[4]	–	–	–	–	–	–	18,130	190
Total	**2,114,637**	**613**	**7,158,666**	**369**	**3,092,432**	**617**	**3,896,788**	**72**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The table below sets forth the sales cost, per unit costs and the selling cost in terms of computing power of our Bitcoin mining machines for the periods indicated:

	Year ended December 31,						Six months ended June 30,					
	2017			2018			2018			2019		
	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash
	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB
A7 series[2]	693.3	2,354	328	51.1	2,482	338	51.1	2,482	388	–	–	–
A8 series[3]	–	–	–	1,243.9	2,472	197	641.5	2,610	218	539.7	2,546	174
A9 series[4]	–	–	–	154.9	4,385	221	–	–	–	170.8	4,180	219
A10 series[5]	–	–	–	–	–	–	–	–	–	2.8	5,640	152
Total	**693.3**	**2,354**	**328**	**1,449.9**	**2,593**	**203**	**692.5**	**2,600**	**224**	**713.3**	**2,815**	**183**

Notes:

(1) Without taking into consideration the inventory and prepayment write down provision of nil, RMB786.0 million (US$114.5 million), RMB786.0 million and RMB0.8 million (US$0.1 million) in 2017, 2018 and the six months ended June 30, 2018 and 2019, respectively, as well as a realized inventory and prepayment write down of nil, RMB71.1 million (US$10.4 million), nil and RMB443.3 million (US$64.6 million), respectively, for the same periods.

(2) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(3) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(4) Mainly includes our A921 and A911 Bitcoin mining machines.

(5) Mainly includes our A1047 Bitcoin mining machines.

Risk Factors

RISK FACTORS *You should consider carefully all of the information in this prospectus, including the risks and uncertainties described below and our consolidated financial statements and related notes, before making an investment in the ADSs. Any of the following risks and uncertainties could have a material adverse effect on our business, financial condition, results of operations and prospects. The market price of the ADSs could decline significantly as a result of any of these risks and uncertainties, and you may lose all or part of your investment.*

Risks Relating to Our Business and Industry

Our results of operations have been and are expected to continue to be negatively impacted by sharp Bitcoin price decreases.

The demand for, and pricing of, our Bitcoin mining machines is determined primarily by the expected economic return of Bitcoin mining activities, which in turn is significantly affected by expectations with respect to the Bitcoin price, among other factors. The price of Bitcoin has experienced significant fluctuations over its short existence and may continue to fluctuate significantly in the future. Bitcoin prices ranged from approximately US$14,166 per coin as of December 31, 2017 to approximately US$3,792 per coin as of December 31, 2018, according to Blockchain.info. According to the same source, the Bitcoin price climbed to US$10,769 as of June 30, 2019. The decrease in the Bitcoin price in 2018 resulted in a material decrease in our sales volume and in the average selling price of our Bitcoin mining machines. As the Bitcoin price only started to recover in the second quarter of 2019 and our operations generally lag behind the increase of Bitcoin price, our revenue for the six months ended June 30, 2019 also decreased by 85.2% from the six months ended June 30, 2018. We expect our results of operations to continue to be affected by the Bitcoin price, as 99.6%, 99.7% and 99.4% of our revenue were from sales of our Bitcoin mining machines and other Bitcoin mining machine parts and accessories in 2017, 2018 and the six months ended June 30, 2019, respectively. Any future significant reductions in the price of Bitcoin will likely have a material and adverse effect on our results of operations and financial condition. We cannot assure you that the Bitcoin price will remain high enough to sustain the demand for our Bitcoin mining machines or that the Bitcoin price will not decline significantly in the future. Furthermore, fluctuations in the Bitcoin price can have an immediate impact on the trading price of the ADSs even before our financial performance is affected, if at all.

Various factors, mostly beyond our control, could impact the Bitcoin price. For example, the usage of Bitcoins in the retail and commercial marketplace is relatively low in comparison with the usage for speculation, which contributes to Bitcoin price volatility.

If the Bitcoin price or Bitcoin network transaction fees drop, the expected economic return of Bitcoin mining activities will diminish, thereby resulting in a decrease in demand for our Bitcoin mining machines. As a result, we may need to reduce the price of our Bitcoin mining machines. At the same time, if transaction fees increase to such an extent as to discourage users from using Bitcoins as a medium of exchange, it may decrease the transaction volume of the Bitcoin network and may affect the demand for our Bitcoin mining machines. In addition, any shortage of power supply due to government control measures or other reasons, and any increase in energy costs, would raise the costs of Bitcoin mining. This in turn could affect our customers' expected economic return for mining activities and the demand for and pricing of our current Bitcoin mining machines.

Furthermore, fluctuations in Bitcoin price may affect the value of inventories as well as the provision we make to the inventory as we manage our inventories based on, among others, the sales forecast of our Bitcoin mining machines. As we generally increase our procurement volume and stock up finished goods for the launch of new products or we expect a surge of demand of Bitcoin mining machine, a significant drop in the Bitcoin price can lead to a lower expected sales price and excessive inventories, which in turn will lead to impairment losses with respect to such inventories. For example, in 2018, as a result of the significant drop in the Bitcoin price, we recorded an inventories and prepayments write down of RMB786.0 million (US$114.5 million), which in turn had a significant negative impact on our profitability. If the Bitcoin price drops significantly in the future, we may need to make similar write-downs again. To the extent we are able to sell such inventories above its carrying value, our gross profit may also be inflated by such write down.

The Bitcoin price drop in 2018 also caused our customers who purchased our Bitcoin mining products on credit to be less willing to make payment. We consider such portion of payment as implicit price concession and we retroactively adjusted our revenue based on such subsequent information. In 2018 and the six months ended June 30, 2019, we recognized such price concessions of RMB152.8 million (US$22.3 million) and RMB9.6 million (US$1.4 million), respectively.

We derive a significant portion of our revenues from our Bitcoin mining machines. If the market for Bitcoin mining machines ceases to exist or diminishes significantly, our business and results of operations would be materially harmed.

Sales of our Bitcoin mining machines, which incorporate our proprietary ASICs, historically generated substantially all of our revenue, and are expected to continue to generate a significant portion of our revenue in the foreseeable future. In 2017, 2018 and the six months ended June 30, 2019, sales of our Bitcoin mining machines and other Bitcoin mining machine parts and accessories accounted for 99.6%, 99.7% and 99.4% of our revenues, respectively. If the market for Bitcoin mining machines ceases to exist or diminishes significantly, we would experience a significant loss of sales, cancelation of orders, or loss of customers for our Bitcoin mining machines. Adverse factors that may affect the market for Bitcoin mining machines include:

- Another cryptocurrency displaces Bitcoin as the mainstream cryptocurrency, thereby causing Bitcoin to lose value or become worthless, which could adversely affect the sustainability of our business;
- Bitcoin fails to gain wide market acceptance and fails to become a generally accepted medium of exchange in the global economy due to certain inherent limitations to cryptocurrencies;
- Over time, the reward for Bitcoin mining (in terms of the amount of Bitcoin awarded) will decline, which may reduce the incentive to mine Bitcoin. Specifically, the next halving event is designed to occur in 2020, and Bitcoins are expected to be fully mined out by the year 2140. Therefore, Bitcoin mining machines may become less productive as the available rewards for Bitcoin mining decrease.

If we cannot maintain the scale and profitability of our Bitcoin mining machines and, at the same time, successfully expand our business in the AI market, our business, results of operations and ability to continue to grow will suffer. Furthermore, excess inventories, inventory markdowns, brand image deterioration and margin squeeze caused by declining economic returns for miners or pricing competition for our Bitcoin mining machines could all have a material and adverse impact on our business, financial condition and results of operations.

If we fail to succeed in the AI market or other new application markets we seek to penetrate into, our revenues, growth prospects and financial condition could be materially and adversely affected.

Until 2018, we have been offering a single line of Bitcoin mining machines, which historically accounted for substantially all of our total revenue. As of June 30, 2019, we shipped more than 26,000 AI chips and development kits. Our future revenue growth will depend largely on our ability to successfully expand our business in the AI market and penetrate into new application markets. We cannot predict how or to what extent the demand for our products in the AI market will develop going forward. Furthermore, as ASICs may not develop into mainstream solutions for AI technologies and applications, we might not be able to capitalize on the growth in the market for AI technologies and applications with our ASICs. If the AI market does not develop as we currently anticipate and we are unable to penetrate into new application markets, our future revenue and profits could be materially and adversely affected.

We plan to work closely with our partners in product development to enhance our visibility in new market trends and meet customer demand by devoting more resources to research and development. We may also need to recruit more employees for research and development and product development, such as software engineers. We intend to continue to capitalize on market opportunities for introducing new product applications and conduct advance planning for our next-generation products in a timely manner. However, if we fail to penetrate into any of these or other new markets to which we devote our resources, we may not be able to generate returns on our investments and our financial condition could suffer.

The industries in which we operate are characterized by constant changes. If we fail to continuously innovate and to provide products that meet the expectations of our customers, we may be unable to attract new customers or retain existing customers, and hence our business and results of operations may be adversely affected.

The industries in which we operate are characterized by constant changes, including rapid technological evolution, continual shifts in customer demands, frequent introductions of new products and solutions and constant emergence of new industry standards and practices. Thus, our success will depend, in part, on our ability to respond to these changes in a cost-effective and timely manner. We need to anticipate the emergence of new technologies and assess their market acceptance. We also need to invest significant resources in research and development in order to keep our products competitive in the market.

However, research and development activities are inherently uncertain, and we might encounter practical difficulties in commercializing our research and development results, which could result in excessive research and development expenses or delays. Given the fast pace with which blockchain and AI technologies have been and will continue to be developed, we may not be able to timely upgrade our technologies in an efficient and cost-effective manner, or at all. In addition, new developments in AI, deep learning, IoT, computer vision, blockchain and cryptocurrency could render our products obsolete or unattractive. If we are unable to keep up with the technological developments and anticipate market trends, or if new technologies render our technologies or solutions obsolete, customers may no longer be attracted to our products. As a result, our business, results of operations and financial condition would be materially and adversely affected.

As our current mining machines are designed for Bitcoin mining, any limitation on the usage and adaptation of Bitcoin and any actual or perceived adverse development in the Bitcoin market, which is rapidly and continuously evolving, can impact our results of operations. As there is no wide consensus with respect to the value and application of Bitcoin, any future development may continue to affect the price of Bitcoin and hence affect the demand for our current Bitcoin mining machines. In addition, any event or rumor that generates negative publicity for the Bitcoin industry and market, such as allegations that Bitcoin is used for money laundering or other illicit activities, could result in harm to our reputation, which in turn may negatively affect our results of operations.

Decentralization, or the lack of control by a central authority, is a key reason that cryptocurrencies like Bitcoin have attracted many committed users. However, the decentralized nature of Bitcoin is subject to growing discussion and suspicion. Some claim that most of the actual services and businesses built within the Bitcoin ecosystem are in fact centralized since they are run by specific people, in specific locations, with specific computer systems, and that they are susceptible to specific regulations. Individuals, companies or groups, as well as Bitcoin exchanges that own vast amounts of Bitcoins, can affect the market price of Bitcoin. Furthermore, mining equipment production and mining pool locations are becoming centralized. Some argue that the decentralized nature of cryptocurrencies is a fundamental flaw rather than a strength. The suspicion about the decentralized nature of Bitcoin may cause our customers to lose confidence in the prospect of the Bitcoin industry. This in turn could adversely affect the market demand for our Bitcoin mining machines and our business. For more details, see "—If any person, institution or a pool of them acting in concert obtains control of more than 50% of the processing power active on the Bitcoin network, such person, institution or a pool of them could prevent new transactions from gaining confirmations, halt payments between users, and reverse previously completed transactions, which would erode user confidence in Bitcoin."

We are subject to risks associated with legal, political or other conditions or developments regarding holding, using or mining of Bitcoins, which could negatively affect our business, results of operations and financial position.

Our customers are based globally. As such, changes in government policies, taxes, general economic and fiscal conditions, as well as political, diplomatic or social events, expose us to financial and business risks. In particular, changes in domestic or overseas policies and laws regarding holding, using and/or mining of Bitcoins could result in an adverse effect on our business operations and results of operations. Moreover, if any domestic or international jurisdiction where we operate or sell our Bitcoin mining machines prohibits or restricts Bitcoin mining activities, we may face legal and other liabilities and will experience a material loss of revenue.

There are significant uncertainties regarding future regulations pertaining to the holding, using or mining of Bitcoins, which may adversely affect our results of operations. While Bitcoin has gradually gained more market acceptance and attention, it is anonymous and may be used for black market transactions, money laundering, illegal activities or tax evasion. As a result, governments may seek to regulate, restrict, control or ban the mining, use and holding of Bitcoins. Our existing policies and procedures for the detection and prevention of money laundering and terrorism-funding activities through our business activities have only been adopted in recent years and may not completely eliminate instances in which we or our products may be used by other parties to engage in money laundering and other illegal or improper activities. We cannot assure you that there will not be a failure in detecting money laundering or other illegal or improper activities which may adversely affect our reputation, business, financial condition and results of operations.

With advances in technology, cryptocurrencies are likely to undergo significant changes in the future. It remains uncertain whether Bitcoin will be able to cope with, or benefit from, those changes. In addition, as Bitcoin mining employs sophisticated and high computing power devices that need to consume a lot of electricity to operate, future developments in the regulation of energy consumption, including possible restrictions on energy usage in the jurisdictions where we sell our products, may also affect our business operations and the demand for our current Bitcoin mining machines. There have been

public backlashes surrounding the environmental impacts of Bitcoin mining, particularly the large consumption of electricity, and governments of various jurisdictions have responded. For example, in the United States, certain local governments of the state of Washington have discussed measures to address environmental impacts of Bitcoin-related operations, such as the high electricity consumption of Bitcoin mining activities.

A substantial majority of our revenues are generated from sales to customers in the PRC. Any adverse development in the regulatory environment in the PRC could have a negative impact on our business.

We primarily sell our Bitcoin mining machines to customers in the PRC. In 2017, 2018 and the six months ended June 30, 2019, revenue from customers in the PRC accounted for 91.5%, 76.1% and 87.9%, respectively, of our total revenue. If there is any adverse development in the regulatory environment concerning Bitcoin mining or AI application in the PRC, our business, financial condition and results of operations will be materially and adversely affected and we will need to further strengthen our efforts in expanding our international sales. For example, pursuant to the Announcement on Requesting Public Comments on the Guidance Catalog for Industrial Structure Adjustment (2019 version, draft for comments), or the 2019 Draft NDRC Catalog, released by the National Development and Reform Commission of the PRC, or the NDRC, on April 8, 2019, cryptocurrency mining is classified as an eliminated industry along with industries such as steel manufacturing and coal mining. If the 2019 Draft NDRC Catalog is enacted as proposed, market entities will not be allowed to invest in or enter into the cryptocurrency mining business. If any entity refuses to eliminate such business on a timely basis, it may be ordered by the relevant government authorities to suspend production or close down. However, the 2019 Draft NDRC Catalog was released for consultation purposes, and there is uncertainty with respect to its actual content, the adoption timeline or the effective date of final rules and its implementation details. There is no assurance that we will be able to effectively respond to any changes in PRC industrial policies as well as their implementation and interpretation. To the extent we are not able to generate sufficient sales from overseas markets to offset any decrease in demand from our PRC customers, our business and results of operations will be negatively impacted. In particular, if the PRC government completely bans the mining, possession and use of Bitcoin, we will not be able to sell our products in the PRC, and we may not be able to generate sufficient sales overseas to make up for such loss of business in the PRC.

Changes in the Bitcoin algorithm or the mining mechanism may materially and adversely affect our business and results of operations.

Our ASICs for Bitcoin mining machines are designed for the POW mechanism which the Bitcoin network uses to validate Bitcoin transactions. Another cryptocurrency that uses the POW mechanism is known as "Bitcoin cash," developed in mid-2017, which our current Bitcoin mining machines can also mine. Many people within the Bitcoin community believe that POW is a foundation within Bitcoin's code that should not be changed. However, there have been debates on mechanism change to avoid the "de facto control" by a great majority of the network computing power. With the possibility of a change in rule or protocol of the Bitcoin network, if our Bitcoin mining machines cannot be modified to accommodate any such changes, our Bitcoin mining machines will not be able to meet customer demand, and the results of our operations will be significantly affected. For more details, see "–The administrators of the Bitcoin network's source code could propose amendments to the Bitcoin network's protocols and software that, if accepted and authorized by the Bitcoin network's community, could adversely affect our business, results of operations and financial condition" and "–The acceptance of Bitcoin network software patches or upgrades by a significant, but not overwhelming, percentage of the users and miners in the Bitcoin network could result in a "fork" in the blockchain, resulting in the operation of two separate networks that cannot be merged. The existence of forked blockchains could erode user confidence in Bitcoin and adversely impact our business, results of operations and financial condition."

Substantial increases in the supply of mining machines connected to the Bitcoin network would lead to an increase in network capacity, which in turn would increase mining difficulty. This development would negatively affect the economic returns of Bitcoin mining activities, which would decrease the demand for and/or pricing of our products.

The difficulty of Bitcoin mining, or the amount of computational resources required for a set amount of reward for recording a new block, directly affects the expected economic returns for Bitcoin miners, which in turn affects the demand for our Bitcoin mining machines. Bitcoin mining difficulty is a measure of how much computing power is required to record a new block and it is affected by the total amount of computing power in the Bitcoin network. The Bitcoin algorithm is designed so that one block is generated, on average, every ten minutes, no matter how much computing power is in the network. Thus, as more computing power joins the network, and assuming the rate of block creation does not change (remaining at one block generated every ten minutes), the amount of computing power required to generate each block and hence the mining difficulty increases. In other words, based on the current design of the Bitcoin network, Bitcoin mining difficulty would increase together with the total computing power available in the Bitcoin network, which is in turn affected by the number of Bitcoin mining machines in operation. From January 2017 to June 2019, Bitcoin mining difficulty increased by approximately 25 times, according to Blockchain.info. As a result, a strong growth in sales of our Bitcoin mining machines can contribute to further growth in the total computing power in the network, thereby driving up the difficulty of Bitcoin mining and resulting in downward pressure on the expected economic return of Bitcoin mining and the demand for, and pricing of, our products.

We may be unable to make the substantial research and development investments that are required to remain competitive in our business.

Advances in AI technology, Bitcoin mining technology and the semiconductor industry have led to increased demand for ICs of higher speed and power efficiency for solving computational problems of increasing complexity. We have broadened our product offerings to include AI applications, which are widely recognized to be a future growth driver for high-performance ASICs, according to Frost & Sullivan. In 2017, 2018 and the six months ended June 30, 2019, we incurred research and development expense of RMB99.8 million, RMB189.7 million (US$27.6 million) and RMB67.2 million (US$9.8 million), respectively. We are committed to investing in new product development in order to stay competitive in our markets. Driven by market demand, we intend to continue to broaden and enhance our product portfolio in order to deliver the most effective solutions to our customers. Nevertheless, if we are unable to generate enough revenue or raise enough capital to make adequate research and development investments going forward, our product development and relevant research and development initiatives may be restricted or delayed, or we may not be able to keep pace with the latest market trends and satisfy our customers' needs, which could materially and adversely affect our results of operations. Furthermore, our substantial research and development expenditures may not yield the expected results that enable us to roll out new products, which in turn will harm our prospects and results of operations.

We face intense competition and our competitors may employ aggressive pricing strategies, which can lead to a price reduction of our products and material adverse effect on our results of operations.

We operate in highly competitive industries for Bitcoin mining solutions and AI products, and we may look to enter into markets with very competitive landscapes. Our competitors include many well-known domestic and international players, and we face competitors that are larger than us and have advantages over us in terms of economies of scale and financial and other resources. We expect that competition in our markets will continue to be intense, as we compete not only with existing players that have been focusing on Bitcoin mining or AI, but also new entrants that include well-established players in the semiconductor industry, or players who have not been predisposed to this industry in the past. Some of these competitors may also have stronger brand names, greater access to capital, longer histories, longer relationships with their suppliers or customers and more resources than we do. Furthermore, these competitors may be able to adapt to changes in the industry more promptly and efficiently. Intense competition from existing and potential competitors could result in material price reductions in the products we sell or a decrease in our market share. Aggressive pricing strategies by our competitors and an abundant supply of Bitcoin mining machines or AI products in the market may cause us to reduce the prices of our products and also negatively affect the demand for our products or harm our profitability. If we fail to compete effectively and efficiently or fail to adapt to changes in the competitive landscape, our business, financial condition and results of operations may be materially and adversely affected.

Our Bitcoin mining machine business mainly depends on supplies from a single third-party foundry, and any failure to obtain sufficient foundry capacity from this foundry would significantly delay the shipment of our products.

As a fabless IC design company, we do not own any IC fabrication facilities. TSMC has been our major third-party foundry partner for our Bitcoin mining machine business. In 2017, 2018 and the six months ended June 30, 2019, the value of the ICs we purchased from TSMC accounted for 63.5%, 63.1% and 28.8%, respectively, of our total procurement for the respective periods. It is important for us to have a reliable relationship with TSMC and other future foundry service providers to ensure adequate product supply to respond to customer demand.

We cannot guarantee that TSMC will be able to meet our manufacturing requirements. The ability of TSMC to provide us with foundry services is limited by its technology migration, available capacity and existing obligations. If TSMC fails to succeed in its technology migration, it will not be able to deliver to us qualified ICs, which will significantly affect our technological advancement and shipment of Bitcoin mining machines. This could in turn result in lost sales and have a material adverse effect on our relationships with our customers and on our business and financial condition. In addition, we do not have a guaranteed level of production capacity from TSMC. We do not have long-term contracts with them, and we source our supplies on a purchase order basis and prepay the purchase amount. As a result, we depend on TSMC to allocate to us a portion of its manufacturing capacity sufficient to meet our needs, to produce products of acceptable quality and at acceptable final test yields and to deliver those products to us on a timely basis and at acceptable prices. If TSMC raises its prices or is unable to meet our required capacity for any reason, such as shortages or delays in the shipment of semiconductor equipment or raw materials required to manufacture our ICs, or if our business relationships with TSMC deteriorate, we may not be able to obtain the required capacity and would have to seek alternative foundries, which may not be available on commercially reasonable terms, or at all. Moreover, it is possible that other customers of TSMC that are larger and/or better financed than we are, or that have long-term contracts with it, may receive preferential treatment in terms of capacity allocation or pricing. In addition, if we do not accurately forecast our capacity needs, TSMC may not have available capacity to meet our immediate needs or we may be required to pay higher costs to fulfill those needs, either of which could materially and adversely affect our business, operating results or financial condition.

In particular, the production of our ASICs may require advanced IC fabrication technologies, and foundries other than TSMC might not have sufficient production capacity for such technologies, if at all, to meet our requirements. This may expose us to risks associated with engaging new foundries. For example, using foundries with which we have not established relationships could expose us to potentially unfavorable pricing, unsatisfactory quality or insufficient capacity allocation.

Other risks associated with our dependence on a single third-party foundry include limited control over delivery schedules and quality assurance, lack of capacity in periods of excess demand, unauthorized use of our intellectual property and limited ability to manage inventory and parts. In particular, although we have entered into confidentiality agreements with our third-party foundry for the protection of our intellectual property, it may not protect our intellectual property with the same degree of care as we use to protect our intellectual property. See "–If we fail to adequately protect our IP rights, our ability to compete effectively or to defend ourselves from litigation could be impaired, which could reduce our total revenue and increase our costs." If we fail to properly manage any of these risks, our business and results of operations may be materially and adversely affected.

Moreover, if TSMC suffers any damage to its facilities, suspends manufacturing operations, loses benefits under material agreements, experiences power outages or computer virus attacks, lacks sufficient capacity to manufacture our products, encounters financial difficulties, is unable to secure necessary raw materials from its suppliers or suffers any other disruption or reduction in efficiency, we may encounter supply delays or disruptions. For example, in early August 2018, the operation of certain factories of TSMC in Taiwan was temporarily suspended as a result of a computer virus attack caused by an improper installment procedure administered by TSMC. The TSMC facilities affected by this computer virus included those that manufacture wafers for us, and TSMC's operational suspension resulted in a delay in its shipment to us of 125 wafers for our 7nm ASICs for up to nine weeks.

Failure to maintain inventory levels in line with the approximate level of demand for our products could cause us to lose sales, expose us to increased inventory risks and subject us to increases in holding costs, risk of inventory obsolescence, increases in markdown allowances and write-offs, any of which could have a material adverse effect on our business, financial condition and results of operations.

To operate our business successfully and meet our customers' demands and expectations, we must maintain a certain level of finished goods inventory to ensure immediate delivery when required. Furthermore, we are required to maintain an appropriate level of inventory of parts and components for our production. However, forecasts are inherently uncertain. If our forecasted demand is lower than actual demand, we may not be able to maintain an adequate inventory level of our finished goods or produce our products in a timely manner, and we may lose sales and market share to our competitors. On the other hand, we may also be exposed to increased inventory risks due to accumulated excess inventory of our products or raw materials, parts and components for our products. Excess inventory levels may lead to increases in inventory holding costs, risks of inventory obsolescence and provisions for write-downs. The carrying value of our inventories were RMB259.8 million, RMB585.7 million (US$85.3 million) and RMB419.8 million (US$61.2 million) as of December 31, 2017, 2018 and June 30, 2019, respectively.

The average selling prices of our products may decrease from time to time due to technological advancement and we may not be able to pass onto our suppliers such decreases, which may in turn adversely affect our profitability.

The IC design industry is characterized by rapid launches of new products, continuous technological advancements and changing market trends and customer preferences, all of which translate to a shorter life cycle and a gradual decrease in the average selling prices of products over time. For example, the average selling price per Thash for our Bitcoin mining machines decreased from RMB613 in 2017 to RMB369 (US$54) in 2018 and further decreased to RMB72 (US$10) in the six months ended June 30, 2019. Because we compete in the environment of rapidly-evolving technology advancement and market trends and developments of the IC design industry, there are no assurances that we will be able to pass on any decrease in average selling prices of our products to our suppliers. In the event that average selling prices of our products unusually or significantly decrease and such decreases cannot be offset by a corresponding decrease in the prices of the principal components of our products, our gross profit margins may be materially and adversely affected, which in turn, may adversely affect our profitability.

Our limited operating history and rapid revenue growth may make it difficult for us to forecast our business and assess the seasonality and volatility in our business.

As the markets for Bitcoin mining machines and AI applications are relatively young and still developing, we cannot forecast longer-term demand or order patterns for our products. Because of our limited operating history and historical data, as well as the limited visibility into future demand trends for our products, we may not be able to accurately forecast our future total revenue and budget our operating expenses accordingly. As most of our expenses are fixed in the short-term or incurred in advance of anticipated total revenue, we may not be able to adjust our expenses in a timely manner in order to offset any shortfall in revenue.

Our business is subject to the varying order patterns of the Bitcoin mining machine and AI products markets. In addition, many of the regions in which our products are purchased have varying holiday seasons that differ from traditional patterns observed by other semiconductor suppliers and these seasonal buying patterns can impact our sales. We have experienced fluctuations in orders during our limited operating history, and we expect such volatility to occur in the future. Our recent significant growth in revenue also makes it difficult to assess the impact of seasonal factors on our business. If we or any of our third-party manufacturing service providers are unable to increase production of new or existing products to meet any increases in demand due to seasonality or other factors, our total revenue would be adversely affected and our reputation with our customers may be damaged. Conversely, if we overestimate customer demand, we may reduce our orders or delay shipments of our products from units forecasted, and our total revenue in a particular period could be lower than expected.

We may be unable to execute our growth strategies or effectively maintain our rapid growth trends.

We have experienced rapid growth and significantly expanded our business in recent years. Our total net revenue grew by 106.8% from RMB1,308.1 million in 2017 to RMB2,705.3 million (US$394.1 million) in 2018, but decreased from RMB1,947.1 million in the six months ended June 30, 2018 to RMB288.8 million (US$42.1 million) in the six months ended June 30, 2019. We may not be able to continue the trend of high revenue growth if we are not able to successfully execute our product development and diversification, geographic expansion and other growth plans. In addition, our rapid growth has placed and will continue to place significant demands on our management and our administrative, operational, research and development and financial resources.

To accomplish our growth strategies and manage the future growth of our operations, we will be required to enhance our research and development capabilities, improve our operational and financial systems, and expand, train and manage our growing employee base. Furthermore, we need to maintain and expand our relationships with our customers, suppliers, research institutions, third-party manufacturers and other third parties. Moreover, as we introduce new products or enter new markets, we may face new market, technological, operational and regulatory risks and challenges with which we are unfamiliar.

Our current and planned operations, personnel, systems, internal procedures and controls may not be adequate to support our future growth and expansion. In addition, the success of our growth strategies depends on a number of external factors, such as the growth of the semiconductor market and the demand for Bitcoin, the level of competition we face and evolving customer behavior and preferences. If we are unable to execute our growth strategies or manage our growth effectively, we may not be able to capture market opportunities or respond to competitive pressures, which may materially and adversely affect our business prospects and results of operations.

We rely on a limited number of third parties to package and test our products.

In addition to IC fabrication, we rely on a limited number of production partners, including Advanced Semiconductor Engineering, Inc., or ASE, STATS ChipPAC Korea Ltd., or STATS ChipPac, and Siliconware Precision Industries Co., Ltd., or SPIL, for the testing and packaging of our ASICs. Reliance on these third parties for the testing and packaging of our ASICs presents significant risks to us, including the following:

- limited control over delivery schedules, quality assurance, final test yields and production costs;
- potential failure to obtain, or delay in obtaining, key process technologies;
- failure by us to find an alternative supplier;
- capacity shortages during periods of high demand;
- shortages of materials;
- unauthorized use of our IP;

- limited warranties on ICs or products supplied to us; and
- potential increases in prices.

The ability and willingness of our production partners to adequately and timely perform is largely beyond our control. If one or more of these production partners fails to perform its obligations in a timely manner or at satisfactory quality levels, our ability to bring products to market and our reputation could suffer. If these production partners fail to deliver quality products and components to us on time and at reasonable prices, we could face difficulties in fulfilling our customers' orders, our total revenue could decline and our business, financial condition and results of operations would be adversely affected.

Bitcoin exchanges and wallets, and to a lesser extent, the Bitcoin network itself, may suffer from hacking and fraud risks, which may adversely erode user confidence in Bitcoin which would decrease the demand for our Bitcoin mining machines.

Bitcoin transactions are entirely digital and, as with any virtual system, are at risk from hackers, malware and operational glitches. Hackers can target Bitcoin exchanges and Bitcoin transactions, to gain access to thousands of accounts and digital wallets where Bitcoins are stored. Bitcoin transactions and accounts are not insured by any type of government program and all Bitcoin transactions are permanent because there is no third party or payment processor. Bitcoin has suffered from hacking and cyber-theft as such incidents have been reported by several cryptocurrency exchanges and miners, highlighting concerns about the security of Bitcoin and therefore affecting its demand and price. Also, the price and exchange of Bitcoin may be affected due to fraud risk. While Bitcoin uses private key encryption to verify owners and register transactions, fraudsters and scammers may attempt to sell false Bitcoins. All of the above may adversely affect the operation of the Bitcoin network which would erode user confidence in Bitcoin, which would negatively affect demand for our products.

We face risks associated with the expansion of our scale of operations globally, and if we are unable to effectively manage these risks, they could impair our ability to expand our business abroad.

As part of our growth strategy, we plan to further expand our sales outside of the PRC. As we continue to grow our business and expand our operations globally, we will continue to sell our products into new jurisdictions in which we have limited or no experience and in which our brands may be less recognized. The expansion exposes us to a number of risks, including:

- we have a limited customer base and limited sales and relationships with international customers;
- difficulty in managing multinational operations;
- we may face competitors in the overseas markets who are more dominant and have stronger ties with customers and greater financial and other resources;
- fluctuations in currency exchange rates;
- challenges in providing customer services and support in these markets;
- challenges in managing our international sales channels effectively;
- unexpected transportation delays or interruptions or increases in international transportation costs;
- difficulties in and costs of exporting products overseas while complying with the different commercial, legal and regulatory requirements of the overseas markets in which we offer our products;
- difficulty in ensuring that our customers comply with the sanctions imposed by the Office of Foreign Assets Control, or OFAC, on various foreign states, organizations and individuals;
- inability to obtain, maintain or enforce intellectual property rights;
- inability to effectively enforce contractual or legal rights or intellectual property rights in certain jurisdictions under which we operate;
- changes in a specific country or region's political or economic conditions or policies;
- unanticipated changes in prevailing economic conditions and regulatory requirements; and
- governmental policies favoring domestic companies in certain foreign markets or trade barriers including export requirements, tariffs, taxes and other restrictions and charges. In particular, there have been concerns over the exit of the United Kingdom from the European Union, a worldwide trend in favor of nationalism and protectionist trade policy and the ongoing trade dispute between the United States and China as well as other potential international trade disputes, all of which could cause turbulence in international markets. These government policies or trade barriers could increase the prices of our products and make us less competitive in such countries.

If we are unable to effectively manage these risks, our ability to expand our business abroad will be impaired, which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We have incurred negative cash flows from operating activities and net losses in the past and can provide no assurance of our future operating results.

We have experienced negative cash flows from operating activities in the amount of RMB12.7 million (US$1.9 million) for the year ended December 31, 2018 and we incurred a net loss in the amount of RMB330.9 million (US$48.2 million) for the six months ended June 30, 2019. We will need to generate and sustain increased revenue and net income levels in future periods in order to increase profitability, and, even if we do, we may not be able to maintain or increase our level of profitability over the long term. We cannot assure you that we will be able to generate positive cash flow from operating activities in the future or that we will be able to continue to obtain financing on acceptable terms or at all. Our ability to achieve profitability and positive cash flow from operating activities will depend on a mix of factors, some of which are beyond our control, including the price of Bitcoin, our ability to grow our AI business and manage our product mix and our ability to secure favorable commercial terms from suppliers.

Shortages in, or increases in the prices of, the components of our products may adversely affect our business.

In addition to our proprietary ASICs, the components we use for our Bitcoin mining machines include printed circuit board, other electronic components, fans and aluminum casings. The use of our Bitcoin mining machines also require certain ancillary equipment and components such as controllers, power adaptors and connectors. The production of our current Bitcoin mining machines depends on obtaining adequate supplies of these components on a timely basis and at competitive prices. We do not typically maintain large inventories of components, but rather we purchase them on a just-in-time basis from various third-party component manufacturers that satisfy our quality standards and meet our volume requirements. Given the long lead times that may be required to manufacture, assemble and deliver certain components and products, problems could arise in planning production and managing inventory levels that could seriously interrupt our operations, including the possibility of defective parts, an increase in component costs, delays in delivery schedules, and shortages of components. Furthermore, we may have to turn to less reputable suppliers if we cannot source adequate components from our regular suppliers. Under such circumstances, the quality of the components may suffer and could cause performance issues in our Bitcoin mining machines.

Shortages of components could result in reduced production or delays in production, as well as an increase in production costs, which may negatively affect our abilities to fulfill orders or make timely shipments to customers, as well as our customer relationships and profitability. Component shortages may also increase our costs of revenue because we may be required to pay higher prices for components in short supply, not being able to pass such costs to customers, and redesign or reconfigure products to accommodate substitute components.

Our prepayments to suppliers may subject us to counterparty risk associated with such suppliers and negatively affect our liquidity and cash position.

We may incur net cash outflows at an early stage of our production because we are required to prepay our foundry service providers before the service is provided in order to secure the foundry service provider's production capacity. As of December 31, 2017, 2018 and June 30, 2019, the outstanding balance of prepayments we made to our foundry service provider amounted to RMB606.0 million, RMB62.3 million (US$9.1 million) and RMB398.6 million (US$58.1 million), respectively. The amount of our prepayments can significantly increase at the beginning of our launch of advanced products in the future. We are subject to counterparty risk exposure to our suppliers. Any failure by our suppliers to perform their contractual obligations in a timely manner and/or in accordance with our requested quality may result in us not being able to fulfill customers' orders accordingly. In such event, we may not be able to receive back the prepayments in a timely manner or in full, notwithstanding that our suppliers are obligated to return such prepayments upon meeting certain conditions. Furthermore, such prepayments also put cash pressure on us and if the cash outflows for the prepayments significantly exceed the cash inflows during any period, our future liquidity and cash position will be adversely affected.

If we experience difficulty in collecting our trade receivables, our liquidity, financial condition and results of operations would be negatively impacted.

We derive our revenues from the sale of products and are subject to counterparty risks such as our customer's inability to pay. As of December 31, 2017, 2018 and June 30, 2019, our trade receivables amounted to RMB7.2 million, RMB27.5 million (US$4.0 million) and RMB20.0 million (US$2.9 million), respectively. There can be no assurance that we will be able to collect our trade receivables on a timely basis, and our trade receivable turnover days may increase, which in turn could materially and adversely affect our liquidity, financial condition and results of operations.

Failure at tape-out or failure to achieve the expected final test yields for our ASICs could negatively impact our operating results.

The tape-out process is a critical milestone in our business. A successful tape-out means all the stages in the design and verification process of our ASICs have been completed, and the product is ready to be sent for manufacturing. A tape-out is either a success or a failure, and in the latter case design modifications are needed. The tape-out process is very costly, and repeated failures can significantly increase our costs, lengthen our product development period and delay our product launch. While we have consistently achieved successful tape-out in the initial batch historically, we cannot assure you that we will be able to continue to have a high tape-out success rate in the future.

Once tape-out is successful, the ASIC design is sent for manufacturing, and the final test yield is a measurement of the production success rate. The final test yield is a function of both product design, which is developed by us, and process technology, which typically belongs to a third-party foundry, such as TSMC in our case. While we have historically achieved high final test yields, such as 96% in 2017, 96% in 2018 and 95% in the six months ended June 30, 2019, we cannot assure you that we will be able to maintain such yields in the future. Low final test yields can result from either a product design deficiency or a process technology failure or a combination of both. As such, we may not be able to identify problems causing low final test yields until our product designs go to the manufacturing stage, which may substantially increase our per unit costs and delay the launch of new products.

For example, if TSMC experiences manufacturing inefficiencies or encounters disruptions, errors or difficulties during production, we may fail to achieve acceptable final test yields or experience product delivery delays. We cannot be certain that TSMC will be able to develop, obtain or successfully implement process technologies needed to manufacture future generations of our products on a timely basis. Moreover, during the periods in which foundries are implementing new process technologies, their manufacturing facilities may not be fully productive. A substantial delay in the technology transitions to smaller geometry process technologies could have a material and adverse effect on us, particularly if our competitors transition to such technologies before us.

In addition, resolution of yield problems requires cooperation among us, TSMC and package and test partners. We cannot assure you that the cooperation will be successful and that any yield problems can be fixed.

If any person, institution or a pool of them acting in concert obtains control of more than 50% of the processing power active on the Bitcoin network, such person, institution or a pool of them could prevent new transactions from gaining confirmations, halt payments between users, and reverse previously completed transactions, which would erode user confidence in Bitcoin.

If the award of Bitcoins for solving blocks and transaction fees for recording transactions are not sufficiently high to incentivize miners, miners may cease expending processing power to solve blocks. Miners ceasing operations would reduce the collective processing power on the Bitcoin network, which would adversely affect the confirmation process for transactions and make the Bitcoin network more vulnerable to any person, institution or a pool of them which has obtained over 50% control over the computing power on the Bitcoin network. In such event, such person, institution or a pool of them could prevent new transactions from gaining confirmation, halt payments between users, and reverse previously completed transactions. Such changes or any reduction in confidence in the confirmation process or processing power of the Bitcoin network may erode user confidence in Bitcoin, which would decrease the demand for our products.

The administrators of the Bitcoin network's source code could propose amendments to the Bitcoin network's protocols and software that, if accepted and authorized by the Bitcoin network's community, could adversely affect our business, results of operations and financial condition.

The Bitcoin network is based on a cryptographic, algorithmic protocol that governs the end-user-to-end-user interactions between computers connected to the Bitcoin network. A loosely organized group can propose amendments to the Bitcoin network's source code through one or more software upgrades that alter the protocols and software that govern the Bitcoin network and the properties of Bitcoins, including the irreversibility of transactions and limitations on the mining of new Bitcoins. To the extent that a significant majority of the users and miners on the Bitcoin network install such software upgrade(s), the Bitcoin network would be subject to new protocols and software that may render our products less desirable, which in turn may adversely affect our business, results of operations and financial condition. If less than a significant majority of the users and miners on the Bitcoin network install such software upgrade(s), the Bitcoin network could "fork."

The acceptance of Bitcoin network software patches or upgrades by a significant, but not overwhelming, percentage of the users and miners in the Bitcoin network could result in a "fork" in the blockchain, resulting in the operation of two separate networks that cannot be merged. The existence of forked blockchains could erode user confidence in Bitcoin and could adversely impact our business, results of operations and financial condition.

Bitcoin is based on open source software and has no official developer or group of developers that formally controls the Bitcoin network. Any individual can download the Bitcoin network software and make any desired modifications, which are proposed to users and miners on the Bitcoin network through software downloads and upgrades. However, miners and users must consent to those software modifications by downloading the altered software or upgrade implementing the changes; otherwise, the changes do not become part of the Bitcoin network. Since the Bitcoin network's inception, changes to the Bitcoin network have been accepted by the vast majority of users and miners, ensuring that the Bitcoin network remains a coherent economic system. However, a developer or group of developers could potentially propose a modification to the Bitcoin network that is not accepted by a vast majority of miners and users, but that is nonetheless accepted by a substantial population of participants in the Bitcoin network. In such a case, a fork in the blockchain could develop and two separate Bitcoin networks could result, one running the pre-modification software program and the other running the modified version. An example is the introduction of a cryptocurrency known as "Bitcoin cash" in mid-2017. This kind of split in the Bitcoin network could erode user confidence in the stability of the Bitcoin network, which could negatively affect the demand for our products.

AI technologies are constantly evolving, and any flaws in or misuse of AI, even if committed by other third parties, could have a negative impact on our business, reputation, brands and the general acceptance of AI solutions by society.

AI technologies are still in a preliminary stage of development and are constantly evolving. As with many disruptive innovations, AI presents risks and challenges that could affect user perception and its adoption. Any flaws in or insufficiencies of AI, and any inappropriate or premature usage thereof, whether actual or perceived, and whether by us or by other third parties, may dissuade prospective customers from adopting AI solutions, and may impair the general acceptance of AI by society. Moreover, AI is covered extensively, and in many instances critically, by various news media across the world. There is no assurance that our AI products will not be misused or applied in a way that is inconsistent with public expectations. Any misuse of our AI technologies, whether actual or perceived, and whether by us or by other third parties, could negatively impact our brands and reputation, and in turn our business, financial condition and results of operation.

Any failure of our products to meet the necessary quality standards could adversely affect our reputation, business and results of operation.

The quality of our products is critical to the success of our business and depends significantly on the effectiveness of our and our manufacturing service providers' quality control systems. In our efforts to quickly meet new market trends and demand and adopt new technologies, our products may not have adequate time to go through our normal rigorous testing procedures and final inspection, which could result in instances where our products cannot reach the required performance standard, or our products are found to be defective. These instances could result in our customers suffering losses. Defects detected before product delivery to our customers may result in additional costs for remediation and rework. Defects detected after the delivery and installation of our products may result in our incurring further costs relating to inspection, installation, remediation or product return, which may result in damages to our reputation, loss of customers, government fines and disputes and litigation.

In addition, we outsourced to certain production partners a portion of our product manufacturing process, which require them to purchase parts and components from other third-party suppliers. Although we carry out quality inspections for the manufacturing process and the parts and components purchased, we cannot assure you that we will always be able to detect defects in the manufacturing process or the parts and components purchased. Any defect in such manufacturing process or parts and components purchased may lead to defects in our finished products, which may in turn increase our costs as well as damage our reputation and market share. We may not be able to procure contractual or other indemnities from the suppliers of the defective parts and components adequately, or at all. We may be subject to product liability claims and litigation for compensation which could result in substantial and unexpected expenditures and could materially and adversely affect our cash flow and operating results.

Our Bitcoin mining machines use open source software and hardware as their basic controller system, which may subject us to certain risks.

We use open source software and hardware in our Bitcoin mining machines. For example, the AvalonMiner controller open source software needs to be installed on open source Raspberry Pi hardware, which serves as the basic controller system for the AvalonMiner, and we expect to continue to use Raspberry Pi and other open source software and hardware in the future. We may face claims from others claiming ownership of, or seeking to enforce the terms of, an open source license, including by demanding the release of the open source software, derivative works or our proprietary source code that was developed using such software. These claims could also result in litigation, requiring us to purchase a costly license or to devote additional research and development resources to change our technologies, either of which would have a negative effect on our business and operating results. In addition, if the license terms for the open source software we utilize change, we may be forced to re-engineer or discontinue our solutions or incur additional costs.

If we are unable to maintain or enhance our brand recognition, our business, financial condition and results of operations may be materially and adversely affected.

Maintaining and enhancing the recognition, image and acceptance of our brand are important to our ability to differentiate our products from and to compete effectively with our peers. Our brand image, however, could be jeopardized if we fail to maintain high product quality, pioneer and keep pace with evolving technology trends, or timely fulfill the orders for our products. If we fail to promote our brand or to maintain or enhance our brand recognition and awareness among our customers, or if we are subject to events or negative allegations affecting our brand image or the publicly perceived position of our brand, our business, operating results and financial condition could be adversely affected.

Power shortages, labor disputes and other factors may result in constraints on our production activities.

Historically, we have not experienced constraints on our production activities, including at our assembly plant, due to power shortages, labor disputes or other factors. However, there can be no assurance that our operations will not be affected by power shortages, labor disputes or other factors in the future, thereby causing material production disruptions and delays in our delivery schedule. In such event, our business, results of operations and financial condition could be materially and adversely affected.

If we fail to adequately protect our IP rights, our ability to compete effectively or to defend ourselves from litigation could be impaired, which could reduce our total revenue and increase our costs.

We rely primarily on a combination of protections provided by patent, IC layout and design rights, copyright, trademark and trade secret laws, as well as confidentiality, non-compete and non-disclosure agreements and other means for protecting our proprietary technologies and know-how. However, we cannot assure you that the strategies and steps we are taking are sufficient to protect our intellectual property rights or that, notwithstanding legal protection, others do not or will not infringe or misappropriate our intellectual property rights. If we fail to adequately protect our intellectual property rights, or if changes in laws diminish or remove the current legal protections available to them, the competitiveness of our products may be eroded and our business could suffer. As of the date of this prospectus we have registered a total of 59 patents in the PRC, including two inventions, 46 utility model patents and 11 exterior design patent. As of the same date, we have registered 70 software copyrights and 30 IC layout-design right in the PRC. The rights granted to us under our patents, IC layout-design rights and copyrights, including prospective rights sought in our pending patent applications, may not be meaningful or provide us with any commercial advantage. In addition, they could be opposed, contested, circumvented or designed around by our competitors or be declared invalid or unenforceable in judicial or administrative proceedings. Any failure of our patents, IC layout-design rights and copyrights to adequately protect our technologies may allow our competitors to offer similar products or technologies. We may not be able to protect our IP rights in some countries where our products are sold or may be sold in the future. Even if IP rights are granted outside of the PRC, effective enforcement in those countries may not be available to us, primarily due to the relatively weak legal regime protecting IP rights in those countries and the difficulties to defend and enforce such rights. Accordingly, we may not be able to effectively protect our IP rights in those countries. Many companies have encountered substantial intellectual property infringement in countries where we sell or intend to sell our products.

Monitoring unauthorized use of our IP is difficult and costly. Unauthorized use of our IP may have occurred or may occur without our knowledge. Any failure by us to effectively protect our IP could reduce the value of our technologies and impair our ability to compete. We may in the future need to initiate infringement claims or litigation. Litigation can be expensive and time-consuming and may divert the efforts of our technical staff and managerial personnel, which could result in lower total revenue and higher expenses, whether or not such litigation results in a determination favorable to us.

We may face IP infringement claims or other related disputes, which could be time-consuming, costly to defend or settle and result in the loss of significant rights and lower sales.

As is typical in the semiconductor industry, we may be subject to infringement claims from time to time or otherwise become aware of potentially relevant patents or other IP rights held by other parties that may cover some of our technology, products and services. The semiconductor industry is characterized by companies that hold large numbers of patents and other IP rights and that vigorously pursue, protect and enforce these rights. Patent litigation has increased in recent years owing to increased assertions made by IP licensing entities and increasing competition and overlap of product functionality in our markets. Additionally, we have in the past entered and may continue in the future to enter into licensing agreements with third parties for the use of their proprietary technologies, like software development tools, in the development of our products. As with any business relationship, we may face disputes and lawsuits related to those IP licensing agreements. As our operations continue to grow in size and scale, the likelihood of us becoming involved in IP related lawsuits and disputes to protect or defend our IP rights and the use of third-party IP rights will increase.

In addition, it is extremely difficult for us to monitor all of the patent applications that have been filed in the PRC, the United States or in other countries or regions and whether, if such pending patents are granted, such patents would have a material and adverse effect on our business if our product and service offering were to infringe upon them.

Other third parties may file claims against us or our customers alleging that our products, processes, or technologies infringe third-party patents or IP rights. Regardless of their merits or resolutions, such claims could be costly to defend or settle and could divert the efforts and attention of our management and technical personnel. In addition, some of our customer agreements in the future may require us to indemnify and defend our customers from third-party

infringement claims and to pay damages in the case of adverse rulings. As such, claims of this sort also could harm our relationships with our customers and may deter future customers from doing business with us. We do not know whether we could prevail in any such proceeding given the complex technical issues and inherent uncertainties involved in IP litigation. If any pending or future proceedings result in an adverse outcome, we could be required to:

- cease the manufacturing, use or sale of the infringing products, processes or technologies;
- stop shipment to certain geographic areas;
- pay substantial damages for infringement;
- expend significant resources to develop non-infringing processes, technologies or products;
- license technology from the third-party claiming infringement, which license may not be available on commercially reasonable terms, or at all;
- cross-license our technology to a competitor in order to resolve an infringement claim, which could weaken our ability to compete with that competitor; or
- pay substantial damages to our customers to discontinue their use of or replace infringing products sold to them with non-infringing products.

Any of the foregoing results could have a material adverse effect on our business, financial condition and results of operations.

The loss of any member of our senior management team, or our failure to attract, train and retain qualified personnel, especially our design and technical personnel, could impair our ability to grow our business and effectively execute our business strategy.

Since our inception, the growth and expansion of our business operations have been dependent upon the business strategies and foresight of our senior management. Our future success depends, in large part, on the continued contributions of our senior management team, specifically Mr. Nangeng Zhang and Mr. Jiaxuan Li.

In addition, our future success depends on our ability to retain, attract and incentivize qualified personnel, including our management, sales, marketing, finance and especially research and development personnel. As the driver of our technological and product innovations, our research and development personnel represent a very significant asset of ours. As the technology in the semiconductor industry is advancing at a quick pace, there is an increasing need for skilled engineers. Many companies across the world are struggling to find suitable candidates for their research and development positions. The process of hiring employees with the combination of skills and characteristics required to implement our strategy can be extremely competitive and time-consuming. We cannot assure you that we will be able to attract adequate personnel as we continue to pursue our business strategies.

Moreover, we cannot assure you that we will be able to retain key existing employees. The loss of any of our co-founders, senior management or research and development team members could harm our ability to implement our business strategies and respond to the rapidly changing market conditions in which we operate, or could result in other operating risks. The loss of one or more of our key employees, especially our key design and technical personnel which includes our co-founders, or our inability to retain, attract and motivate qualified design and technical personnel, could have a material adverse effect on our business, financial condition and results of operations.

Our corporate actions are significantly influenced by our principal shareholders, including Nangeng Zhang, our Chairman and Chief Executive Officer, who have the ability to exert significant influence over important corporate matters that require approval of shareholders while their interests may differ from those of the other shareholders. This may deprive you of the opportunity to receive a premium for your ADSs and materially reduce the value of your investment.

Immediately prior to the completion of this offering, our outstanding share capital will be re-designated into Class A ordinary shares and Class B ordinary shares. Each Class A ordinary share is entitled to one vote and each Class B ordinary share is entitled to 15 votes at general meetings of our shareholders. Immediately after the completion of this offering, Nangeng Zhang, our Chairman and Chief Executive Officer, will beneficially own 100% of our Class B ordinary shares, representing approximately [●]% of the aggregate voting power of our issued and outstanding share capital assuming the underwriters do not exercise their option to purchase additional ADSs. However, the interests of our Chairman and Chief Executive Officer may differ from the interests of other shareholders. This concentration of ownership and the protective provisions in our amended and restated memorandum and articles of association, which will become effective upon the completion of this offering, may discourage, delay or prevent a change in control of our company, which could have the dual effect of depriving our shareholders of an opportunity to receive a premium for their shares as part of a sale of our company and reducing the price of the ADSs. We may not be able to enter into other transactions that could be beneficial to us without the consent of our Chairman and Chief Executive Officer. As a result of the foregoing, the value of your investment could be materially reduced.

We may engage in acquisitions or strategic alliances that could disrupt our business, result in increased expenses, reduce our financial resources and cause dilution to our shareholders. We cannot assure you that such acquisitions or strategic alliances may be successfully implemented.

Although we have not engaged in acquisitions or strategic alliances in the past, we may look for potential acquisitions or strategic alliances in the future to expand our business. However, we may not be able to find suitable acquisition candidates, complete acquisitions on favorable terms, if at all, or integrate any acquired business, products or technologies into our operations. If we do complete acquisitions, they may be viewed negatively by customers or investors and they may not enable us to strengthen our competitive position or achieve our goals. In addition, any acquisitions that we make could lead to difficulties in integrating personnel, technologies and operations from the acquired businesses and in retaining and motivating key personnel from these businesses. Moreover, acquisitions may disrupt our ongoing operations, divert management from day-to-day responsibilities and increase our expenses. Future

acquisitions may reduce our cash available for operations and other uses, and could result in increases in amortization expenses related to identifiable intangible assets acquired, potentially dilutive issuances of equity securities or the incurrence of debt. We cannot predict the number, timing or size of future acquisitions, or the effect that any such acquisitions might have on our operating results.

Changes in international trade policies and international barriers to trade may have an adverse effect on our business and expansion plans.

We have exported our products to a number of countries outside of the PRC and derive sales from exporting to those countries, and we intend to continue to sell our current and future products to countries outside of the PRC. Sales to the United States accounted for 10.5% and 5.6% of our total sales in 2018 and the six months ended June 30, 2019, respectively. Further, we rely on certain overseas suppliers, including suppliers in the United States, for the supply of certain equipment and tools, such as our electronic design automation, a development tool. Changes to trade policies, treaties and tariffs in or affecting the jurisdictions in which we operate and to which we sell our products, or the perception that these changes could occur, could adversely affect the financial and economic conditions in those jurisdictions, as well as our international sales, financial condition and results of operations.

In 2017, 2018 and the six months ended June 30, 2019, the United States was the largest country outside of the PRC by sales contribution to which we sold our Bitcoin mining machines. The U.S. administration under President Donald Trump has advocated greater restrictions on trade generally and significant increases on tariffs on goods imported into the United States, particularly from China, and has recently taken steps toward restricting trade in certain goods. On June 15, 2018, the U.S. Trade Representative announced the imposition of an additional duty of 25% on approximately US$50 billion worth of Chinese imports, including those related to China's "Made in China 2025" industrial policy. This list of products consists of two sets of U.S. tariff lines. The additional duty assessed on the first set, which includes photosensitive semiconductor devices, parts and accessories for measuring semiconductor devices, came into effect on July 6, 2018. These tariffs impact Chinese semiconductor companies that manufacture and export to the United States. The second set, which includes electronic integrated circuits, came into effect on August 23, 2018. On September 21, 2018, the U.S. Trade Representative further announced the imposition of additional duties on approximately US$200 billion worth of Chinese imports. The additional duties came into effect on September 24, 2018. The products that we exported to the United States were not included in the tariff lists for the above additional duties. Additionally, we plan to sell our AI products to domestic manufacturers who will then incorporate our AI products into final products such as smart appliances and smart toys. Therefore, while our AI products are not currently subject to these tariffs directly, the products of our customers that incorporate our AI products may be subject to these tariffs. We cannot assure you that future restrictions on trade and tariffs implemented by the United States will not affect our products, which would negatively affect our expansion plans as well as our financial condition and results of operations.

In response to the additional tariffs by the United States that came into effect on July 6, 2018, China has imposed retaliatory tariffs on various goods imported from the United States. In the event that China adopts further retaliatory measures against the United States or any adverse trade policies of other countries that affect the importation of equipment and tools that we require, we may not be able to find alternative suppliers on comparable terms, or at all, which may lead to an increase in our costs or significant delays in our product releases. In addition, such policy retaliations could result in further trade policy responses by the United States and other countries, which would cause an adverse effect on manufacturing levels, trade levels and industries in the jurisdictions in which we operate and to which we sell our products and may result in a material and adverse effect on our business and results of operations.

Our operations and those of our production partners and customers are vulnerable to natural disasters and other events beyond our control, the occurrence of which may have an adverse effect on the supply chain of our suppliers and on our facilities, personnel and results of operations.

Our business operations and those of our production partners and customers are faced with numerous risks and dangers, including capacity constraints, labor strikes, fire, natural disasters (e.g. earthquakes, typhoons), and environmental or occupational disasters. Any of these events could have a material adverse effect on our business.

We have one assembly plant and one warehouse in the PRC which could suffer significant business disruption due to earthquakes or other natural disasters. We are currently not covered by insurance against such business disruption. Similarly, the manufacturing facilities of our production partners and the mining facilities of our customers are principally located in Asia and their operations may be reduced or eliminated due to natural disasters. The risk of earthquakes in these geographic regions is significant due to the proximity of major earthquake fault lines, and Taiwan in particular, where our IC foundry supplier is located, is also subject to typhoons and other Pacific storms. In addition, some of our customers may place their Bitcoin mining facilities near streams within mountainous regions to take advantage of hydroelectric power, which causes them to be at risk of flooding. For example, a flood in Sichuan in June 2018 caused significant damage to certain Bitcoin mining facilities in the area and to the mining equipment at these facilities.

Our business could also be adversely affected by epidemics or outbreaks such as avian flu, or H1N1, also known as swine flu. An outbreak of avian flu or H1N1 in the human population, or another similar health crisis, could adversely affect the economies and financial markets of entire regions, particularly in Asia. Moreover, any related disruptions to transportation or the free movement of persons could hamper our operations and force us to close our offices temporarily.

The occurrence of any of the foregoing or other natural or man-made disasters could cause damage or disruption to us, our employees, operations, markets and customers, which could result in significant delays in deliveries or substantial shortages of our products and could adversely affect our business, financial condition, results of operations or prospects.

Cyber-security incidents, including data security breaches or computer viruses, could harm our business by disrupting our delivery of services, damaging our reputation or exposing us to liability.

We receive, process, store and transmit, often electronically, the data of our customers and others, much of which is confidential. Unauthorized access to our computer systems or stored data could result in the theft, including cyber-theft, or improper disclosure of confidential information, and the deletion or modification of records could cause interruptions in our operations. These cyber-security risks increase when we transmit information from one location to another, including over the Internet or other electronic networks. Despite the security measures we have implemented, our facilities, systems and procedures, and those of our third-party service providers, may be vulnerable to security breaches, acts of vandalism, software viruses, misplaced or lost data, programming or human errors or other similar events which may disrupt our delivery of services or expose the confidential information of our

customers and others. Any security breach involving the misappropriation, loss or other unauthorized disclosure or use of confidential information of our customers or others, whether by us or a third party, could (i) subject us to civil and criminal penalties, (ii) have a negative impact on our reputation, or (iii) expose us to liability to our customers, third parties or government authorities. We are not aware of such breaches to date. Any of these developments could have a material adverse effect on our business, financial condition and results of operations.

Preferential tax treatment currently available to us in the PRC could be discontinued or reduced.

As an enterprise selling self-developed software, Hangzhou Canaan Creative Information Technology Co., Limited, or Hangzhou Canaan, a subsidiary of ours, received VAT tax refunds of RMB38.8 million, RMB110.2 million (US$16.1 million) and RMB0.3 million (US$0.1 million) in 2017, 2018 and the six months ended June 30, 2019, respectively. We cannot assure you that we will continue to qualify for the VAT tax refund, or that the policies providing for the VAT tax refund will continue to be effective.

Additionally, Hangzhou Canaan is accredited as a software enterprise, and was therefore entitled to preferential tax treatment in 2017, paying no income taxes. In 2018, Hangzhou Canaan as a key software enterprise will be subject to a preferential enterprise income tax rate, or EIT rate, of 10.0%. Following our accreditation as a key software enterprise falling within the State's planning lay-out or high-tech enterprise, we will independently determine whether we meet the conditions required for EIT preferences annually. Canaan Creative, a subsidiary of ours, was certified as a High-tech Enterprise in Beijing, and has also been entitled to an EIT rate of 15.0% since 2016. Under the PRC Enterprise Income Tax Law (LOGO), or the PRC EIT Law and its relevant regulations, PRC companies are typically subject to an income tax rate of 25% under the PRC EIT Law. Meanwhile, we shall, in accordance with the requirements of the tax authority and other relevant authorities, retain and submit our financial statements together with details of our research and development activities and other technological innovation activities for future reference to enjoy the preferential tax treatment. As advised by Commerce & Finance Law Offices, our PRC legal adviser, if we fail to provide materials retained for future reference, we will not be entitled to enjoy the preferential tax treatment, as well as other benefits conferred under the accreditations.

We require various approvals, licenses, permits and certifications to operate our business. Any failure to obtain or renew any of these approvals, licenses, permits or certifications could materially and adversely affect our business and results of operations.

In accordance with the laws and regulations in the jurisdictions in which we operate, we are required to maintain various approvals, licenses, permits and certifications in order to operate our business. Complying with such laws and regulations may require substantial expense, and any non-compliance may expose us to liability. In the event of non-compliance, we may have to incur significant expenses and divert substantial management time to rectify the incidents. In the future, if we fail to obtain all the necessary approvals, licenses, permits and certifications, we may be subject to fines or the suspension of operations at the production facilities and research and development facilities that do not have all the requisite approvals, licenses, permits and certifications, which could materially and adversely affect our business and results of operations. See "Regulation" for further details on the requisite approvals, licenses, permits and certifications necessary for our business operations. We may also experience adverse publicity arising from non-compliance with government regulations, which would negatively impact our reputation.

We cannot assure you that we will be able to fulfill all the conditions necessary to obtain the required government approvals, or that relevant government officials will always, if ever, exercise their discretion in our favor, or that we will be able to adapt to any new laws, regulations and policies. There may also be delays on the part of government authorities in reviewing our applications and granting approvals, whether due to the lack of human resources or the imposition of new rules, regulations, government policies or their implementation, interpretation and enforcement. If we are unable to obtain, or experience material delays in obtaining, necessary government approvals, our operations may be substantially disrupted, which could materially and adversely affect our business, financial condition and results of operations.

Our assembly plant is located on property whose owner has not obtained the approval of relevant authorities, and we may be ordered to relocate from that property.

Our assembly plant for Bitcoin mining machines in Hebei province with a gross floor area of 7,538.5 square meters was constructed by our landlord without the approval of housing use planning authorities. As advised by Commerce & Finance Law Offices, our PRC legal adviser, such buildings may be considered to be in violation of relevant zoning laws and the government may order the demolition or relocation of such building.

If we are evicted from such property, we may need to find alternative properties and relocate our assembly plant. Unless we are able to make timely alternative arrangements for relocating our assembly plant, we may not be able to fulfill purchase orders received, which may have a material and adverse effect on our business, results of operations and financial condition.

We may be involved in legal and other disputes from time to time arising out of our operations, including disputes with our raw material or component suppliers, production partners, customers or employees.

We may from time to time be involved in disputes with various parties arising out of our operations, including raw material or electronic components suppliers, production partners, customers or employees. These disputes may lead to protests or legal or other proceedings and may result in damage to our reputation, substantial costs and diversion of resources and management's attention from our core business activities. In addition, we may encounter compliance issues with regulatory bodies in the course of our operations, in respect of which we may face administrative proceedings or unfavorable decisions that may result in liabilities and cause delays to our production and delivery. We may be involved in other proceedings or disputes in the future that may have a material adverse effect on our business, financial condition, results of operations or cash flows.

Our insurance coverage is limited and may not be adequate to cover potential losses and liabilities. A significant uninsured loss or a loss in excess of our insurance coverage could have a material adverse effect on our results of operations and financial condition.

The insurance products available to us are limited, and the insurance policies we have obtained may not cover all risks associated with our business. The occurrence of certain incidents including severe weather, earthquake, fire, war, power outages, flooding and the consequences resulting from them may not be covered by our insurance policies adequately, or at all. If we were subject to substantial liabilities that were not covered by our insurance, we could incur costs and losses that could materially and adversely affect our results of operations and financial condition.

We may need additional capital but may not be able to obtain it in a timely manner and on favorable terms or at all.

Our operations may require additional capital or financing from time to time in order to achieve further growth. We had outstanding borrowings of RMB197.2 million (US$28.7 million) as of June 30, 2019, incurred primarily to support our operation. We may require additional cash resources due to the future growth and development of our business. Our future capital requirements may be substantial as we seek to expand our operations, diversify our product offering, and pursue acquisitions and equity investments. If our cash resources are insufficient to satisfy our cash requirements, we may seek to issue additional equity or debt securities or obtain new or expanded credit facilities or enter into additional factoring arrangements.

Our ability to obtain external financing in the future is subject to a variety of uncertainties, including our future financial condition, results of operations and cash flows and the liquidity of international capital and lending markets. In addition, our loan agreements may contain financial covenants that restrict our ability to incur additional indebtedness or to distribute dividends. Any indebtedness that we may incur in the future may also contain operating and financial covenants that could further restrict our operations. There can be no assurance that financing will be available in a timely manner or in amounts or on terms acceptable to us, or at all. A large amount of bank borrowings and other debt may result in a significant increase in interest expense while at the same time exposing us to increased interest rate risks. Equity financings could result in dilution to our shareholders, and the securities issued in future financings may have rights, preferences and privileges that are senior to those of our ordinary shares or ADSs. Any failure to raise needed funds on terms favorable to us, or at all, could severely restrict our liquidity as well as have a material adverse effect on our business, financial condition and results of operations.

We rely on third-party logistics service providers to deliver our products. Disruption in logistics may prevent us from meeting customer demand and our business, financial condition and results of operations may suffer as a result.

We engage independent third-party logistics service providers to deliver the ICs from our production partners to our assembly plant and our products from our warehouses to our customers. Disputes with or termination of our contractual relationships with one or more of our logistics service providers could result in delayed delivery of products or increased costs. There can be no assurance that we can continue or extend relationships with our current logistics service providers on terms acceptable to us, or that we will be able to establish relationships with new logistics service providers to ensure accurate, timely and cost-efficient delivery services. If we are unable to maintain or develop good relationships with our preferred logistics service providers, it may inhibit our ability to offer products in sufficient quantities, on a timely basis, or at prices acceptable to our consumers. If there is any breakdown in our relationships with our preferred logistics service providers, we cannot assure you that no interruptions in our product delivery would occur or that they would not materially and adversely affect our business, prospects and results of operations.

As we do not have any direct control over these logistics service providers, we cannot guarantee their quality of service. In addition, services provided by these logistics service providers could be interrupted by unforeseen events beyond our control, such as poor handling provided by these logistics service providers, natural disasters, pandemics, adverse weather conditions, riots and labor strikes. If there is any delay in delivery, damage to products or any other issue, we may lose customers and sales and our brand image may be tarnished.

Bitcoin mining activities are energy-intensive, which may restrict the geographic locations of miners and have a negative environmental impact.

Bitcoin mining activities are inherently energy-intensive and electricity costs account for a significant portion of the overall mining costs. The availability and cost of electricity will restrict the geographic locations of mining activities. Any shortage of electricity supply or increase in electricity cost in a jurisdiction may negatively impact the viability and the expected economic return for Bitcoin mining activities in that jurisdiction, which may in turn decrease the sales of our Bitcoin mining machines in that jurisdiction.

In addition, the significant consumption of electricity may have a negative environmental impact, including contribution to climate change, which may give rise to public opinion against allowing the use of electricity for Bitcoin mining activities or government measures restricting or prohibiting the use of electricity for Bitcoin mining activities. Any such development in the jurisdictions where we sell our Bitcoin mining machines could have a material and adverse effect on our business, financial condition and results of operations.

Our business operation and international expansion is subject to geopolitical risks.

Our business operation and international expansion is subject to geopolitical risks. We mainly rely on our production partners in Taiwan, including TSMC, ASE and SPIL, for the fabrication, testing and packaging of our ASICs. Any significant deterioration in the cross-strait relationship may have a negative impact on the ability of our production partners in Taiwan to fulfill their contractual obligations and ship the ASICs to us, which could have a material and adverse effect on our business, financial condition and results of operations.

In addition, there might be significant changes to United States trade policies, treaties and tariffs, including trade policies and tariffs regarding the PRC. China may respond by imposing retaliatory trade measures against the United States. In 2017, 2018 and the six months ended June 30, 2019, the United States was the largest country outside the PRC by sales contribution to which we sold our Bitcoin mining machines. Further, we rely on suppliers in the United States for the supply of certain equipment and tools, such as our electronic design automation, a development tool. If the United States restricts or prohibits the importation of ASICs or related products from China, our international expansion may be negatively affected. If China imposes retaliatory trade measures that affect the importation of the equipment and tools we require, we may face difficulty in our production. In both cases, our business, financial condition and results of operations could be materially and adversely affected.

We may be subject to fines and other administrative penalties resulting from the operation of our business, which could materially and adversely affect our business, financial condition and results of operation.

We are subject to regulation by the PRC government authorities. These relevant regulatory authorities have broad powers to adopt regulations and other requirements affecting or restricting our operations, including tax policies. Moreover, these relevant regulatory authorities possess significant powers to enforce applicable regulatory requirements in the event of our non-compliance, including the imposition of fines, sanctions or the revocation of licenses or permits to operate our business. For example, we were notified by the Beijing City Haidian District Zhongguancun Customs that we owe a value-added tax,

or VAT, amounting to not more than RMB830,000. We expect the relevant government authority to require us to pay the outstanding VAT plus a late-payment fee, as well as an administrative fine of up to two times the outstanding VAT. However, we cannot determine the exact amount of the administrative fine for the late payment of VAT as of the date of this prospectus. We cannot assure you that we will not face similar or other administrative fines or penalties concerning our operations or our subsidiaries, which could have a material adverse impact on our results of operation.

Any global systemic economic and financial crisis could negatively affect our business, results of operations, and financial condition.

Any prolonged slowdown in the Chinese or global economy may have a negative impact on our business, results of operations and financial condition. The global financial markets have experienced significant disruptions since 2008 and the United States, Europe and other economies have experienced periods of recession. The recovery from the lows of 2008 and 2009 has been uneven and there are new challenges, including the escalation of the European sovereign debt crisis from 2011 and the slowdown of the PRC's economic growth since 2012, which may continue. There is considerable uncertainty over the long-term effects of the expansionary monetary and fiscal policies adopted by the central banks and financial authorities of some of the world's leading economies, including the United States and the PRC. There have also been concerns over unrest in Ukraine, the Middle East and Africa, which have resulted in volatility in financial and other markets. There have also been concerns over the United Kingdom leaving the European Union as well as the significant potential changes to United States trade policies, treaties and tariffs, including trade policies and tariffs regarding the PRC. There have also been concerns about the economic effect of the tensions in the relationship between the PRC and surrounding Asian countries. There were and could be in the future a number of domino effects from such turmoil on our business, including significant decreases in orders from our customers; insolvency of key suppliers resulting in product delays; inability of customers to obtain credit to finance purchases of our products and/or customer insolvencies; and counterparty failures negatively impacting our operations. Any systemic economic or financial crisis could cause revenues for the semiconductor industry as a whole to decline dramatically and could materially and adversely affect our results of operations.

If counterfeit products are sold under our brand names and trademarks, our reputation and financial results could be materially and adversely affected.

Third-party merchants and dealers are separately responsible for sourcing counterfeit products that are sold under our brand names and trademarks. Counterfeit products may be defective or inferior in quality as compared to authentic products. If our customers are not satisfied by counterfeit products sold under our brand names and trademarks, we may be subject to reputational damage. We believe our brand and reputation are important to our success and our competitive position. The discovery of counterfeit products sold under our brand names and trademarks may severally damage our reputation and cause customers to refrain from making future purchases from us, which would materially and adversely affect our business operations and financial results.

Risks Relating to Doing Business in the PRC

Economic, political and social conditions as well as governmental policies in the PRC could adversely affect our business, prospects, financial condition and financial results.

A majority of our business operations is currently conducted in the PRC and we derive a majority of our revenue from the PRC. The PRC economy differs from the economies of most developed countries in many aspects, including:

- political structure;
- level of government involvement and control;
- growth rate and level of development;
- level and control of capital investment and reinvestment;
- control of foreign exchange; and
- allocation of resources.

The PRC economy has been transitioning from a centrally planned economy to a more market-oriented economy for approximately four decades as the PRC government has implemented economic reform measures to utilize market forces in the development of the PRC economy. We cannot predict whether changes in the economic, political and social conditions of the PRC and in its laws, regulations and policies will have any adverse effect on our current or future business, financial condition or results of operations.

More specifically, many of the economic reforms carried out by the PRC government are unprecedented or experimental and are expected to be refined and improved over time. This refining and adjustment process may not necessarily have a positive effect on our operations and business development. These actions, as well as other actions and policies of the government of the PRC, could cause a decrease in the overall level of economic activity in the PRC and the surrounding regions and, in turn, have an adverse impact on our business and financial condition.

Changes to and uncertainties in the legal system of the PRC may have a material adverse impact on our business, financial condition and results of operations. Legal protections available to you under the legal system of the PRC may be limited.

The PRC is still in the process of developing a comprehensive statutory framework. Since 1979, the PRC government has established a commercial law system, and significant progress has been made in promulgating laws and regulations relating to economic affairs and matters such as corporate organization and governance, foreign investment, commerce, taxation and trade. However, many of these laws and regulations are relatively new, and the implementation and interpretation of these laws and regulations remain uncertain in many areas. It may be difficult to obtain swift and equitable enforcement or to obtain

enforcement of a judgment by a court of another jurisdiction. Consequently, developments and changes in the PRC laws and regulations, including their interpretation and enforcement, may have a material and adverse effect on our business, financial condition and results of operations. Furthermore, the legal protections available to you under the PRC legal system may be limited.

You may experience difficulties enforcing judgments against us and our management in the PRC.

Commerce & Finance Law Offices, our PRC legal adviser, has advised us that the recognition and enforcement of foreign judgments are governed by the PRC Civil Procedures Law. PRC courts may recognize and enforce foreign judgments in accordance with the requirements of the PRC Civil Procedures Law based either on treaties between the PRC and the country where the judgment is made or on reciprocity between jurisdictions, provided that the foreign judgments do not violate the basic principles of laws of the PRC or its sovereignty, security or social and public interest.

PRC regulations relating to the establishment of offshore special purpose vehicles by PRC residents may subject our PRC-resident beneficial owners or our PRC subsidiaries to liability or penalties, limit our ability to make capital contributions into our PRC subsidiaries, limit our PRC subsidiaries' ability to distribute profits to us, or otherwise adversely affect our financial position.

Under several regulations promulgated by the State Administration of Foreign Exchange of the People's Republic of China, or SAFE, PRC residents and PRC corporate entities are required to register with and obtain approval from local branches of SAFE or designated qualified foreign exchange banks in China in connection with their direct or indirect offshore investment activities. In addition, any PRC resident who is a direct or indirect shareholder of an offshore company is required to update the previously filed registration with the local branch of SAFE, with respect to any material change involving that offshore company, such as an increase or decrease in capital, transfer or swap of shares, merger or division. These regulations apply to all direct and indirect shareholders and beneficial owners of our company who are PRC residents, or PRC-Resident Shareholders, and may apply to any offshore acquisitions that we make in the future. To the best of our knowledge, as of the date of this prospectus, each of our principal shareholders who is required to make the foreign exchange registration under SAFE Circular 37 had completed such registration. However, we may not at all times be fully aware or informed of the identities of all the PRC residents holding direct or indirect interests in our company, and we cannot assure you that all of our shareholders and beneficial owners who are PRC residents will comply with these foreign exchange regulations.

If any PRC-Resident Shareholder fails to make the required registration or update a previously filed registration, our PRC subsidiaries may be prohibited from distributing their profits and proceeds from any reduction in capital, share transfer or liquidation to us, and we may also be prohibited from injecting additional capital into our PRC subsidiaries. Moreover, failure to comply with the various foreign exchange registration requirements described above could result in liability on the related PRC-Resident shareholder or our PRC subsidiaries under the PRC laws for evasion of applicable foreign exchange restrictions.

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

Our auditor, the independent registered public accounting firm that issued the audit report included elsewhere in this registration statement, as an auditor of companies that are traded publicly in the United States and a firm registered with the Public Company Accounting Oversight Board (United States), or PCAOB, is subject to laws in the United States pursuant to which the PCAOB conducts regular inspections to assess its compliance with applicable professional standards. Our auditor is located in, and organized under the laws of, the PRC, which is a jurisdiction where the PCAOB, has been unable to conduct inspections without the approval of the Chinese authorities. In May 2013, PCAOB announced that it had entered into a Memorandum of Understanding on Enforcement Cooperation with the CSRC and the PRC Ministry of Finance, which establishes a cooperative framework between the parties for the production and exchange of audit documents relevant to investigations undertaken by PCAOB, the CSRC or the PRC Ministry of Finance in the United States and the PRC, respectively. PCAOB continues to be in discussions with the China Securities Regulatory Commission, or CSRC, and the PRC Ministry of Finance to permit joint inspections in China of audit firms that are registered with PCAOB and audit Chinese companies that trade on U.S. exchanges.

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

This lack of PCAOB inspections in China prevents the PCAOB from fully evaluating audits and quality control procedures of our independent registered public accounting firm. As a result, we and investors in our ordinary shares are deprived of the benefits of such PCAOB inspections. The inability of the PCAOB to conduct inspections of auditors in China 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 of China that are subject to PCAOB inspections, which could cause investors and potential investors in our stock to lose confidence in our audit procedures and reported financial information and the quality of our financial statements.

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

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

In late 2012, this impasse led the SEC to commence administrative proceedings under Rule 102(e) of its Rules of Practice and also under the Sarbanes-Oxley Act of 2002 against the Chinese accounting firms, including 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 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 firms reached a settlement with the SEC. Under the settlement, the SEC accepted that future requests by the SEC for the production of documents will normally be made to the CSRC. The firms were to receive matching Section 106 requests, and were 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 failed to meet specified criteria, the SEC retained authority to impose a variety of additional remedial measures on the firms depending on the nature of the failure.

Under the terms of the settlement, the underlying proceeding against the four China-based accounting firms was deemed dismissed with prejudice four years after entry of the settlement. The four-year mark occurred on February 6, 2019. While we cannot predict if the SEC will further challenge the four China-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 remedial measures are imposed on the "big four" PRC-based accounting firms, including our independent registered public accounting firm, we could be unable to timely file future financial statements in compliance with the requirements of the Exchange Act.

In the event the "big four" PRC-based accounting firms become subject to additional legal challenges by the SEC or PCAOB, 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 China, which could result in financial statements being determined to not be in compliance with the requirements of the Exchange Act, including possible delisting. Moreover, any negative news about any such future proceedings against these audit firms may cause investor uncertainty regarding China-based, U.S.-listed companies and the market price of our common stock may be adversely affected.

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

Our corporate structure may restrict our ability to receive dividends from, and transfer funds to, our PRC operating subsidiaries, which could restrict our ability to act in response to changing market conditions in a timely manner.

We are a Cayman Islands holding company and a certain portion of our operations are conducted through our operating subsidiaries. The ability of our operating subsidiaries to make dividend and other payments to us may be restricted by factors that include changes in applicable foreign exchange and other laws and regulations.

In particular, under the PRC law, each of our PRC operating subsidiaries may only pay dividends after 10% of its net profit has been set aside as reserve funds, unless such reserves have reached at least 50% of its registered capital. In addition, the profit available for distribution from our PRC operating subsidiaries is determined in accordance with generally accepted accounting principles in the PRC. This calculation may differ if it were performed in accordance with U.S. GAAP. As a result, we may not have sufficient distributions from our PRC operating subsidiaries to enable necessary profit distributions to our shareholders in the future, which would be based upon our financial statements prepared under U.S. GAAP.

Distributions by our PRC operating subsidiaries to us other than as dividends may be subject to governmental approval and taxation. Any transfer of funds from our company to our PRC operating subsidiaries, either as a shareholder loan or as an increase in registered capital, is subject to registration or approval of PRC governmental authorities, including the relevant administration of foreign exchange and/or the relevant examining and approval authority. These limitations on the free flow of funds between us and our PRC subsidiaries could restrict our ability to act in response to changing market conditions in a timely manner.

Dividends payable by us to our foreign investors and gains on the sale of the ADSs may become subject to withholding taxes under the PRC tax laws.

Under the EIT Law and EIT Implementation Rules, our foreign corporate shareholders may be subject to a 10% income tax upon any gains realized from the transfer of their ADSs and dividends distributable to such foreign corporate shareholder, if such income is regarded as income from "sources within the PRC." According to the EIT Implementation Rules, whether income generated from transferring equity investments is to be regarded as sources within the PRC or from foreign territory shall depend upon the locations in which the enterprises accepting the equity investment are located. However, it is unclear whether income received by our shareholders will be deemed to be income from sources within the PRC and whether there will be any exemption or reduction in taxation for our foreign corporate shareholders due to the promulgation of the EIT Law. If our foreign corporate shareholders are required to pay PRC income tax on the transfers of the ADSs that they hold or on the gains on the sale of the ADSs by them, the value of our foreign corporate shareholders' investments in the ADSs may be materially and adversely affected.

We may be classified as a "resident enterprise" for PRC enterprise income tax purposes, which could result in unfavorable tax consequences to us and our non-PRC shareholders.

The EIT Law provides that enterprises established outside of the PRC whose "de facto management bodies" are located in the PRC are considered "resident enterprises" and are generally subject to the uniform 25% enterprise income tax rate on their worldwide income. In addition, a circular issued by the State Administration of Taxation on April 22, 2009 regarding the standards used to classify certain Chinese-invested enterprises controlled by Chinese enterprises or Chinese group enterprises and established outside of the PRC as "resident enterprises" clarified that dividends and other income paid by such "resident enterprises" will be considered to be PRC source income, subject to PRC withholding tax, currently at a rate of 10%, when recognized by non-PRC enterprise shareholders. This circular also subjects such "resident enterprises" to various reporting requirements with the PRC tax authorities. Under the implementation regulations to the enterprise income tax, a "de facto management body" is defined as a body that has material and overall management and control over the manufacturing and business operations, personnel and human resources, finances and properties of an enterprise. In addition, the circular mentioned above sets out criteria for determining whether "de facto management bodies" are located in the PRC for overseas incorporated, domestically controlled enterprises. However, as this circular only applies to enterprises established outside of the PRC that are controlled by PRC enterprises or groups

of PRC enterprises, it remains unclear how the tax authorities will determine the location of "de facto management bodies" for overseas incorporated enterprises that are controlled by individual PRC residents like us and some of our subsidiaries. Therefore, although substantially all of our management is currently located in the PRC, it remains unclear whether the PRC tax authorities would require or permit our overseas registered entities to be treated as PRC resident enterprises. We do not currently consider our company to be a PRC resident enterprise. However, if the PRC tax authorities disagree with our assessment and determine that we are a "resident enterprise" we may be subject to enterprise income tax at a rate of 25% on our worldwide income and dividends paid by us to our non-PRC shareholders as well as capital gains recognized by them with respect to the sale of the ADSs may be subject to a PRC withholding tax.

This will have an impact on our effective tax rate, a material adverse effect on our net income and results of operations, and may require us to withhold tax on our non-PRC shareholders.

Government control of foreign currency conversion may affect the value of your investment.

The PRC government imposes controls on the convertibility of Renminbi into foreign currencies and, in certain cases, the remittance of currency out of the PRC. Under existing PRC foreign exchange regulations, payments of certain current account items can be made in foreign currencies without prior approval from the local branch of the SAFE by complying with certain procedural requirements. However, approval from appropriate government authorities is required where Renminbi is to be converted into foreign currency and remitted out of the PRC to pay capital expenses such as the repayment of bank loans denominated in foreign currencies. The restrictions on foreign exchange transactions under capital accounts could also affect the ability of our subsidiaries in the PRC to obtain foreign exchange through debt or equity financing, including by means of loans or capital contributions from us. The PRC government may also at its discretion restrict access in the future to foreign currencies for current account transactions.

Risks Relating to the ADSs and this Offering

An active trading market for our ordinary shares or the ADSs may not develop and the trading price for the ADSs may fluctuate significantly.

We will apply to list the ADSs on the Nasdaq Global Market. We have no current intention to seek a listing for our ordinary shares on any stock exchange. Prior to the completion of this offering, there has been no public market for the ADSs or our ordinary shares. If an active public market for our ADSs does not develop following the completion of this offering, the market price and liquidity of the ADSs may be materially and adversely affected.

The initial public offering price for the ADSs will be determined by negotiation between us and the underwriters based upon several factors, and we can provide no assurance that the trading price of the ADSs after this offering will not fall below the initial public offering price. As a result, investors in our securities may experience a significant decrease in the value of their ADSs.

The trading price of the ADSs is likely to be volatile, which could result in substantial losses to investors.

The trading price of the ADSs is likely to be volatile and could fluctuate widely due to factors beyond our control. This may happen because of broad market and industry factors, including the performance and fluctuation of the market prices of other companies with business operations located mainly in China that have listed their securities in the United States. The securities of some of these companies have experienced significant volatility since their initial public offerings, including, in some cases, substantial price declines in their trading prices. The trading performances of other PRC companies' securities after their offerings may affect the attitudes of investors toward PRC companies listed in the United States in general and consequently may impact the trading performance of our ADSs, regardless of our actual operating performance.

In addition to market and industry factors, the price and trading volume of our ADSs may be highly volatile due to factors specific to our own operations, including the following:

- variations in our revenues, earnings and cash flow;
- announcements of new investments, acquisitions, strategic partnerships or joint ventures by us or our competitors;
- announcements of new offerings, solutions and expansions by us or our competitors;
- changes in financial estimates by securities analysts;
- detrimental adverse publicity about us, our products or our industry;
- additions or departures of key personnel;
- the release of lockup or other transfer restrictions on our outstanding equity securities or sales of additional equity securities; and
- potential litigation or regulatory investigations.

Any of these factors may result in large and sudden changes in the volume and price at which our ADSs will trade.

In the past, shareholders of public companies have often brought securities class action suits against those companies following periods of instability in the market price of their securities. If we were involved in a class action suit, it could divert a significant amount of our management's attention and other resources from our business and operations and require us to incur significant expenses to defend the suit, which could harm our results of operations. Any

such class action suit, whether or not successful, could harm our reputation and restrict our ability to raise capital in the future. In addition, if a claim is successfully made against us, we may be required to pay significant damages, which could have a material adverse effect on our financial condition and results of operations.

If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding the ADSs, the market price for the ADSs and trading volume could decline.

The trading market for the ADSs will be influenced by research or reports that industry or securities analysts publish about our business. If one or more analysts who cover us downgrade the ADSs, the market price for the ADSs would likely decline. If one or more of these analysts cease to cover us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could, in turn, cause the market price or trading volume for the ADSs to decline.

The sale or availability for sale of substantial amounts of the ADSs could adversely affect their market price.

Sales of substantial amounts of the ADSs in the public market after the completion of this offering, or the perception that these sales could occur, could adversely affect the market price of the ADSs and could materially impair our ability to raise capital through equity offerings in the future. The ADSs sold in this offering will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, and shares held by our existing shareholders may also be sold in the public market in the future subject to the restrictions in Rule 144 and Rule 701 under the Securities Act and the applicable lock-up agreements. There will be ADSs (equivalent to Class A ordinary shares) outstanding immediately after this offering, or ADSs (equivalent to Class A ordinary shares) if the underwriters exercise their option to purchase additional ADSs in full. In connection with this offering, we and our officers, directors and certain option holders have agreed not to sell any ordinary shares or ADSs for 180 days after the date of this prospectus without the prior written consent of the underwriters, subject to certain exceptions. However, the underwriters may release these securities from these restrictions at any time, subject to applicable regulations of the Financial Industry Regulatory Authority, Inc. We cannot predict what effect, if any, market sales of securities held by our significant shareholders or any other shareholder or the availability of these securities for future sale will have on the market price of the ADSs. See "Underwriting" and "Shares Eligible for Future Sale" for a more detailed description of the restrictions on selling our securities after this offering.

Because we do not expect to pay dividends in the foreseeable future after this offering, you must rely on price appreciation of the ADSs for a return on your investment.

We currently intend to retain most, if not all, of our available funds and any future earnings after this offering to fund the development and growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future. Therefore, you should not rely on an investment in our ADSs as a source for any future dividend income.

Our board of directors has discretion as to whether to distribute dividends, subject to certain requirements of Cayman Islands law. Under Cayman Islands law, a Cayman Islands company may pay a dividend out of either profit or share premium account, provided that in no circumstances may a dividend be paid if this would result in the company being unable to pay its debts as they fall due in the ordinary course of business. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on our future results of operations and cash flow, our capital requirements and surplus, the amount of distributions, if any, received by us from our subsidiaries, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in the ADSs will likely depend entirely upon any future price appreciation of the ADSs. There is no guarantee that the ADSs will appreciate in value after this offering or even maintain the price at which you purchased the ADSs. You may not realize a return on your investment in the ADSs, and you may even lose your entire investment in the ADSs.

Because the initial public offering price is substantially higher than the pro forma net tangible book value per share, you will experience immediate and substantial dilution.

If you purchase ADSs in this offering, you will pay more for each ADS than the corresponding amount paid by existing shareholders for their Class A ordinary shares. As a result, you will experience immediate and substantial dilution of approximately US$ per ADS (assuming that no outstanding options to acquire ordinary shares are exercised). This number represents the difference between (1) our pro forma net tangible book value per ADS of US$ as of June 30, 2019, after giving effect to this offering and (2) the assumed initial public offering price of US$ per ADS, the midpoint of the estimated initial public offering price range set forth on the front cover of this prospectus. See "Dilution" for a more complete description of how the value of your investment in the ADSs will be diluted upon the completion of this offering.

We have not determined a specific use for a portion of the net proceeds from this offering, and we may use these proceeds in ways with which you may not agree.

We have not determined a specific use for a portion of the net proceeds of this offering, and our management will have considerable discretion in deciding how to apply these proceeds. You will not have the opportunity to assess whether the proceeds are being used appropriately before you make your investment decision. You must rely on the judgment of our management regarding the application of the net proceeds of this offering. We cannot assure you that the net proceeds will be used in a manner that will improve our results of operations or increase our ADS price, or that these net proceeds will be placed only in investments that generate income or appreciate in value.

Our post-offering memorandum and articles of association contain anti-takeover provisions that could have a material adverse effect on the rights of holders of our ordinary shares and ADSs.

We will adopt an amended and restated memorandum and articles of association that will become effective immediately prior to the completion of this offering. Our new memorandum and articles of association will contain certain provisions that limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions, including a provision that grants authority to our board of directors to establish and issue from time to time one or more series of preferred shares without action by our shareholders and to determine, with respect to any series of preferred shares, the terms

and rights of that series. These provisions could have the effect of depriving our shareholders and ADSs holders of the opportunity to sell their shares or ADSs at a premium over the prevailing market price by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transactions.

The dual-class structure of our ordinary shares may adversely affect the trading market for our ADSs.

Certain shareholder advisory firms have announced changes to their eligibility criteria for inclusion of shares of public companies on certain indices, including the S&P 500, to exclude companies with multiple classes of shares and companies whose public shareholders hold no more than 5% of total voting power from being added to such indices. In addition, several shareholder advisory firms have announced their opposition to the use of multiple class structures. As a result, the dual-class structure of our ordinary shares may prevent the inclusion of our ADSs representing Class A ordinary shares in such indices and may cause some shareholder advisory firms to publish negative commentary about our corporate governance practices or otherwise seek to cause us to change our capital structure. Any such exclusion from indices could result in a less active trading market for our ADSs. Any negative actions or publications by shareholder advisory firms could also adversely affect the value of our ADSs.

Our amended and restated memorandum and articles of association contain anti-takeover provisions that could have a material adverse effect on the rights of holders of our Class A ordinary shares and ADSs.

We have adopted an amended and restated memorandum and articles of association that will become effective immediately prior to completion of this offering. Our new memorandum and articles of association contain provisions to limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions, including a provision that entitles each Class B ordinary share to 15 votes in respect of all matters subject to a shareholders' vote. These provisions could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties form seeking to obtain control of our company in a tender offer or similar transaction. Although we expect to issue all of our authorized Class B ordinary shares upon the completion of this offering, if any of such Class B ordinary shares are converted into Class A ordinary shares or canceled for any reasons, our board of directors will have the authority without further action by our shareholders to issue additional Class B ordinary shares, which will be dilutive to our Class A ordinary shareholders. In addition, our board of directors has the authority, without further action by our shareholders, to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our Class A ordinary shares, in the form of ADS or otherwise. We could issue preferred shares quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. If our board of directors decides to issue preferred shares, the price of our ADSs may fall and the voting and other rights of the holders of our Class A ordinary shares and ADSs may be materially and adversely affected.

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

We are an exempted company incorporated under the laws of the Cayman Islands. Our corporate affairs are governed by our memorandum and articles of association, the Companies Law of the Cayman Islands, as amended and the common law of the Cayman Islands. The rights of shareholders to take action against our directors, actions by our minority shareholders and the fiduciary duties of our directors to us under the Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as from the common law of England, the decisions of whose courts are of persuasive authority, but are not binding, on a court in the Cayman Islands. The rights of our shareholders and the fiduciary duties of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands have a less developed body of securities laws than the United States. In addition, Cayman Islands companies may not have standing to initiate a shareholder derivative action in a federal court of the United States.

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

Certain corporate governance practices in the Cayman Islands, which is our home country, differ significantly from requirements for companies incorporated in other jurisdictions such as the United States. We may follow the home country practice for certain corporate governance practices after the closing of this offering which may differ from the requirements of the Nasdaq Global Market. If we choose to follow the home country practice, our shareholders may be afforded fewer protection than they otherwise would under rules and regulations applicable to U.S. domestic issuers.

As a result of all of the above, our public shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as public shareholders of a company incorporated in the United States. For a discussion of significant differences between the provisions of the Companies Law of the Cayman Islands and the laws applicable to companies incorporated in the United States and their shareholders, see "Description of Share Capital—Differences in Corporate Law."

Certain judgments obtained against us by our shareholders may not be enforceable.

We are a Cayman Islands exempted company and all of our assets are located outside of the United States. All of our current operations are conducted in China. In addition, all of our current directors and officers are nationals and residents of countries other than the United States. A substantial portion of the assets of these persons are located outside the United States. As a result, it may be difficult or impossible for you to bring an action against us or against these individuals in the United States in the event that you believe that your rights have been infringed under the U.S. federal securities laws or otherwise.

Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands and of China may render you unable to enforce a judgment against our assets or the assets of our directors and officers. For more information regarding the relevant laws of the Cayman Islands and China, see "Enforcement of Civil Liabilities."

Fluctuations in the exchange rate between the Renminbi and the U.S. dollar could result in foreign currency exchange losses and could materially reduce the value of your investment.

The value of the Renminbi against the U.S. dollar and other currencies may fluctuate and is affected by, among other things, changes in political and economic conditions and the foreign exchange policy adopted by the PRC government. On July 21, 2005, the PRC government changed its policy of pegging the value of the Renminbi to the U.S. dollar. Following the removal of the U.S. dollar peg, the Renminbi appreciated more than 20% against the U.S. dollar over the following three years. Between July 2008 and June 2010, this appreciation halted and the exchange rate between the Renminbi and the U.S. dollar remained within a narrow band. Since June 2010, the Renminbi has fluctuated against the U.S. dollar, at times significantly and unpredictably. On November 30, 2015, the Executive Board of the International Monetary Fund (IMF) completed the regular five- year review of the basket of currencies that make up the Special Drawing Right, or the SDR, and decided that with effect from October 1, 2016, the Renminbi is determined to be a freely usable currency and will be included in the SDR basket as a fifth currency, along with the U.S. dollar, the Euro, the Japanese yen and the British pound. In the fourth quarter of 2016, the Renminbi had depreciated significantly in the backdrop of a surging U.S. dollar and persistent capital outflows of China. This depreciation halted in 2017, and the Renminbi appreciated approximately 7% against the U.S. dollar during this one-year period. Starting from the beginning of 2019, the Renminbi has depreciated significantly against the U.S. dollar again. In early August 2019, the PBOC set the Renminbi's daily reference rate at RMB7.0039 to US$1.00, the first time that the exchange rate of the Renminbi to the U.S. dollar exceeded 7.0 since 2008. With the development of the foreign exchange market and progress towards interest rate liberalization and Renminbi internationalization, the PRC government may in the future announce further changes to the exchange rate system, and we cannot assure you that the Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future.

Substantially all of our revenues and costs are denominated in Renminbi. We are a holding company and we rely on dividends paid by our operating subsidiaries in China for our cash needs. Any significant revaluation of the Renminbi may materially and adversely affect our results of operations and financial position reported in Renminbi when translated into U.S. dollars, and the value of, and any dividends payable on, the ADSs in U.S. dollars. To the extent that we need to convert U.S. dollars we receive from this offering into Renminbi for our operations, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the Renminbi amount we would receive. Conversely, if we decide to convert our Renminbi into U.S. dollars for the purpose of making payments for dividends on our ordinary shares or ADSs or for other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollar amount.

We are an emerging growth company within the meaning of the Securities Act and may take advantage of certain reduced reporting requirements.

We are an "emerging growth company," as defined in the JOBS Act, and we may take advantage of certain exemptions from requirements applicable to other public companies that are not emerging growth companies including, most significantly, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 for so long as we are an emerging growth company until the fifth anniversary from the date of our initial listing.

The JOBS Act also provides that an emerging growth company does not need to comply with any new or revised financial accounting standards until such date that a private company is otherwise required to comply with such new or revised accounting standards. We intend to avail ourselves of the extended transition period.

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

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

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

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

The voting rights of holders of ADSs are limited by the terms of the deposit agreement, and you may not be able to exercise your right to vote your ordinary shares.

As a holder of the ADSs, you will only be able to exercise the voting rights with respect to the underlying ordinary shares represented by your ADSs in accordance with the provisions of the deposit agreement. Under the deposit agreement, you must vote by giving voting instructions to the depositary. Upon receipt of your voting instructions, the depositary will vote the underlying ordinary shares represented by your ADSs in accordance with these instructions. You will not be able to directly exercise your right to vote with respect to the underlying ordinary shares represented by your ADSs unless you cancel and withdraw such ordinary shares. Under our amended and restated memorandum and articles of association that will become effective immediately prior to the completion of this offering, the minimum notice period required for convening a general meeting is ten days. When a general meeting is convened, you may not receive sufficient advance notice to withdraw the underlying ordinary shares represented by your ADSs to allow you to vote with respect to any specific matter. If we ask for your instructions, the depositary will notify you of the upcoming vote and will arrange to deliver our voting materials to you. We cannot assure you that you will receive the voting materials in time to ensure that you can instruct the depositary to vote the underlying ordinary shares represented by your ADSs. In addition, the depositary and its agents are not responsible for failing to carry out voting instructions or for their manner of carrying out your voting instructions. This means that you may not be able to exercise your right to vote and you may have no legal remedy if the underlying ordinary shares represented by your ADSs are not voted as you requested.

ADS holders may not be entitled to a jury trial with respect to claims arising under the deposit agreement, which could result in less favorable outcomes to the plaintiff(s) in any such action.

The deposit agreement governing the ADSs representing our Class A ordinary shares provides that, to the fullest extent permitted by law, ADS holders waive the right to a jury trial of any claim they may have against us or the depositary arising out of or relating to our shares, the ADSs or the deposit agreement, including any claim under the U.S. federal securities laws. The waiver would most likely not apply to ADS holders who subsequently withdraw the Class A ordinary shares represented by ADSs with respect to claims arising after the withdrawal.

If we or the depositary oppose a jury trial demand based on the waiver, the court would determine whether the waiver was enforceable based on the facts and circumstances of that case in accordance with the applicable state and federal law. To our knowledge, the enforceability of a contractual pre-dispute jury trial waiver in connection with claims arising under the federal securities laws has not been finally adjudicated by the United States Supreme Court. However, we believe that a contractual pre-dispute jury trial waiver provision is generally enforceable, including under the laws of the State of New York, which govern the deposit agreement, by a federal or state court in the City of New York, which has non-exclusive jurisdiction over matters arising under the deposit agreement. In determining whether to enforce a contractual pre-dispute jury trial waiver provision, courts will generally consider whether a party knowingly, intelligently and voluntarily has waived the right to a jury trial. We believe that this is the case with respect to the deposit agreement and the ADSs. It is advisable that you consult legal counsel regarding the jury waiver provision before investing in the ADSs.

If you or any other holders or beneficial owners of ADSs, including purchasers of ADSs in secondary market transactions, bring a claim against us or the depositary in connection with matters arising under the deposit agreement or the ADSs, including claims under federal securities laws, you or such other holder or beneficial owner may not be entitled to a jury trial with respect to such claims, which may have the effect of increasing the cost of bringing a claim and limiting and discouraging lawsuits against us and the depositary. If a lawsuit is brought against either or both of us and the depositary under the deposit agreement, it may be heard only by a judge or justice of the applicable trial court, which would be conducted according to different civil procedures and may result in different outcomes than a trial by jury would have, including results that could be less favorable to the plaintiffs in any such action.

Nevertheless, if this jury trial waiver provision is not permitted by applicable law, an action could proceed under the terms of the deposit agreement with a jury trial. No condition, stipulation or provision of the deposit agreement or ADSs serves as a waiver by any holder or beneficial owner of ADSs or by us or the depositary of compliance with any substantive provision of the U.S. federal securities laws and the rules and regulations promulgated thereunder.

The depositary for the ADSs will give us a discretionary proxy to vote our ordinary shares underlying your ADSs if you do not vote at shareholders' meetings, except in limited circumstances, which could adversely affect your interests.

Under the deposit agreement for the ADSs, if you do not vote, the depositary may give us a discretionary proxy to vote the ordinary shares underlying the ADSs at shareholders' meetings if we have timely provided the depositary with notice of meeting and related voting materials and (i) we have instructed the depositary that we wish a discretionary proxy to be given, (ii) we have informed the depositary that there is no substantial opposition as to a matter to be voted on at the meeting, and (iii) a matter to be voted on at the meeting would not have a material adverse impact on shareholders.

The effect of this discretionary proxy is that you cannot prevent the underlying ordinary shares represented by the ADSs from being voted, except under the circumstances described above. This may make it more difficult for holders to influence the management of the company. Holders of ordinary shares are not subject to this discretionary proxy.

Your rights to pursue claims against the depositary as a holder of ADSs are limited by the terms of the deposit agreement and the deposit agreement may be amended or terminated without your consent.

Under the deposit agreement, any action or proceeding against or involving the depositary, arising out of or based upon the deposit agreement or the transactions contemplated thereby or by virtue of owning the ADSs, which may include claims arising under the U.S. federal securities laws, may only be instituted in a state or federal court in New York, New York, and you, as a holder of our ADSs, will have irrevocably waived any objection which you may have to the laying of venue of any such proceeding, and irrevocably submitted to the exclusive jurisdiction of such courts in any such action or proceeding. However, there is uncertainty as to whether a court would enforce such forum selection provision. No condition, stipulation or provision of the deposit agreement or ADSs serves as a waiver by any holder or beneficial owner of ADSs or by us or the depositary of compliance with the U.S. federal securities laws and the rules and regulations promulgated thereunder. Also, we may amend or terminate the deposit agreement without your consent. If you continue to hold your ADSs after an amendment to the deposit agreement, you agree to be bound by the deposit agreement as amended. See "Description of American Depositary Shares" for more information.

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

Holders of ADSs do not have the same rights as our registered shareholders. As a holder of the ADSs, you will not have any direct right to attend general meetings of our shareholders or to cast any votes at such meetings. You will only be able to exercise the voting rights that are carried by the underlying ordinary shares represented by your ADSs indirectly in accordance with the provisions of the deposit agreement. Under the deposit agreement, you may vote only by giving voting instructions to the depositary. Upon receipt of your voting instructions, the depositary will try, as far as is practicable, to vote the underlying ordinary shares represented by your ADSs in accordance with your instructions. If we ask for your instructions, then upon receipt of your voting instructions, the depositary will try to vote the underlying ordinary shares represented by your ADSs in accordance with these instructions. If we do not instruct the depositary to ask for your instructions, the depositary may still vote in accordance with instructions you give, but it is not required to do so. You will not be able to directly exercise your right to vote with respect to the underlying ordinary shares represented by your ADSs unless you withdraw such ordinary shares and become the registered holder of such shares prior to the record date for the general meeting.

The deposit agreement provides that ADS holders and the depositary have the right to elect to have any claim they may have against us arising out of or relating to the Class A ordinary shares, the ADSs or the deposit agreement settled by arbitration in New York, New York rather than in a court of law, which may or may not be more costly, and to have any judgment rendered by the arbitrators entered in any court having jurisdiction. An arbitral tribunal in any such arbitration would not have the authority to award any consequential, special, or punitive damages and its award would have to conform to the provisions of the deposit agreement. The deposit agreement does not give us the right to require that any claim, whether brought by us or against us, be arbitrated.

You may experience dilution of your holdings due to the inability to participate in rights offerings.

We may, from time to time, distribute rights to our shareholders, including rights to acquire securities. Under the deposit agreement, the depositary will not distribute rights to holders of ADSs unless the distribution and sale of rights and the securities to which these rights relate are either exempt from registration under the Securities Act with respect to all holders of ADSs, or are registered under the provisions of the Securities Act. The depositary may, but is not required to, attempt to sell these undistributed rights to third parties, and may allow the rights to lapse. We may be unable to establish an exemption from registration under the Securities Act, and we are under no obligation to file a registration statement with respect to these rights or underlying securities or to endeavor to have a registration statement declared effective. Accordingly, holders of ADSs may be unable to participate in our rights offerings and may experience dilution of their holdings as a result.

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

Your ADSs are transferable on the books of the depositary. However, the depositary may close its books at any time or from time to time when it deems it expedient in connection with the performance of its duties. The depositary may close its books from time to time for a number of reasons, including in connection with corporate events such as a rights offering, during which time the depositary needs to maintain an exact number of ADS holders on its books for a specified period. The depositary may also close its books in emergencies, and on weekends and public holidays. The depositary may refuse to deliver, transfer or register transfers of our ADSs generally when our share register or the books of the depositary are closed, or at any time if we or the depositary thinks it is advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

We have identified two material weaknesses in our internal controls as of December 31, 2018, and if we fail to maintain an effective system of internal controls, our ability to accurately and timely report our financial results or prevent fraud may be adversely affected, and investor confidence and the market price of the ADSs may be adversely affected.

Prior to this offering, we have been a private company with limited accounting personnel and other resources with which to address our internal controls. In the course of preparing our consolidated financial statements, we and our independent registered public accounting firm identified two material weaknesses in our internal controls. A material weakness is a deficiency, or combination of deficiencies, in internal controls, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses identified are related to (i) our lack of competent financial reporting and accounting personnel with appropriate knowledge of U.S. GAAP and SEC reporting and compliance requirements, and (ii) our lack of documented financial closing policies and procedures, specifically those related to the period end expenses cut-off and accruals.

We have begun and will continue to implement measures to address the material weaknesses. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Internal Control over Financial Reporting." However, the implementation of those measures may not fully remediate the material weaknesses in a timely manner. In the future, we may determine that we have additional material weaknesses or other deficiencies, or our independent registered public accounting firm may disagree with our management's assessment of the effectiveness of our internal controls. Our failure to correct these material weaknesses or our failure to discover and address any other material weaknesses could result in inaccuracies in our financial statements and impair our ability to comply with the applicable financial reporting requirements and related regulatory filings on a timely basis. Moreover, ineffective internal control over financial reporting could significantly hinder our ability to prevent fraud.

We will incur increased costs as a result of being a public company, particularly after we cease to qualify as an "emerging growth company."

Upon the completion of this offering, we will become a public company and expect to incur significant legal, accounting and other expenses that we did not incur as a subsidiary of a listed company. The Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the SEC and the Nasdaq Global Market, impose various requirements on the corporate governance practices of public companies.

We expect these rules and regulations to increase our legal and financial compliance costs and to make some corporate activities more time-consuming and costly. After we are no longer an "emerging growth company," we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and the other rules and regulations of the SEC. For example, as a result of becoming a public company, we will need to increase the number of independent directors and adopt policies regarding internal controls and disclosure controls and procedures. We also expect that operating as a public company will make it more difficult and more expensive for us to obtain

director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or to incur substantially higher costs to obtain the same or similar coverage. In addition, we will incur additional costs associated with our public company reporting requirements. It may also be more difficult for us to find qualified persons to serve on our board of directors or as executive officers. We are currently evaluating and monitoring developments with respect to these rules and regulations, and we cannot predict or estimate with any degree of certainty the amount of additional costs we may incur or the timing of such costs.

As an exempted company incorporated in the Cayman Islands, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from the requirements of the Nasdaq Stock Market Rules; these practices may afford fewer protection to shareholders than they would enjoy if we complied fully with the Nasdaq Stock Market Rules.

As a Cayman Islands exempted company listed on the Nasdaq Global Market, we are subject to the Nasdaq Stock Market Rules. However, Nasdaq Stock Market Rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq Stock Market Rules. For instance, we are not required to: (i) have a majority of the board be independent; (ii) have a compensation committee or a nominating and corporate governance committee consisting entirely of independent directors; or (iii) have regularly scheduled executive sessions with only independent directors each year. We intend to rely on some of these exemptions. As a result, you may not be provided with the benefits of certain corporate governance requirements of the Nasdaq Global Market. We may also follow the home country practice for certain corporate governance practices after the closing of this offering which may differ from the requirements of the Nasdaq Global Market. If we choose to follow the home country practice, our shareholders may be afforded fewer protection than they would otherwise enjoy under the Nasdaq Stock Market Rules applicable to U.S. domestic issuers.

We may become a passive foreign investment company, or PFIC, which could result in adverse U.S. tax consequences to U.S. investors.

Based on the past and projected composition of our income and assets, and the valuation of our assets, including goodwill (which we have determined based on the expected price of the ADSs in this offering), we do not expect to be a passive foreign investment company, or a PFIC, in the current taxable year or in the foreseeable future, although there can be no assurance in this regard.

In general, we will be a PFIC for any taxable year in which:

- at least 75% of our gross income is passive income, or
- at least 50% of the value (determined based on a quarterly average) of our assets is attributable to assets that produce or are held for the production of passive income.

The determination of whether we are a PFIC is made annually. Accordingly, it is possible that we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition. The composition of our assets and income may be affected by how, and how quickly, we use our liquid assets and the cash raised in this offering. Because we have valued our goodwill based on the expected market value of the ADSs, a decrease in the price of the ADSs may also result in our becoming a PFIC.

If we are a PFIC for any taxable year during which you hold the ADSs or ordinary shares, our PFIC status could result in adverse United States federal income tax consequences to you if you are a United States Holder, as defined under "Taxation—United States Federal Income Tax Considerations." For example, if we are or become a PFIC, you may become subject to increased tax liabilities under United States federal income tax laws and regulations, and will become subject to burdensome reporting requirements. See "Taxation—United States Federal Income Tax Considerations—Passive Foreign Investment Company." There can be no assurance that we will not be a PFIC for the current or any future taxable year. Our U.S. counsel expresses no opinion with respect to our PFIC status.

Special Note Regarding Forward-Looking Statements

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS This prospectus contains forward-looking statements that involve risks and uncertainties, including statements based on our current expectations, assumptions, estimates and projections about us and our industry. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Industry Overview," "Business" and "Regulation" in this prospectus. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. In some cases, these forward-looking statements can be identified by words or phrases such as "may," "will," "expect," "anticipate," "aim," "estimate," "intend," "plan," "believe," "potential," "continue," "is/are likely to" or other similar expressions. The forward-looking statements included in this prospectus relate to, among others:

- our goals and growth strategies;
- our future business development, financial condition and results of operations;
- trends in the Bitcoin and AI industries in the PRC and globally;
- competition in our industry;
- fluctuations in general economic and business conditions in China and other regions where we operate;

- the regulatory environment in which we and companies integral to our business operate;
- our proposed use of proceeds from this offering; and
- assumptions underlying or related to any of the foregoing.

This prospectus also contains market data relating to the IC industry in China, including our market position and the size and growth rates of the markets in which we participate, that are based on industry publications and reports. Statistical data in these publications and reports also include projections based on a number of assumptions. The IC industry in China may not grow at the rates projected by market data, or at all. The failure of these markets to grow at the projected rates may have a material adverse effect on our business and the market price of the ADSs. If any one or more of the assumptions underlying the market data turns out to be incorrect, actual results may differ from the projections based on these assumptions. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and elsewhere in this prospectus. You should not place undue reliance on these forward-looking statements.

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

Use of Proceeds

USE OF PROCEEDS We estimate that we will receive net proceeds from this offering of approximately US$ million, or approximately US$ million if the underwriters exercise their option to purchase additional ADSs in full, after deducting underwriting discounts and commissions and the estimated offering expenses payable by us and based upon an assumed initial offering price of US$ per ADS (the mid-point of the estimated range of initial public offering price shown on the front cover page of this prospectus). A US$1.00 increase (decrease) in the assumed initial public offering price of US$ per ADS would increase (decrease) the net proceeds to us from this offering by US$ million, after deducting the estimated underwriting discounts and commissions and estimated aggregate offering expenses payable by us and assuming no change to the number of ADSs offered by us as set forth on the front cover page of this prospectus.

We plan to use the net proceeds we will receive from this offering as follows:

- approximately US$ million for research and development for ASICs related to AI algorithms and applications;
- approximately US$ million for research and development for ASICs related to blockchain algorithms and applications;
- approximately US$ million for expansion of our AI and blockchain business globally by making strategic investments and establishing overseas offices;
- approximately US$ million for supply chain optimization and repayment of debts incurred by us in connection with our reorganization; and
- the balance of the net proceeds for general corporate purposes.

The foregoing represents our intentions as of the date of this prospectus with respect to the use and allocation of the net proceeds of this offering based upon our present plans and business conditions, but our management will have significant flexibility and discretion in applying the net proceeds of the offering.

The occurrence of unforeseen events or changed business conditions may result in application of the proceeds of this offering in a manner other than as described in this prospectus.

To the extent that the net proceeds we receive from this offering are not immediately applied for the above purposes, we intend to invest our net proceeds in short-term, interest bearing, debt instruments or bank deposits.

In utilizing the proceeds of this offering, we, as an offshore holding company, are permitted under PRC laws and regulations to provide funding to our PRC subsidiaries only through loans or capital contributions. Subject to satisfaction of applicable government registration and approval requirements, we may extend inter-company loans to our PRC subsidiaries or make additional capital contributions to our PRC subsidiaries to fund their capital expenditures or working capital. We cannot assure you that we will be able to obtain these government registrations or approvals on a timely basis, if at all.

Dividend Policy

DIVIDEND POLICY Since our inception, we have not declared or paid any dividends on our ordinary shares. We do not have any present plan to pay any dividends on our ordinary shares or ADSs in the foreseeable future. We intend to retain most, if not all, of our available funds and any future earnings to operate and expand our business.

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

Any future determination to pay dividends will be made at the discretion of our board of directors and may be based on a number of factors, including our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the board of directors may deem relevant. If we pay any dividends, we will pay our ADS holders to the same extent as holders of our ordinary shares, subject to the terms of the deposit agreement, including the fees and expenses payable thereunder. See "Description of American Depositary Shares." Cash dividends on our ordinary shares, if any, will be paid in U.S. dollars.

We are a holding company incorporated in the Cayman Islands. In order for us to distribute any dividends to our shareholders and ADS holders, we rely on dividends distributed by our subsidiaries in the PRC and other jurisdictions. Distributions from our subsidiaries to us may be subject to various local taxes, such as withholding tax. In addition, regulations in the PRC currently permit the payment of dividends of a PRC company only out of accumulated distributable after-tax profits as determined in accordance with its articles of association and the accounting standards and regulations in China. See "Risk Factors—Risks Relating to Doing Business in the PRC—Our corporate structure may restrict our ability to receive dividends from, and transfer funds to, our PRC operating subsidiaries, which could restrict our ability to act in response to changing market conditions in a timely manner."

Capitalization

CAPITALIZATION The following table sets forth our capitalization as of June 30, 2019 presented on:

- an actual basis; and
- a pro forma basis as adjusted to reflect the issuance and sale of the Class A ordinary shares in the form of ADSs by us in this offering at an assumed initial public offering price of US$ per ADS, the mid-point of the estimated range of the initial public offering price shown on the front cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us and assuming no exercise of the underwriters' over-allotment option.

The pro forma as adjusted information below is illustrative only and our capitalization following the completion of this offering is subject to adjustment based on the initial public offering price of the ADSs and other terms of this offering determined at pricing. You should read this table in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

	As of June 30, 2019			
	Actual		Pro Forma as Adjusted	
	RMB	US$	RMB	US$
	(in millions)			
Shareholders' equity:				
Ordinary shares	1	–		
Subscription receivable from shareholders	(1)	–		
Treasury stocks	–	–		
Additional paid-in capital	1,045,535	152,299		
Statutory reserves	97,307	14,174		
Accumulated other comprehensive loss	(48,784)	(7,106)		
Retained earnings	(276,993)	(40,350)		
Total shareholders' equity	817,065	119,017		
Total capitalization	**817,065**	**119,017**		

Dilution

DILUTION

If you invest in the ADSs, your interest will be diluted to the extent of the difference between the initial public offering price per ADS and our net tangible book value per ADS after this offering. Dilution results from the fact that the initial public offering price per ordinary share is substantially in excess of the book value per ordinary share attributable to the existing shareholders for our presently outstanding ordinary shares. Because our Class A ordinary shares and Class B ordinary shares will have the same dividend and other rights, except for conversion and voting rights, the following discussion is presented on the basis of all of our ordinary shares, including Class A ordinary shares and Class B ordinary shares.

Our net tangible book value as of June 30, 2019 was approximately RMB million (US$ million), or RMB (US$) per ordinary share as of that date, and US$ per ADS. Net tangible book value represents the amount of our total consolidated assets, less the amount of our intangible assets, goodwill and total consolidated liabilities. Dilution is determined by subtracting net tangible book value per ordinary share, after giving effect to the issuance and sale by us of ordinary shares in the form of ADSs in this offering at an assumed initial public offering price of US$ per ADS (the mid-point of the estimated initial public offering price range shown on the front cover page of this prospectus) after deduction of the underwriting discounts and commissions and estimated offering expenses payable by us.

Without taking into account any other changes in net tangible book value after June 30, 2019, other than to give effect to the issuance and sale by us of ordinary shares in the form of ADSs in this offering at an assumed initial public offering price of US$ per ADS (the mid-point of the estimated initial public offering price range shown on the front cover page of this prospectus) after deduction of the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2019 would have been US$ million, or US$ per outstanding ordinary share and US$ per ADS. This represents an immediate increase in net tangible book value of US$ per ordinary share and US$ per ADS to the existing shareholders and an immediate dilution in net tangible book value of US$ per ordinary share and US$ per ADS to investors purchasing ADSs in this offering.

The following table illustrates such dilution:

	Per ordinary share	Per ADS
Actual net tangible book value per share as of June 30, 2019	US$	US$
Pro forma as adjusted net tangible book value per share after giving effect to this offering	US$	US$
Assumed initial public offering price	US$	US$
Dilution in net tangible book value per share to new investors in the offering	US$	US$

The amount of dilution in net tangible book value to new investors in this offering set forth above is determined after giving effect to this offering from the public offering price per ordinary share.

A US$1.00 increase (decrease) in the assumed public offering price of US$ per ADS (the mid-point of the estimated initial public offering price range shown on the front cover page of this prospectus) would increase (decrease) our pro forma net tangible book value after giving effect to the offering by US$ million, the pro forma net tangible book value per ordinary share and per ADS after giving effect to this offering by US$ per ordinary share and US$ per ADS and the dilution in pro forma net tangible book value per ordinary share and per ADS to new investors in this offering by US$ per ordinary share and US$ per ADS, assuming no change to the number of ADS offered by us as set forth on the front cover page of this prospectus, and after deducting underwriting discounts and commissions and other offering expenses.

The following table summarizes, on a pro forma basis as of June 30, 2019, the differences between existing shareholders and new investors with respect to the number of ordinary shares (in the form of ADSs or shares) purchased from us, the total consideration paid and the average price per ordinary share and per ADS paid before deducting the underwriting discounts and commissions and estimated offering expenses. The total number of ordinary shares does not include ordinary shares underlying the ADSs issuable upon the exercise of the option to purchase additional ADSs granted to the underwriters.

	Ordinary Shares Purchased		Total Consideration		Average Price perOrdinaryShare	Average Price perADS
	Number	Percent	Amount	Percent		
	(in millions of US$, except number of shares and percentages)					
Existing shareholders			US$		US$	US$
New investors			US$		US$	US$
Total		100%	US$	100%	US$	US$

If the underwriters were to fully exercise the over-allotment option to purchase additional ADSs from us, the percentage of our ordinary shares held by existing shareholders would be %, and the percentage of our ordinary shares held by new investors would be %.

The pro forma information discussed above is illustrative only. Our net tangible book value following the completion of this offering is subject to adjustment based on the actual initial public offering price of the ADSs and other terms of this offering determined at pricing.

Enforcement of Civil Liabilities

ENFORCEMENT OF CIVIL LIABILITIES We are incorporated under the laws of the Cayman Islands as an exempted company with limited liability. We are incorporated in the Cayman Islands because of certain benefits associated with being a Cayman Islands company, such as political and economic stability, an effective judicial system, a favorable tax system, the absence of foreign exchange control or currency restrictions and the availability of professional and support services. However, the Cayman Islands has a less developed body of securities laws as compared to the United States and provides protections for investors to a lesser extent. In addition, Cayman Islands companies may not have standing to sue before the federal courts of the United States.

Most of our operations are conducted in China, and most of our assets are located in China. In addition, most of our directors and officers are residents of jurisdictions other than the United States and all or a substantial portion of their assets are located outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us or these persons, or to enforce against us or them judgments obtained in United

States courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state in the United States. It may also be difficult for you to enforce in United States courts judgments obtained in United States courts based on the civil liability provisions of the United States federal securities laws against us and our officers and directors.

We have appointed Cogency Global Inc. as our agent to receive service of process with respect to any action brought against us in the U.S. District Court for the Southern District of New York under the federal securities laws of the U.S. or of any state in the U.S. or any action brought against us in the Supreme Court of the State of New York in the County of New York under the securities laws of the State of New York.

Maples and Calder (Hong Kong) LLP, our counsel as to Cayman Islands law, has advised us that there is uncertainty as to whether the courts of the Cayman Islands would (1) recognize or enforce judgments of U.S. courts obtained against us or our directors or officers that are predicated upon the civil liability provisions of the federal securities laws of the United States or the securities laws of any state in the United States, or (2) entertain original actions brought in the Cayman Islands against us or our directors or officers that are predicated upon the federal securities laws of the United States or the securities laws of any state in the United States.

In addition, Maples and Calder (Hong Kong) LLP has advised us that although there is no statutory enforcement in the Cayman Islands of judgments obtained in the federal or state courts of the United States (and the Cayman Islands are not a party to any treaties for the reciprocal enforcement or recognition of such judgments), a judgment obtained in such jurisdiction will be recognized and enforced in the courts of the Cayman Islands at common law, without any re-examination of the merits of the underlying dispute, by an action commenced on the foreign judgment debt in the Grand Court of the Cayman Islands, provided such judgment (i) is given by a foreign court of competent jurisdiction, (ii) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given, (iii) is final and conclusive, (iv) is not in respect of taxes, a fine or a penalty, and (v) was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands.

Commerce & Finance Law Offices, our counsel as to PRC laws, has advised us that the recognition and enforcement of foreign judgments are provided for under the PRC Civil Procedure Law. PRC courts may recognize and enforce foreign judgments in accordance with the requirements of the PRC Civil Procedure Law based either on treaties between China and the country where the judgment is made or on principles of reciprocity between jurisdictions. Commerce & Finance Law Offices has advised us further that under PRC law, courts in the PRC will not recognize or enforce a foreign judgment against us or our directors and officers if they decide that the judgment violates the basic principles of PRC law or national sovereignty, security or social public interest. As there existed no treaty or other form of reciprocity between China and the United States governing the recognition and enforcement of judgments as of the date of this prospectus, including those predicated upon the liability provisions of the United States federal securities laws, there is uncertainty whether and on what basis a PRC court would enforce judgments rendered by United States courts. In addition, because there is no treaty or other form of reciprocity between the Cayman Islands and China governing the recognition and enforcement of judgments as of the date of this prospectus, there is further uncertainty as to whether and on what basis a PRC court would enforce judgments rendered by a Cayman Islands court.

Our History and Corporate Structure

OUR HISTORY AND CORPORATE STRUCTURE

Our History

We are a Cayman Islands holding company and conduct our operations in China through our PRC subsidiaries. We first started our business developing Bitcoin mining machines incorporating ASIC technology in 2013 through Beijing Canaan Creative Information Technology Co., Ltd. which was subsequently renamed Hangzhou Canaan Creative Information Technology Co., Limited, or Hangzhou Canaan, in September 2015. Empowered by the academic training and technical expertise of our co-founders, we have focused on the design of high performance, repeated computing ICs since our inception. As we further developed, Hangzhou Canaan went through a series of capital injections and became a holding company for our PRC operating subsidiaries.

With the growth of our business and in order to facilitate international capital investment in us, we underwent an offshore reorganization in the first quarter of 2018. In February 2018, Canaan Cayman Holdings Ltd. was incorporated under the laws of the Cayman Islands as an exempted company with limited liability. It was later renamed Canaan Inc. in April 2018. In March 2018, in order to mirror the shareholding structure of the then shareholders of Hangzhou Canaan, we issued and allotted our ordinary shares at par value to investment holding companies held by the then shareholders of Hangzhou Canaan. Further, an intermediate holding company, Canaan Creative (HK) Holdings Limited, or Canaan HK, our wholly-owned subsidiary, was also established in Hong Kong in February 2018. In March 2018, Canaan HK acquired a 100% equity interest in Hangzhou Canaan and Canaan Inc. became our ultimate holding company. In June 2018, we completed a one-for-2,000 shares subdivision, and the number of total issued and outstanding ordinary shares became 2,000,000,000. Accordingly, our authorized share capital of US$50,000 is divided into 1,000,000,000,000 ordinary shares of US$0.00000005 each.

In August 2017 and May 2018, we sought listing on China's National Equities Exchange Quotations Co., Ltd. and The Stock Exchange of Hong Kong Limited, respectively, both of which were subsequently suspended.

Our principal executive offices are located at 30/F, Dicara Silver Tower, 29 Jiefang East Road, Jianggan District, Hangzhou, People's Republic of China. Our telephone number at this address is +86-571-8999-5063. Our registered office in the Cayman Islands is located at the offices of Sertus Chambers, Suite #5-204, 23 Lime Tree Bay Avenue, P.O. Box 2547, Grand Cayman, KY1-1104, Cayman Islands. Investors should submit any inquiries to the address and telephone number of our principal executive offices set forth above.

Our Corporate Structure

The following diagram illustrates our corporate structure as of the date of this prospectus. It omits certain entities that are immaterial to our results of operations, business and financial condition. Unless otherwise indicated, equity interests depicted in this diagram are 100%-owned.

Selected Consolidated Financial and Operating Data

SELECTED CONSOLIDATED FINANCIAL AND OPERATING DATA The following selected consolidated statements of income and cash flows data for the years ended December 31, 2017 and 2018 and the selected consolidated balance sheet data as of December 31, 2017 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus.

The following selected consolidated statements of income (loss) and cash flows data for the six months ended June 30, 2018 and 2019 and the selected consolidated balance sheet data as of June 30, 2019 have been derived from our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus.

Our consolidated financial statements are prepared and presented in accordance with U.S. GAAP. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements and include all normal recurring adjustments that we consider necessary for a fair statement of our financial position and operating results for the periods presented.

Our historical results are not necessarily indicative of results to be expected for any future period. The following selected consolidated financial data for the periods and as of the dates indicated are qualified by reference to and should be read in conjunction with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," both of which are included elsewhere in this prospectus.

Consolidated Statements of Comprehensive Income (Loss):

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net revenues:						
Products revenue	1,303.1	2,698.6	393.1	1,941.7	287.6	41.9
Service revenue	4.7	6.0	0.9	5.3	0.4	0.1
Other revenues	0.3	0.7	0.1	0.2	0.7	0.1
Total net revenues	**1,308.1**	**2,705.3**	**394.1**	**1,947.1**	**288.8**	**42.1**
Cost of revenues	(703.7)	(2,197.2)	(320.1)	(1,499.4)	(277.5)	(40.4)
Gross profit	**604.4**	**508.1**	**74.0**	**447.7**	**11.2**	**1.6**
Operating expenses:						
Research and development expenses	(99.8)	(189.7)	(27.6)	(70.8)	(67.2)	(9.8)
Sales and marketing expenses	(20.7)	(38.7)	(5.6)	(27.2)	(7.9)	(1.2)
General and administrative expenses	(125.3)	(146.7)	(21.4)	(73.7)	(263.0)	(38.3)
Total operating expenses	**(245.8)**	**(375.1)**	**(54.6)**	**(171.7)**	**(338.1)**	**(49.3)**
Income (loss) from operations:						
Interest income	0.2	4.2	0.6	0.6	0.9	0.1
Investment income	5.6	3.2	0.5	1.6	1.1	0.2
Interest expense and guarantee fee	–	(53.1)	(7.7)	(17.4)	(16.4)	(2.4)
Foreign exchange (loss) gain, net	(1.2)	(1.2)	(0.2)	(0.2)	3.7	0.5
Value added tax refunds	38.8	110.2	16.1	93.0	0.3	0.1
Other (loss) income, net	(1.1)	3.8	0.6	3.0	6.4	0.9
Income (loss) before income tax expenses	**401.0**	**200.2**	**29.2**	**356.4**	**(330.9)**	**(48.2)**
Income tax expense	(25.2)	(77.8)	(11.3)	(139.7)	–	–
Net income (loss)	**375.8**	**122.4**	**17.8**	**216.8**	**(330.9)**	**(48.2)**
Foreign currency translation adjustment, net of nil tax	–	(65.2)	(9.5)	(37.9)	16.4	2.4
Total comprehensive income (loss)	**375.8**	**57.2**	**8.3**	**178.9**	**(314.5)**	**(45.8)**

Consolidated Statements of Financial Positions:

	As of December 31,			As of June 30,	
	2017	2018		2019	
	RMB	RMB	US$	RMB	US$
	(in millions)				
Cash and cash equivalents	176.5	258.9	37.7	270.4	39.4
Restricted cash	–	286.3	41.7	–	–
Accounts receivable	1.3	23.7	3.5	20.0	2.9
Inventories	259.8	585.7	85.3	419.8	61.2
Prepayments and other current assets	636.4	186.7	27.2	532.9	77.6
Income tax receivable	–	27.1	3.9	30.0	4.4
Property, equipment and software	18.4	27.9	4.1	23.9	3.5
Total assets	**1,203.2**	**1,402.7**	**204.3**	**1,444.3**	**210.4**
Short-term debts	–	1,049.0	152.8	197.2	28.7
Contract liabilities	202.5	6.9	1.0	280.3	40.8
Accrued liabilities and other current liabilities	69.2	58.0	8.4	58.7	8.6
Total liabilities	**346.0**	**1,161.7**	**169.2**	**627.2**	**91.4**
Total shareholders' equity	**857.2**	**241.0**	**35.1**	**817.1**	**119.0**
Total liabilities and shareholders' equity	**1,203.2**	**1,402.7**	**204.3**	**1,444.3**	**210.4**

Consolidated Statements of Cash Flow:

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net cash provided by (used in) operating activities	91.2	(12.7)	(1.9)	(170.7)	6.4	0.9
Net cash provided by (used in) investing activities	(86.8)	84.0	12.2	97.6	(112.2)	(16.3)
Net cash provided by (used in) financing activities	150.0	295.2	43.0	145.2	(169.1)	(24.6)
Net increase/(decrease) in cash and cash equivalents, restricted cash	**154.4**	**366.4**	**53.4**	**72.1**	**(274.9)**	**(40.0)**
Effect of exchange rate changes on cash and cash equivalents, restricted cash	(1.3)	2.3	0.3	0.3	0.1	0.0
Cash and cash equivalents, restricted cash at the beginning of year/period	23.4	176.5	25.7	176.5	545.2	79.4
Cash and cash equivalents, restricted cash at the end of year/period	**176.5**	**545.2**	**79.4**	**248.9**	**270.4**	**39.4**

NonGAAP Financial Measures:

In evaluating our business, we consider and use adjusted net income as a supplemental measures to review and assess our operating performance. The presentation of this non-GAAP financial measure is not intended to be considered in isolation or as a substitute for financial information prepared and presented in accordance with U.S. GAAP. We define adjusted net income as net income excluding sharebased compensation expense.

We believe that adjusted net income helps to identify underlying trends in our business that could otherwise be distorted by the effect of the expenses that we exclude in adjusted net income. We believe that adjusted net income provides useful information about our operating results, enhances the overall understanding of our past performance and future prospects and allows for greater visibility with respect to key metrics used by our management in its financial and operational decision-making.

The non-GAAP financial measure "adjusted net income" is not defined under U.S. GAAP, is not presented in accordance with U.S. GAAP and has limitations as an analytical tool. One of the key limitations of using adjusted net income is that it does not reflect all of the items of income and expense that affect our operations. Share-based compensation has been and may continue to be incurred in our business and is not reflected in the presentation of adjusted net income. Further, the non-GAAP financial measure "adjusted net income" may differ from the non-GAAP information used by other companies, including peer companies, and therefore their comparability may be limited.

We compensate for these limitations by reconciling the non-GAAP financial measure to the nearest U.S. GAAP performance measure, all of which should be considered when evaluating our performance. We encourage you to review our financial information in its entirety and not to rely on a single financial measure.

The table below sets forth a reconciliation of our net income to adjusted net income (loss) for the years/period indicated:

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net income (loss)	**375.8**	**122.4**	**17.8**	**216.8**	**(330.9)**	**(48.2)**
Add:						
Share-based compensation expenses	95.5	18.6	2.7	9.5	221.0	32.2
Adjusted net income (loss)	**471.3**	**141.0**	**20.5**	**226.2**	**(109.9)**	**(16.0)**

Selected Operating Data:

The following table sets forth the sales volume and average selling prices generated by our different Bitcoin mining machines:

	Year ended December 31,				Six months ended June 30,			
	2017		2018		2018		2019	
	Volume	ASP	Volume	ASP	Volume	ASP	Volume	ASP
	set	RMB	set	RMB	set	RMB	set	RMB
A7 series[(1)]	294,523	4,402	20,576	3,710	20,576	3,710	–	–
A8 series[(2)]	–	–	503,237	4,842	245,735	7,449	212,000	1,008
A9 series[(3)]	–	–	35,324	3,665	–	–	40,862	1,526
A10 series[(4)]	–	–	–	–	–	–	490	7,038
Total	**294,523**	**4,402**	**559,137**	**4,726**	**266,311**	**7,160**	**253,352**	**1,103**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The following table sets forth the total computing power sold and average selling prices of our Bitcoin mining machines expressed in terms of computing power:

	Year ended December 31,				Six months ended June 30,			
	2017		2018		2018		2019	
	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash	Total ComputingPower Sold	ASP per Thash
	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB
A7 series[(1)]	2,114,637	613	151,131	505	151,131	505	–	–
A8 series[(2)]	–	–	6,305,119	386	2,941,301	622	3,098,145	69
A9 series[(3)]	–	–	702,416	184	–	–	780,513	80
A10 series[(4)]	–	–	–	–	–	–	18,130	190
Total	**2,114,637**	**613**	**7,158,666**	**369**	**3,092,432**	**617**	**3,896,788**	**72**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The table below sets forth the sales cost, the per unit costs and the selling cost in terms of computing power of our Bitcoin mining machines:

	Year ended December 31,						Six months ended June 30,					
	2017			2018			2018			2019		
	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash	Cost[1]	Per unit cost	Cost per Thash
	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB	RMB in millions	RMB	RMB
A7 series[2]	693.3	2,354	328	51.1	2,482	338	51.1	2,482	388	–	–	–
A8 series[3]	–	–	–	1,243.9	2,472	197	641.5	2,610	218	539.7	2,546	174
A9 series[4]	–	–	–	154.9	4,385	221	–	–	–	170.8	4,180	219
A10 series[5]	–	–	–	–	–	–	–	–	–	2.8	5,640	152
Total	**693.3**	**2,354**	**328**	**1,449.9**	**2,593**	**203**	**692.5**	**2,600**	**224**	**713.3**	**2,815**	**183**

Notes:

(1) Without taking into consideration the inventory and prepayment write down provision of nil, RMB786.0 million (US$114.5 million), RMB786.0 million and RMB0.8 million (US$0.1 million) in 2017, 2018 and the six months ended June 30, 2018 and 2019, respectively, as well as a realized inventory and prepayment write down of nil, RMB71.1 million (US$10.4 million), nil and RMB443.2 million (US$64.6 million), respectively, for the same periods.

(2) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(3) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(4) Mainly includes our A921 and A911 Bitcoin mining machines.

(5) Mainly includes our A1047 Bitcoin mining machines.

Management's Discussion and Analysis of Financial Condition and Results of Operations

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS *You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the section entitled "Selected Consolidated Financial and Operating Data" and our consolidated financial statements and the related notes included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this prospectus.*

Overview

We provide supercomputing solutions through our proprietary high performance computing ASICs. Our visionary management team has a clear strategy to commercialize supercomputing technology. In January 2013, Mr. Nangeng Zhang, our chairman and chief executive officer, and his team, invented and delivered one of the first cryptocurrency mining machines incorporating ASIC technology. We initially dedicated our research and development efforts to ASIC applications for Bitcoin mining, which rapidly built up our know-how of ASIC design. Such experience provided us with a solid foundation in terms of both technology and capital resources, which better prepared us for further research and development involving AI chips. We were the second largest designer and manufacturer of Bitcoin mining machines globally in terms of computing power sold in the six months ended June 30, 2019, according to Frost & Sullivan. During the same period, our Bitcoin mining machines sold accounted for 21.9% of the combined computing power of all the Bitcoin mining machines sold globally, according to Frost & Sullivan. In September 2018, we became the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance. As we are a fabless IC designer, the ICs that we design are manufactured, packaged and tested by industry-leading suppliers, including TSMC, Samsung, STATS ChipPac, ASE and SPIL.

We have developed significant advantages in our business and technological capabilities, including the following:

- Our mastery of the whole IC design process;
- Our years of accumulated engineering experience in applying theoretical research to the mass production of new products, producing in aggregate over 130 million ASICs in 2017, 2018 and the six months ended June 30, 2019;

- Our ability to achieve a fast time-to-market with our products and our successful early monetization of the ASIC design in blockchain applications have provided us with an early advantage with respect to both technology and capital reserve to pursue our strategic initiatives;
- Our breakthroughs in various technological fields to improve ASIC performance, such as low voltage and high power efficiency operations and high computing density, all of which are crucial features for ASICs for blockchain and AI solutions;
- Our ownership of most of the intellectual property we employ, and our accumulation of valuable know-how and multiple generations of proprietary silicon data through our years of ASIC design experience;
- Our ability to provide a holistic AI solution to our customers, including AI chips, algorithm development and optimization, hardware module, end-product and software services; and
- Our close and trusted partnerships with leading global suppliers, which have enabled us to achieve high-quality, high yield rate and stable production, with a 100% success rate for all of our seven tape-outs.

Key Factors Affecting Our Results of Operations

Our results of operations have been, and are expected to continue to be, affected by a number of factors, which primarily include the following:

- fluctuation of the Bitcoin price;
- acceptance and development of blockchain technology applications, especially Bitcoin;
- development of AI technology, especially edge computing;
- the performance and cost of our products;
- production capacity;
- investment in research and development; and
- the regulatory environment.

Fluctuation of the Bitcoin Price

The demand and pricing for our Bitcoin mining machines are significantly affected by the Bitcoin price, the most significant factor affecting the expected returns generated by Bitcoin mining activities. In addition, other factors such as the power efficiency of mining machines and transaction fees also have an inverse relationship with the expected economic return of Bitcoin mining, while factors such as network computing power, price of mining machines and other operating costs such as electricity costs typically have a converse relationship with the expected return on Bitcoin mining activities.

In general, our financial performance, particularly our revenue and gross margin, would fluctuate in response to the factors below:

- Bitcoin miners' purchasing behavior are primarily driven by the expectation about future Bitcoin price, as well as the expected economic returns of Bitcoin mining based on a series of abovementioned factors, which impact the demand and selling price of our Bitcoin mining machines.
- As the Bitcoin price fluctuates, we will adjust our selling price of Bitcoin mining machines to match Bitcoin miners' typical target payback cycle of 150 to 300 days.
- Although our technology upgrade for new generation of our Bitcoin mining machine will reduce the average production cost for our Bitcoin mining machines in general, a sudden decrease of the Bitcoin price may lead to stagnant demand and decrease of selling price for our Bitcoin mining machines, which further lead to inventories and prepayments write-down that impact our gross margin.

Our results of operations generally lag behind the change of the Bitcoin price. Historically, a strong increase in the Bitcoin price in late 2017 drove the significant increase in both the demand for and the average selling price of our Bitcoin mining machines in the first half of 2018. As the Bitcoin price dropped in 2018, manufacturers of Bitcoin mining machines began to experience a lower demand and average selling price of Bitcoin mining machines, thereby leading to lower revenue and a larger amount of inventory, as well as the elimination of certain weaker players in the market. Such trend is expected to reverse as Bitcoin price started to recover in the second quarter of 2019. Furthermore, due to the decrease of the Bitcoin price in 2018, we made a total provision of RMB786.0 million (US$114.5 million) during the year and recorded a gross margin of 18.8%, compared with gross margin of 46.2% in 2017. As the Bitcoin price remained relatively low throughout the first quarter of 2019 and only started to recover in the second quarter of 2019, we continued to experience low demand of our Bitcoin mining machines despite a low selling price, and our revenue for the six months ended June 30, 2019 decreased by 85.2% from the six months ended June 30, 2018. The Bitcoin price drop in 2018 also led to our offering of credit sales, and such Bitcoin price trend also caused our customers who purchased our Bitcoin mining products on credit to be less willing to make payment. We consider the portion of the contract price on credit and not yet collected as implicit price concession and we recognize revenue based on subsequent information regarding our collection of such portion of the contract price. We only recognize the portion of contract price we received up to the issuance date of our financial statements to be our revenue for the period covered by such financial statements. Payment received subsequent to the issuance of our financial statements will be recognized as

revenue in a subsequent period. For 2018 and the six months ended June 30, 2019, we recognized the uncollected portion of the contract price of RMB152.8 million (US$22.3 million) and RMB9.6 million (US$1.4 million), respectively, as price concession. To the extent we collect any of these outstanding uncollected portion of the contract price, we will recognize as revenue such collected amount in subsequent period(s).

Going forward, if the Bitcoin price fluctuates significantly, we expect to experience a significant corresponding fluctuation in both sales volume and average selling prices of our Bitcoin mining machines, as well as a significant inventory and prepayment write down that erodes our profitability in the case of a significant Bitcoin price drop. See "Risk Factors—Risks Relating to Our Business and Industry—Our results of operations have been and are expected to continue to be impacted by Bitcoin price fluctuation."

Acceptance and Development of Blockchain Technology Applications, Especially Bitcoin

Our current blockchain product is designed for Bitcoin mining. In recent years, the cumulative number of global Bitcoin mining transactions has rapidly increased, and the total revenue generated by Bitcoin mining, which includes new Bitcoins awarded for blocks created as well as Bitcoins charged for transactions verified, has rapidly increased at a CAGR of 152.8% from US$21.1 million in 2012 to US$5,508.6 million in 2018, according to Frost & Sullivan. Driven by such trends, the market size of ASIC-based Bitcoin hardware has grown from RMB1.1 billion in 2014 to RMB21.4 billion in 2018, representing a CAGR of 110.0%. Our net revenues derived from sales of Bitcoin mining machines and Bitcoin mining machine parts were RMB1,303.1 million in 2017, RMB2,698.3 million (US$393.1 million) in 2018 and RMB287.2 million (US$41.8 million) in the six months ended June 30, 2019. Any adverse development in blockchain technology and the cryptocurrency markets, and in the Bitcoin market in particular, can significantly impact our results of operations. The Bitcoin market can also be affected by the following factors, among others: (i) different views regarding the decentralized nature of cryptocurrencies, (ii) acceptance of cryptocurrencies as an investment instrument as well as a currency for payment, (iii) competing cryptocurrencies to Bitcoin, and (iv) changes in the Bitcoin algorithm and the mechanism of mining. See "Risk Factors—Risks Relating to Our Business and Industry—We derive a significant portion of our revenues from our Bitcoin mining machines. If the market for Bitcoin mining machines ceases to exist or diminishes significantly, our business and results of operations would be materially harmed," "—Changes in the Bitcoin algorithm or the mining mechanism may materially and adversely affect our business and results of operations" and "—The industries in which we operate are characterized by constant changes. If we fail to continuously innovate and to provide products that meet the expectations of our customers, we may be unable to attract new customers or retain existing customers, and hence our business and results of operations may be adversely affected.

Development of AI Technology, Especially Edge Computing

In addition to our Bitcoin mining machines, we have also developed ASICs for AI applications and have continued to make investments in the edge computing area. Net revenues derived from the sale of our AI products was RMB275.2 thousand (US$40.1 thousand) in 2018 and RMB467.7 thousand (US$68.1 thousand) for the six months ended June 30, 2019. The development of AI technology, especially as it relates to edge computing, and the acceptance of ASICs for AI applications is crucial to our future success in diversifying our product offering. According to Frost & Sullivan, the global AI chips market is expected to reach approximately RMB221.6 billion by the end of 2023, representing a CAGR of 45.1% from RMB34.4 billion in 2018. ASICs in the processing chips market are expected to experience the fastest growth at a CAGR of 15.8% from US$31.7 billion in 2018 to US$66.1 billion in 2023. However, if any adverse development in AI technology arises or if ASICs for AI applications are not widely accepted, our results of operations and prospects may be negatively impacted.

Performance and Cost of Our Products

The pricing of and demand for our Bitcoin mining machines and our AI chips are closely related to their performance. In general, more advanced process technologies, such as the 7nm process technology used in our Bitcoin mining machines, can accommodate designs that produce ASICs with higher power efficiency. The introduction of new process and design technologies also enables us to gradually lower the production costs of ASICs with comparable computing power. However, the application of such process technologies also commands high initial setup costs, particularly when the new production techniques first become available, which translates to higher per unit costs. As a result, our new generation ASICs using the most advanced process technologies will need to achieve strong sales in order to justify the initial setup costs of the new production techniques and maintain our profitability. At the same time, as the most advanced production capabilities of IC foundries ramp up, the initial high unit cost for IC fabrication may also decrease, which will likely translate to lower fabrication costs and a positive effect on our business, results of operations and financial condition.

Production Capacity

As a fabless IC design company, we outsource the fabrication process of our ICs to third-party foundry partners, and we outsource the testing and packaging process to third-party testing and packaging partners. We work closely with a limited number of such production partners. For example, we currently mainly rely on one third-party foundry for our Bitcoin mining machine business, and we cannot guarantee that it will be able to meet our manufacturing requirements or capacity or that it will not raise its prices. See "Risk Factors—Risks Relating to Our Business and Industry—Our Bitcoin mining machine business mainly depends on supplies from a single third-party foundry, and any failure to obtain sufficient foundry capacity from this foundry would significantly delay the shipment of our products." As a result, our ability to quickly respond to market demand and meet production timelines, as well as to price our products competitively, is highly dependent on our third-party production partners. If our production partners are unable to meet our production capacity requirements or deliver products that meet our quality standards on a timely basis, our results of operations will be adversely affected.

We may also incur significant cash outflow at the early stages of our production process because we are required to make prepayments to some of our third-party production partners to secure their production capacity beforehand, which may affect our liquidity position. In addition, any failure by our third-party production partners to perform their obligations in a timely manner may subject us to counterparty risk and make it difficult or impossible for us to fulfill our customers' orders, which would harm our reputation and negatively affect our business, results of operations and financial condition.

Investment in Research and Development

We are a fabless IC design company. Our ability to design high quality ASICs largely depends on our continued investment in research and development, and our results of operations are affected by related expenses. Historically, we have invested substantially in research and development to build and enhance our competitive edge, and we need to continue to devote resources to research and development activities in order to (i) design and develop new or enhanced ASICs for Bitcoin mining applications, (ii) design and develop new or enhanced ASICs for AI applications, and (iii) expand our product offering and penetrate into new application markets, particularly into markets for ASIC applications that require high performance and strong computing power. In addition, as the tape-out process is extremely costly, our historical 100% successful tape-out rate has contributed to lower research and development expenses. We cannot assure you that we can continue to have a high successful tape-out rate. Unsuccessful tape-outs will significantly increase our research and development expenses. Our ability to design and develop new or enhanced ASICs for Bitcoin mining and AI applications and ASICs for other applications with market potential as well as maintain a high tape-out rate will have a material effect on our business, results of operations, financial condition and profitability.

Regulatory Environment

Our customers are primarily based in the PRC, and we expect a growing portion of our revenues to be derived from sales outside of the PRC. As such, we need to make efforts and incur costs to ensure that we are compliant with the existing laws and regulations relating to our business in the various jurisdictions that are material to our business and operations, and to comply with new laws and regulations or changes under existing laws and regulations that may arise in the future. Our ability to anticipate and respond to potential changes in government policies and regulations will have a significant impact on our business operations in such countries and our overall results of operations. See "Risk Factors—Risks Relating to Our Business and Industry—We are subject to risks associated with legal, political or other conditions or developments regarding holding, using or mining of Bitcoins, which could negatively affect our business, results of operation and financial position."

Critical Accounting Policies, Judgments and Estimates

We prepare our financial statements in accordance with U.S. GAAP, which requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the balance sheet dates and the reported amounts of revenues and expenses during the reporting periods. We continually evaluate these judgments and estimates based on our own historical experience, knowledge and assessment of current business and other conditions, our expectations regarding the future based on available information and assumptions that we believe to be reasonable, which together form our basis for making judgments about matters that are not readily apparent from other sources. Since the use of estimates is an integral component of the financial reporting process, our actual results could differ from those estimates. Some of our accounting policies require a higher degree of judgment than others in their application.

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 that should be considered when reviewing our financial statements. We believe the following accounting policies involve the most significant judgments and estimates used in the preparation of our financial statements. You should read the following description of critical accounting policies, judgments and estimates in conjunction with our consolidated financial statements and other disclosures included in this prospectus.

Revenue Recognition

We have adopted the new revenue standard, ASC 606, Revenue from Contracts with Customers (Topic 606) for all periods presented. Consistent with the criteria of Topic 606, we recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services.

Products revenue

We generate revenue primarily from the sale of Bitcoin mining machines directly to customers such as businesses or individuals engaged in Bitcoin mining activities. As the Bitcoin price fluctuates, we may adjust selling price of Bitcoin mining machines on a weekly basis, as customers are only willing to pay for machines based on their ability to recover their investment through mining Bitcoins over a relatively short period of time. Our sales arrangements usually require a full prepayment before the delivery of products. However, as the Bitcoin price experienced a significant downtrend during 2018, we started to offer credit sales to certain significant, long-standing customers in China. The payment terms under credit sales generally consist of 50% down payment and 50% subsequent payments over a period of 90 to 180 days. With the adoption of a more dynamic pricing strategy, we expect to accept a lower amount of consideration (as compared to fixed and promised consideration that is set out in the sales contracts) from our credit sales customers if the Bitcoin prices continue to decrease in the post-sale period; hence providing implicit price concessions to these customers and the ultimate amount of price concessions to be provided to these credit sales customers is highly dependent on the changes of Bitcoin prices.

Revenues from product sales are recorded at the net sales price (transaction price), which includes an estimation of variable consideration which primarily results from implicit price concessions on credit sales. The amount of variable consideration is included in the transaction price to the extent it is not constrained and it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period. Actual amounts of consideration ultimately received may differ from the estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect revenue and earnings in the period such variances are known. With respect to the determination of variable consideration resulting from the amount of implicit price concessions, since the Bitcoin market price is volatile and unpredictable and changes in the Bitcoin price will greatly affect the implicit price concession to be provided by us to our credit sales customers, we historically have not been able to overcome the constraint on variable consideration at the time of product sale or at subsequent period-end dates until we have knowledge about the resolution of the uncertainty through payment by the customer. We use all the subsequent information through the date of issuance of our financial statements to adjust the estimated variable consideration for the period, representing updated information on the best estimate of the amount of transaction price that is probable of being received and therefore not constrained as of period-end. We will continue to monitor and evaluate historical data and other factors in determining the total

transaction price (including implicit price concessions) that can be recognized for product sales on credit. In 2017, 2018 and the six months ended June 30, 2019, the contract amounts that were not included in the transaction prices due to the aforementioned variable consideration constraint were nil, RMB152.8 million (US$22.3 million) and RMB9.6 million (US$1.4 million), respectively. In 2017, 2018 and the six months ended June 30, 2018 and 2019, the adjustment to the previously estimated variable consideration amounted to nil, nil, nil and RMB10.3 million (US$1.5 million), respectively.

We recognize products revenue at a point in time based on management's evaluation of when the control of the products have been passed to customers. The transfer of control is considered complete when products have been picked up by or shipped to our customers.

We offer a standard product warranty of no longer than six months that the product will operate under normal use. At the time revenue is recognized, an estimate of future warranty costs is recorded as a component of cost of revenues. The reserves established are regularly monitored based upon historical experience and any actual claims charged against the reserve. The amount of total warranty costs incurred was immaterial for 2017, 2018 and the six months ended June 30, 2019, respectively.

Services revenue

We also generate a small portion of revenue from our maintenance services under separate contracts. Revenue from the maintenance service to the customer is recognized when the related services have been rendered to the customer.

Inventories

Inventories, consisting of finished goods, work in process, raw materials and goods in transit, which are purchased from contract manufacturers and component suppliers. Inventories are stated at the lower of cost and net realizable value. Cost of inventory is determined using the weighted average cost method. Adjustments are recorded to write down the cost of inventory to the estimated net realizable value due to slow-moving and obsolete inventory, which is dependent upon factors such as historical and forecasted consumer demand, and promotional environment. We take ownership, risks and rewards of the products purchased.

In accordance with ASC 855-10-55-1(b), we consider all data available, including future demand and subsequent changes in product prices, that may provide additional information about the valuation of inventories at the balance sheet date.

Share-based Compensation

We grant restricted shares and share options to eligible employees and account for share-based compensation in accordance with ASC 718, Compensation—Stock Compensation.

Employees' share-based compensation awards are measured at the grant date fair value of the awards and recognized as expenses (a) immediately at the grant date if no vesting conditions are required; or (b) for share-based awards granted with only service conditions, using the graded vesting method, net of estimated forfeitures, over the vesting period; or (c) for share-based awards granted with service conditions and the occurrence of an initial public offering as a performance condition, cumulative share-based compensation expenses for the options that have satisfied the service condition should be recorded upon the completion of the initial public offering, using the graded vesting method, or (d) for share-based awards with service conditions and other performance conditions, using the graded vesting method, net of estimated pre-vesting forfeitures, over the vesting period.

A change in any of the terms or conditions of share-based awards is accounted for as a modification of the awards. We calculate incremental compensation expense of a modification as the excess of the fair value of the modified awards over the fair value of the original awards immediately before its terms are modified at the modification date. For vested awards, we recognize incremental compensation cost in the period when the modification occurs. For awards not being fully vested, we recognize the sum of the incremental compensation expense and the remaining unrecognized compensation expense for the original awards over the remaining requisite service period after modification.

Share-based compensation in relation to the restricted shares is measured based on the fair market value of our ordinary shares at the grant date of the award. Prior to the listing, estimates of the fair value of our ordinary shares involve significant assumptions that might not be observable in the market, and a number of complex and subjective variables, including discount rate, and subjective judgments regarding our projected financial and operating results, our unique business risks, the liquidity of our ordinary shares and our operating history and prospects at the time the grants are made. The fair value of our ordinary shares was determined with assistance from an independent valuation firm.

Share-based compensation in relation to the share options is estimated using the Binomial Option Pricing Model. The determination of the fair value of share options is affected by the share price of our ordinary shares as well as the assumptions regarding a number of complex and subjective variables, including the expected share price volatility, risk-free interest rate, exercise multiple and expected dividend yield. The fair value of these awards was determined with assistance from an independent valuation firm with the following assumptions:

	Share options granted as of October 8, 2016
Risk-free interest rate	2.29%
Estimated volatility rate	36.53%
Dividend yield	0.0%
Exercise multiple	2.8x
Expected term (in years)	0.83
Exercise price (RMB)	0.023
Fair value of share options (RMB)	1.30

The risk-free rate of interest is based on the yield curve of China Government Bond as of valuation date. Volatility is estimated based on annualized standard deviation of daily stock price return of comparable companies for the period before valuation date and with similar span as the expected expiration term.

Determining the fair value of the share options required us to make complex and subjective judgments, assumptions and estimates, which involved inherent uncertainty. Had we used different assumptions and estimates, the resulting fair value of the share options and the resulting share-based compensation expenses could have been different.

The following table sets forth the fair value of ordinary shares and share-based awards estimated at the valuation dates indicated below with the assistance from an independent valuation firm:

Date	Type	Share-basedawardsgranted	Exercise price	Intrinsic Value	Weighted averagefair valueof share-basedawards	Fair value ofordinaryshares	Discount for lack ofmarketability	Discount rate	Type of valuations
Oct 8, 2016	Share option	39,600,000	0.023	1.30	1.30	1.32	26.%	28.0%	Retrospective
Nov 22, 2017	Restricted share unit	71,200,000	0.015	N/A	1.56	1.58	19.0%	16.5%	Retrospective
Apr 24, 2018	Restricted ordinary share	19,594,000	—	N/A	2.56	2.56	16.0%	16.0%	Retrospective
Apr 30, 2019	Share transfer	N/A	N/A	N/A	N/A	2.25	16.0%	16.0%	Contemporaneous

The major assumptions used in calculating the fair value of ordinary shares include:

- Weighted average cost of capital, or WACC: The discount rates we listed in the table above were based on the WACC determined based on a consideration of the factors, including risk-free rate, comparative industry risk, equity risk premium, company size and non-systematic risk factors.
- Comparable companies: In deriving the WACCs, which are used as the discount rates under the income approach, eight publicly traded companies were selected for reference as our guideline companies. The guideline companies were selected based on the following criteria: (i) companies with business model of fabless IC design and (ii) companies that are publicly listed in the United States or publicly listed in China.
- Discount for lack of marketability, or DLOM: DLOM was quantified by the Black-Scholes put options model. Under this option-pricing model, which assumed that the put option is struck at the spot price of the stock before the privately held shares can be sold, the cost of the put option was considered as a basis to determine the DLOM. This option pricing model is one of the methods commonly used in estimating DLOM as it can take into consideration factors like timing of a liquidity event, such as an initial public offering, and estimated volatility of our shares. The farther the valuation date is from an expected liquidity event, the higher the put option value and thus the higher the implied DLOM. The lower DLOM is used for the valuation, the higher is the determined fair value of the ordinary shares.

The income approach involves applying appropriate discount rates to estimated cash flows that are based on earnings forecasts. The growth rates of our total revenues, as well as major milestones that we have achieved, contributed to the fair value of our ordinary shares to be RMB1.32 per share as of October 8, 2016, to be RMB1.58 per share as of November 22, 2017, to be RMB2.56 per share as of April 24, 2018 and to be RMB2.25 per share as of April 30, 2019. However, these fair values are inherently uncertain and highly subjective. The assumptions used in deriving the fair values are consistent with our business plan. These assumptions include: no material changes in the existing political, legal and economic conditions in China; our ability to retain competent management, key personnel and staff to support our ongoing operations; and no material deviation in market conditions from economic forecasts. These assumptions are inherently uncertain. The risks associated with achieving our forecasts were assessed in selecting the appropriate discount rates.

Components of Results of Operations

Revenue

We derive our revenue primarily from sales of Bitcoin mining machines.

The following table sets forth a breakdown of our revenue by services, each expressed in the absolute amount and as a percentage of our total revenue, for the periods indicated:

	Year ended December 31,					Six months ended June 30,				
	2017		2018			2018		2019		
	RMB	%	RMB	US$	%	RMB	%	RMB	US$	%
	(in millions, except for percentages)									
Products revenue	1,303.1	99.6	2,698.6	393.1	99.8	1,941.7	99.7	287.6	41.9	99.6
Blockchain products[(1)]	1,303.1	99.6	2,698.3	393.1	99.7	1,941.7	99.7	287.2	41.8	99.4
AI products	—	—	0.3	0.0	0.0	—	—	0.5	0.1	0.2
Service revenue	4.7	0.4	6.0	0.9	0.2	5.3	0.3	0.4	0.1	0.1
Other revenues	0.3	0.0	0.7	0.1	0.0	0.2	0.0	0.7	0.1	0.3

Total	**1,308.1**	**100.0**	**2,705.3**	**394.1**	**100.0**	**1,947.1**	**100.0**	**288.8**	**42.1**	**100.0**

Note:

(1) Substantially all of our blockchain products revenue is attributable to sales of Bitcoin mining machines, with the remainder consisting of other Bitcoin mining machine parts and accessories.

Our net revenue is primary affected by the number of Bitcoin mining machines sold and their average selling price. The average unit selling price of our Bitcoin mining machines is primarily affected by the Bitcoin price and the computing power per machine. The following table sets forth the sales volume and average selling prices generated by our different Bitcoin mining machines:

	Year ended December 31,						**Six months ended June 30,**					
	2017			**2018**			**2018**			**2019**		
	Revenue	**Volume**	**ASP**	**Revenue**	**Volume**	**ASP**	**Revenue**	**Volume**	**ASP**	**Revenue**	**Volume**	**ASP**
	RMB in millions	**set**	**RMB**	**RMB in millions**	**set**	**RMB**	**RMB in millions**	**set**	**RMB**	**RMB in millions**	**set**	**RMB**
A7 series[(1)]	1,296.5	294,523	4,402	76.3	20,576	3,710	76.3	20,576	3,710	–	–	–
A8 series[(2)]	–	–	–	2,436.8	503,237	4,842	1,830.5	245,735	7,449	213.7	212,000	1,0
A9 series[(3)]	–	–	–	129.5	35,324	3,665	–	–	–	62.4	40,862	1,5
A10 series[(4)]	–	–	–	–	–	–	–	–	–	3.4	490	7,0
Total	**1,296.5**	**294,523**	**4,402**	**2,642.5**	**559,137**	**4,726**	**1,906.8**	**266,311**	**7,160**	**279.5**	**253,352**	**1,1**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The Bitcoin price hike in late 2017 resulted in strong demand and higher average selling prices for our A7 and A8 series products. In 2018, a significant drop in the Bitcoin price reversed the trends, especially with respect to the average selling prices. As a result, our A9 series products released after the Bitcoin price drop, despite having much stronger computing power, had a lower average selling price as compared with our A7 and A8 series products. As the Bitcoin price slump continued in 2019 and only started to recover in the second quarter of 2019, the average selling price of our A8 and A9 series products further decreased in the six months ended June 30, 2019. Due to the general recovery of the Bitcoin price in the second quarter of 2019 as well as a higher computing power per machine, we were able to sell our A10 series products that we rolled out in April 2019 at a higher average selling price. We typically price our Bitcoin mining machine based on their computing power. In addition, we typically reduce the price of the previous generation of Bitcoin mining machines when we introduce a new generation of Bitcoin mining machines. Also, the selling price of our Bitcoin mining machines is closely related to their performance in terms of power-efficiency.

The following table sets forth the total computing power sold and average selling prices of our Bitcoin mining machines expressed in terms of computing power:

	Year ended December 31,						**Six months ended June 30,**				
	2017			**2018**			**2018**			**2019**	
	Revenue	**Total ComputingPowerSold**	**ASP per Thash**	**Revenue**	**Total ComputingPower Sold**	**ASP per Thash**	**Revenue**	**Total ComputingPower Sold**	**ASP per Thash**	**Revenue**	**Total Compu Sold**
	RMB in millions	**Thash/s**	**RMB**	**RMB in millions**	**Thash/s**	**RMB**	**RMB in millions**	**Thash/s**	**RMB**	**RMB in millions**	**Thash**
A7 series[(1)]	1,296.5	2,114,637	613	76.3	151,131	505	76.3	151,131	505	–	–
A8 series[(2)]	–	–	–	2,436.8	6,305,119	386	1,830.5	2,941,301	622	213.7	3,(
A9 series[(3)]	–	–	–	129.5	702,416	184	–	–	–	62.4	78(
A10 series[(4)]	–	–	–	–	–	–	–	–	–	3.4	18,

Total	**1,296.5**	**2,114,637**	**613**	**2,642.5**	**7,158,666**	**369**	**1,906.8**	**3,092,432**	**617**	**279.5**	**3,**

Notes:

(1)	Mainly includes our A721, A741 and A761 Bitcoin mining machines.
(2)	Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.
(3)	Mainly includes our A921 and A911 Bitcoin mining machines.
(4)	Mainly includes our A1047 Bitcoin mining machines.

In general, the average selling price of our Bitcoin mining machines in terms of computing power decreased as a result of the overall technology advancement that led to a lower unit cost and the fact that we typically decrease the price of our previous generation of Bitcoin mining machines as we introduce the new generation of Bitcoin mining machines.

Cost of revenues

Our cost of revenues consists of product costs, including costs of raw materials, costs of contract manufacturers for production, shipping and handling costs, manufacturing and tooling equipment depreciation, warehousing costs as well as slow-moving and obsolete inventory and prepayment write-downs and tax surcharges. The following table sets forth a breakdown of our cost of revenue, expressed as an absolute amount and as a percentage of our total cost of revenue, for the years indicated.

	Year ended December 31,					**Six months ended June 30,**				
	2017		**2018**			**2018**		**2019**		
	RMB	**%**	**RMB**	**US$**	**%**	**RMB**	**%**	**RMB**	**US$**	**%**
	(in millions, except for percentages)									
Cost of revenue excluding the impact of write-downs	703.7	100.0	1,482.3	215.9	67.5	713.4	47.6	720.0	104.9	259.4
Inventory and prepayment write-down	—	—	786.0	114.5	35.8	786.0	52.4	0.8	0.1	0.3
Realized inventory and prepayment write-down	—	—	(71.1)	(10.4)	(3.2)	—	—	(443.3)	(64.6)	(159.7)
Total cost of revenue	**703.7**	**100.0**	**2,197.2**	**320.1**	**100.0**	**1,499.4**	**100.0**	**277.5**	**40.4**	**100.0**

Historically, the relative weight of the components of our cost of revenue remained relatively stable without taking into consideration the inventory and prepayment write down provision. As we employ a fabless model, costs of contract manufacturing and raw materials is the largest component of our cost of revenue. Going forward, as we continue our fabless model, we do not expect any major changes to the relative weight of the components of our cost of revenue without taking into consideration the inventory and prepayment write down provision.

We make inventory and prepayment write downs when we determine that we are unlikely to sell our inventory at or above their cost. The amount to be written down is the difference between the cost of our inventory and the estimated realizable value of our inventory, which is significantly affected by the Bitcoin price. In 2018, in view of the Bitcoin price drop, the prevailing market demand of our Bitcoin mining machines and the prevailing retail price of our Bitcoin mining machine, we determined that under such conditions it was unlikely that we would be able to sell those Bitcoin mining machines at or above their cost. As a result, based on our estimation of market conditions with reference to the Bitcoin price, we recorded an inventory and prepayment write down of RMB786.0 million (US$114.5 million). Going forward, if we are able to sell such inventories above their cost, the cost of sales for those machines will be net of such write down, which in turn will have the effect of increasing our gross profit for the period. The price of Bitcoin has experienced recovery starting in the second quarter of 2019. We expect our results of operations, including the quantity of Bitcoin mining machines sold and their average selling price, to increase with the recovery of the Bitcoin price in 2019. However, our results of operations generally lag behind the increase in the Bitcoin price.

Our cost of revenue increased as an absolute amount during the periods indicated primarily due to the increase in the sales volume of our Bitcoin mining machines. The table below sets forth the per unit costs of our Bitcoin mining machines:

	Year ended December 31,						**Six months ended June 30,**					
	2017			**2018**			**2018**			**2019**		
	Cost[(1)]	**Volume**	**Per unit cost**	**Cost[(1)]**	**Volume**	**Per unit cost**	**Cost[(1)]**	**Volume**	**Per unit cost**	**Cost[(1)]**	**Volume**	**Per unit cost**
	RMB in millions	**set**	**RMB**	**RMB in millions**	**set**	**RMB**	**RMB in millions**	**set**	**RMB**	**RMB in millions**	**set**	**RMB**
A7 series[(2)]	693.3	294,523	2,354	51.1	20,576	2,482	51.1	20,576	2,482	—	—	—
A8 series[(3)]	—	—	—	1,243.9	503,237	2,472	641.5	245,735	2,610	539.7	212,000	2,546

A9 series[4]	–	–	–	154.9	35,324	4,385	–	–	–	170.8	40,862	4,180
A10 series[5]	–	–	–	–	–	–	–	–	–	2.8	490	5,640
Total	**693.3**	**294,523**	**2,354**	**1,449.9**	**559,137**	**2,593**	**692.5**	**266,311**	**2,600**	**713.3**	**253,352**	**2,815**

Notes:

(1) Without taking into consideration the inventory and prepayment write down provision of nil, RMB786.0 million (US$114.5 million), RMB786.0 million and RMB0.8 million (US$0.1 million) in 2017, 2018 and the six months ended June 30, 2018 and 2019, respectively, as well as a realized inventory and prepayment write down of nil, RMB71.1 million (US$10.4 million), nil and RMB443.3 million (US$64.6 million), respectively, for the same periods.

(2) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(3) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(4) Mainly includes our A921 and A911 Bitcoin mining machines.

(5) Mainly includes our A1047 Bitcoin mining machines.

The following table sets out the sales cost and average selling cost of our Bitcoin mining machines expressed in terms of computing power:

	Year ended December 31,						**Six months ended June 30,**				
	2017			**2018**			**2018**			**2019**	
	Cost[1]	**Total ComputingPower Sold**	**Cost per Thash**	**Cost[1]**	**Total ComputingPower Sold**	**Cost per Thash**	**Cost[1]**	**Total ComputingPower Sold**	**Cost per Thash**	**Cost[1]**	**Total ComputingP Sold**
	RMB in millions	**Thash/s**	**RMB**	**RMB in millions**	**Thash/s**	**RMB**	**RMB in millions**	**Thash/s**	**RMB**	**RMB in millions**	**Thash/s**
A7 series[2]	693.3	2,114,637	328	51.1	151,131	338	51.1	151,131	338	–	–
A8 series[3]	–	–	–	1,243.9	6,305,119	197	641.5	2,941,301	218	539.7	3,098,14
A9 series[4]	–	–	–	154.9	702,416	221	–	–	–	170.8	780,513
A10 series[5]	–	–	–	–	–	–	–	–	–	2.8	18,130
Total	**693.3**	**2,114,637**	**328**	**1,449.9**	**7,158,666**	**203**	**692.5**	**3,092,432**	**224**	**713.3**	**3,896,78**

Notes:

(1) Without taking into consideration the inventory and prepayment write down provision of nil, RMB786.0 million (US$114.5 million), RMB786.0 million and RMB0.8 million (US$0.1 million) in 2017, 2018 and the six months ended June 30, 2018 and 2019, respectively, as well as a realized inventory and prepayment write down of nil, RMB71.1 million (US$10.4 million), nil and RMB443.3 million (US$64.6 million), respectively, for the same periods.

(2) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(3) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(4) Mainly includes our A921 and A911 Bitcoin mining machines.

(5) Mainly includes our A1047 Bitcoin mining machines.

In general, we tend to incur higher production costs per Thash for our Bitcoin mining machines using newly implemented process technologies early in their life cycle due to the initial set up costs. We were also able to optimize our design as a same generation of processing technology matures, which can lead to a lower per Thash cost for newer products. The number of ASICs installed in each unit of our Bitcoin mining machines also affects the per unit production costs for our Bitcoin mining machines. The cost of other parts and accessories can also affect our production costs. As a result, (i) our A7 series products sold in 2018 had more ASICs and were bundled with power adapters and had higher per unit costs as compared with 2017, (ii) our A8 series products that employ improved design for 16nm processing technology and a larger number of ASICs have lower per unit production costs and significantly lower per Thash production costs as compared with our A7 series products which also employ 16nm ASICs and have a lower number of ASICs installed, (iii) our A921 Bitcoin mining machine that employs 7nm ASICs with much stronger computing power have significantly higher per unit production costs and higher per Thash production costs as compared with our A8 series products due to significantly higher set-up cost and related expenses from employing new

technology, and (iv) our A10 series products that employ improved design for 16nm processing technology and a larger number of ASICs have higher per unit production costs due to the larger number of ASICs, and lower per Thash production costs due to the advancement of production technology, as compared with our A9 series products.

Gross profit and gross profit margin

Our gross profit and gross profit margin are primarily affected by Bitcoin prices, which have a significant effect on the average selling price of our products, and, to a lesser extent, the average per unit production costs of our Bitcoin mining machines. In 2017, 2018 and the six months ended June 30, 2019, our gross profit was RMB604.4 million, RMB508.1 million (US$74.0 million) and RMB11.2 million (US$1.6 million), respectively. Our overall gross profit margin was 46.2%, 18.8% and 3.9%, respectively, in the same periods. A strong increase in the Bitcoin price in late 2017 drove the significant increase in both the demand and average selling price of our Bitcoin mining machines in the first half of 2018. As the Bitcoin price dropped in 2018, we began to experience a much lower demand and average selling price of our Bitcoin mining machines, thereby leading to lower revenue and a large amount of inventory. Furthermore, we made an inventory and prepayment write down of RMB786.0 million (US$114.5 million) in 2018 in response to the stagnant demand for our products and the decreased Bitcoin price, which resulted in a significant increase in our cost of sales and therefore lower gross margin in 2018. As our results of operations generally lag behind the change of the Bitcoin price, the decrease of the Bitcoin price in the second half of 2018 continued to impact our operation during the six months ended June 30, 2019, and resulted in a low gross margin.

Operating expenses

Our operating expenses include research and development expenses, sales and marketing expenses and general and administrative expenses. The following table sets forth components of our operating expenses, both in absolute amount and as a percentage of our total revenue, for the periods presented:

	Year ended December 31,					Six months ended June 30,				
	2017		2018			2018		2019		
	RMB	%	RMB	US$	%	RMB	%	RMB	US$	%
	(in millions, except for percentages)									
Research and development expenses	99.8	7.6	189.7	27.6	7.0	70.8	3.6	67.2	9.8	23.3
Share-based compensation expense included in research and development expenses	25.1	1.9	9.6	1.4	0.4	4.8	0.2	4.8	0.7	1.7
Sales and marketing expenses	20.7	1.6	38.7	5.6	1.4	27.2	1.4	7.9	1.2	2.8
Share-based compensation expense included in sales and marketing expenses	0.1	0.0	1.1	0.2	0.0	0.6	0.0	0.2	0.0	0.1
General and administrative expenses	125.3	9.6	146.7	21.4	5.4	73.7	3.8	263.0	38.3	91.1
Share-based compensation expense included in general and administrative expenses	70.3	5.4	7.9	1.1	0.3	4.1	0.2	216.0	31.5	74.8
Total	**245.8**	**18.8**	**375.1**	**54.6**	**13.9**	**171.7**	**8.8**	**338.1**	**49.3**	**117.1**

Research and development expenses. Research and development expenses primarily consist of salary and welfare for research and development personnel (including share-based compensation), consulting and contractor expenses, testing and tooling materials and other expenses associated with research and development. Substantially all of our research and development expenses are related to developing new products and services and improving existing products and services.

Sales and marketing expenses. Sales and marketing expenses consist primarily of salary and welfare for sales and marketing personnel (including share-based compensation), promotion and marketing expenses and other expenses associated with sales and marketing.

General and administrative expenses. General and administrative expenses consist primarily of salary and welfare for general and administrative personnel (including share-based compensation), rental expenses and depreciation, allowance for doubtful receivables, entertainment expense, general office expense and professional service fees.

Taxation

Cayman Islands

The Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciation and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to us levied by the government of the Cayman Islands except for stamp duties which may be applicable to instruments executed in, or after execution, brought within the jurisdiction of the Cayman Islands. In addition, the Cayman Islands does not impose withholding tax on dividend payments.

Hong Kong

Our subsidiary incorporated in Hong Kong is subject to Hong Kong profit tax at a rate of 16.5%. No Hong Kong profit tax has been levied as we did not have an assessable profit that was earned in or derived from the Hong Kong subsidiary during the periods presented. Hong Kong does not impose a withholding tax on dividends.

Prc

In March 2007, the National People's Congress of China enacted the Enterprise Income Tax Law, which became effective on January 1, 2008 and amended on February 24, 2017. The Enterprise Income Tax Law provides that enterprises organized under the laws of jurisdictions outside China with their "de facto management bodies" located within China may be considered PRC resident enterprises and therefore subject to the PRC EIT at the rate of 25% on their worldwide income. The Implementing Rules of the Enterprise Income Tax Law further define the term "de facto management body" as the management body that exercises substantial and overall management and control over the business, personnel, accounts and properties of an enterprise.

While we do not currently consider our company or any of our overseas subsidiaries to be a PRC resident enterprise, there is a risk that the PRC tax authorities may deem our company or any of our overseas subsidiaries to be a PRC resident enterprise since a substantial majority of the members of our management team as well as the management team of our overseas subsidiaries are located in China, in which case we or the applicable overseas subsidiaries, as the case may be, would be subject to the PRC EIT at the rate of 25% on worldwide income. If the PRC tax authorities determine that our Cayman Islands holding company is a "resident enterprise" for PRC EIT purposes, a number of unfavorable PRC tax consequences could follow.

Under the Enterprise Income Tax Law and its implementation regulations issued by the State Council, a 10% PRC withholding tax is applicable to dividends paid to investors that are nonresident enterprises, which do not have an establishment or place of business in the PRC or which have such establishment or place of business but the dividends are not effectively connected with such establishment or place of business, to the extent such dividends are derived from sources within the PRC.

In addition, any gain realized on the transfer of shares by such investors is also subject to PRC tax at a rate of 10%, if such gain is regarded as income derived from sources within the PRC. If we are deemed to be a PRC resident enterprise, dividends paid on our ordinary shares or ADSs, and any gain realized from the transfer of our ordinary shares or ADSs, may be treated as income derived from sources within the PRC and may as a result be subject to PRC taxation.

Furthermore, if we are deemed to be a PRC resident enterprise, dividends paid to individual investors who are non-PRC residents and any gain realized on the transfer of ADSs or ordinary shares by such investors may be subject to PRC tax at a current rate of 20% (which in the case of dividends may be withheld at source). Any PRC tax liability may be reduced under applicable tax treaties or tax arrangements between China and other jurisdictions. If we or any of our subsidiaries established outside China are considered to be a PRC resident enterprise, it is unclear whether holders of the ADSs or ordinary shares would be able to claim the benefit of income tax treaties or agreements entered into between China and other countries or areas.

In April 2018, the Ministry of Finance, or MOF, and State Administration of Taxation, or SAT, jointly promulgated the Circular of the MOF and the SAT on Adjustment of Value-Added Tax Rates, or Circular 32, according to which (i) for VAT taxable sales or imports of goods originally subject to VAT rates of 17% and 11% respectively, such tax rates were adjusted to 16% and 10%, respectively; and (ii) for exported goods originally subject to a tax rate of 17% and an export tax refund rate of 17%, the export tax refund rate was adjusted to 16%. Circular 32 became effective on May 1, 2018 and superseded existing provisions which were inconsistent with Circular 32.

Pursuant to the Announcement on Relevant Policies for Deepening Value-Added Tax Reform, which was promulgated by MOF, SAT and the General Administration of Customs on March 20, 2019, where (i) for VAT taxable sales or imports of goods originally subject to VAT rates of 16%, such tax rates shall be adjusted to 13%; (ii) for exported goods originally subject to a tax rate of 16% and an export tax refund rate of 16%, the export tax refund rate shall be adjusted to 13%.

We are also subject to VAT at a rate of approximately 6% on the services and solutions we provide to our customers, less any deductible VAT we have already paid or borne. We are also subject to surcharges on VAT payments in accordance with PRC law.

`Internal Control over Financial Reporting`

Prior to this offering, we have been a private company with limited accounting personnel and other resources with which to address our internal controls and procedures, and we were never required to evaluate our internal controls within a specified period. As a result, we may experience difficulty in meeting these reporting requirements in a timely manner. Our management has not completed an assessment of the effectiveness of our internal control over financial reporting, and our independent registered public accounting firm has not conducted an audit of our internal control over financial reporting. However, in the course of preparing and auditing our consolidated financial statements for the years ended December 31, 2017 and 2018, we and our independent registered public accounting firm identified two material weaknesses in our internal control over financial reporting as of December 31, 2018. In accordance with reporting requirements set forth by the SEC, a "material weakness" is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our company's annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

The material weaknesses identified are related to (i) our lack of competent financial reporting and accounting personnel with appropriate knowledge of U.S. GAAP and SEC reporting and compliance requirements, and (ii) our lack of documented financial closing policies and procedures, specifically those related to the period end expenses cut-off and accruals.

We have taken initiatives to improve our internal control over financial reporting to address the material weaknesses that have been identified, including:

- `implementing regular and continuous U.S. GAAP accounting and financial reporting training programs for our accounting and financial reporting personnel; and`
- `formalizing and standardizing our financial reporting control procedures and policies to improve the quality and accuracy of the period end financial closing process.`

In addition, we plan to take the following initiatives to improve our internal control over financial reporting to address the material weaknesses that have been identified:

- hiring additional qualified accounting and reporting personnel who are equipped with the relevant U.S. GAAP and SEC reporting experience and qualifications to strengthen our financial reporting function and to set up a financial and system control framework; and
- enhancing our internal audit function as well as engaging an external consulting firm to assist us with assessing our Sarbanes-Oxley compliance readiness and improving overall internal controls.

However, we cannot assure you that we will complete the implementation of these measures in a timely manner. See "Risk Factors—Risks Relating to Our Business and Industry—We have identified two material weaknesses in our internal controls as of December 31, 2018, and if we fail to maintain an effective system of internal controls, our ability to accurately and timely report our financial results or prevent fraud may be adversely affected, and investor confidence and the market price of the ADSs may be adversely affected."

As a company with less than US$1.07 billion in revenue for our last fiscal year, we qualify as an "emerging growth company" pursuant to the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other requirements that are otherwise applicable generally to public companies. These provisions include an exemption from the auditor attestation requirement under Section 404 of the Sarbanes-Oxley Act of 2002, related to the assessment of the effectiveness of the emerging growth company's internal control over financial reporting.

Results of Operations

The following table sets forth a summary of our consolidated results of operations for the periods indicated. This information should be read together with our consolidated financial statements and related notes included elsewhere in this prospectus. The operating results in any period are not necessarily indicative of the results that may be expected for any future period.

	Year ended December 31,					Six months ended June 30,				
	2017		2018			2018		2019		
	RMB	% of revenue	RMB	US$	% of revenue	RMB	% of revenue	RMB	US$	% of revenue
	(in millions)									
Net revenues:										
Products revenue	1,303.1	99.6	2,698.6	393.1	99.8	1,941.7	99.7	287.6	41.9	99.6
Service revenue	4.7	0.4	6.0	0.9	0.2	5.3	0.3	0.4	0.1	0.1
Other revenues	0.3	0.0	0.7	0.1	0.0	0.2	0.0	0.7	0.1	0.3
Total net revenues	**1,308.1**	**100.0**	**2,705.3**	**394.1**	**100.0**	**1,947.1**	**100.0**	**288.8**	**42.1**	**100.0**
Cost of revenues	(703.7)	(53.8)	(2,197.2)	(320.1)	(81.2)	(1,499.4)	(77.0)	(277.5)	(40.4)	(96.1)
Gross profit	**604.4**	**46.2**	**508.1**	**74.0**	**18.8**	**447.7**	**23.0**	**11.2**	**1.6**	**3.9**
Operating expenses:										
Research and development expenses	(99.8)	(7.6)	(189.7)	(27.6)	(7.0)	(70.8)	(3.6)	(67.2)	(9.8)	(23.3)
Sales and marketing expenses	(20.7)	(1.6)	(38.7)	(5.6)	(1.4)	(27.2)	(1.4)	(7.9)	(1.2)	(2.8)
General and administrative expenses	(125.3)	(9.6)	(146.7)	(21.4)	(5.4)	(73.7)	(3.8)	(263.0)	(38.3)	(91.1)
Total operating expenses	**(245.8)**	**(18.8)**	**(375.1)**	**(54.6)**	**(13.9)**	**(171.7)**	**(8.8)**	**(338.1)**	**(49.3)**	**(117.1)**
Income (loss) from operations:										
Interest income	0.2	0.0	4.2	0.6	0.2	0.6	0.0	0.9	0.1	0.3
Investment income	5.6	0.4	3.2	0.5	0.1	1.6	0.1	1.1	0.2	0.4
Interest expense and guarantee fee	—	—	(53.1)	(7.7)	(2.0)	(17.4)	(0.9)	(16.4)	(2.4)	(5.7)
Foreign exchange (loss) gain, net	(1.2)	(0.1)	(1.2)	(0.2)	(0.0)	(0.2)	(0.0)	3.7	0.5	1.3
Value added tax refunds	38.8	3.0	110.2	16.1	4.1	93.0	4.8	0.3	0.1	0.1
Other income, net	(1.1)	(0.1)	3.8	0.6	0.1	3.0	0.2	6.4	0.9	2.2

Income (loss) before income tax expenses	**401.0**	**30.7**	**200.2**	**29.2**	**7.4**	**356.4**	**18.3**	**(330.9)**	**(48.2)**	**(114.6)**
Income tax expense	(25.2)	(1.9)	(77.8)	(11.3)	(2.9)	(139.7)	(7.2)	–	–	–
Net income (loss)	**375.8**	**28.7**	**122.4**	**17.8**	**4.5**	**216.8**	**11.1**	**(330.9)**	**(48.2)**	**(114.6)**
Foreign currency translation adjustment, net of nil tax	–	–	(65.2)	(9.5)	(2.4)	(37.9)	(1.9)	16.4	2.4	5.7
Total comprehensive income (loss)	**375.8**	**28.7**	**57.2**	**8.3**	**2.1**	**178.9**	**9.2**	**(314.5)**	**(45.8)**	**(108.9)**

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Revenue. Our revenue decreased by 85.2% to RMB288.8 million (US$42.1 million) in the six months ended June 30, 2019 from RMB1,947.1 million in the six months ended June 30, 2018, primarily due to the decrease in the average selling price of our Bitcoin mining machines on a per Thash basis from RMB617 per Thash in the six months ended June 30, 2018 to RMB72 per Thash in the six months ended June 30, 2019, which in turn was the result of the Bitcoin price drop that began in 2018, and was partially offset by an increase in the sales volume of our Bitcoin mining machines in terms of computing power from 3.1 million Thash in the six months ended June 30, 2018 to 3.9 million Thash in the six months ended June 30, 2019.

Cost of revenue. Our cost of revenue decreased by 81.5% to RMB277.5 million (US$40.4 million) in the six months ended June 30, 2019 from RMB1,499.4 million in the six months ended June 30, 2018, primarily due to the decrease of average cost of our Bitcoin mining machines on a per Thash basis from RMB224 per Thash in the six months ended June 30, 2018 to RMB183 per Thash in the six months ended June 30, 2019, which in turn was the result of the advancement of production technology and the decrease of wafer cost, and was partially offset by an increase in the sales volume of our Bitcoin mining machines in terms of computing power from 3.1 million Thash in the six months ended June 30, 2018 to 3.9 million Thash in the six months ended June 30, 2019. Additionally, we recorded RMB443.3 million (US$64.6 million) of realized inventory and prepayment write down which reduced the cost of revenue in the six months ended June 30, 2019, whereas we recorded provision for inventories and prepayments write down of RMB786.0 million which increased the cost of revenue in the six months ended June 30, 2018.

Gross profit. As a result of the foregoing, our gross profit decreased by 97.5% to RMB11.2 million (US$1.6 million) in the six months ended June 30, 2019 from RMB447.7 million in the six months ended June 30, 2018. Our overall gross profit margin decreased significantly from 23.0% in the six months ended June 30, 2018 to 3.9% in the six months ended June 30, 2019, primarily due to the decrease of the Bitcoin price in the second half of 2018 which continued to impact our operation during the six months ended June 30, 2019.

Operating expenses. Our total operating expenses increased by 96.9% to RMB338.1 million (US$49.3 million) in the six months ended June 30, 2019 from RMB171.7 million in the six months ended June 30, 2018, primarily due to the increase in our general and administrative expenses, which was partially offset by the decrease in our sales and marketing expenses.

- *Research and development expenses*. Our research and development expenses decreased by 5.1% to RMB67.2 million (US$9.8 million) in the six months ended June 30, 2019 from RMB70.8 million in the six months ended June 30, 2018. However, due to the significant decrease in revenue, our research and development expenses as a percentage of our revenues increased to 23.3% in the six months ended June 30, 2019 from 3.6% in the six months ended June 30, 2018.

- *Sales and marketing expenses*. Our sales and marketing expenses decreased by 70.8% to RMB7.9 million (US$1.2 million) in the six months ended June 30, 2019 from RMB27.2 million in the six months ended June 30, 2018, primarily due to the decrease in sales of our Bitcoin mining machines, as our sales and marketing efforts are linked to the actual sales of our products. Our sales and marketing expenses as a percentage of our revenues increased to 2.8% in the six months ended June 30, 2019 from 1.4% in the six months ended June 30, 2018.

- *General and administrative expenses.* Our general and administrative expenses increased by 256.9% to RMB263.0 million (US$38.3 million) in the six months ended June 30, 2019 from RMB73.7 million in the six months ended June 30, 2018, primarily due to the higher share-based compensation expense allocated to general and administrative expenses in the amount of RMB216.0 million (US$31.5 million) in the six months ended June 30, 2019, compared to the share-based compensation expense allocated to general and administrative expenses of RMB4.1 million in the six months ended June 30, 2018. The share-based compensation allocated to general and administrative expenses in the amount of RMB213.1 million (US$31.0 million) in the six months ended June 30, 2019 was due to the excess of

appraised fair value of ordinary shares transferred from our existing shareholders to other existing shareholders who were also our employees. As the result of the foregoing, our general and administrative expenses as a percentage of our revenues increased significantly to 91.1% in the six months ended June 30, 2019 from 3.8% in the six months ended June 30, 2018.

Investment income. Our investment income decreased by 27.3% to RMB1.1 million (US$0.2 million) in the six months ended June 30, 2019 from RMB1.6 million in the six months ended June 30, 2018, primarily due to the decrease in the purchase of investment products.

Interest income. Our interest income increased to RMB0.9 million (US$0.1 million) in the six months ended June 30, 2019 from RMB0.6 million in the six months ended June 30, 2018, primarily in connection with the interest from a security deposit associated with a bank loan we obtained in 2018.

Interest expense and guarantee fee. Our interest expense and guarantee fee decreased by 6.0% to RMB16.4 million (US$2.4 million) in the six months ended June 30, 2019 from RMB17.4 million in the six months ended June 30, 2018, primarily in connection with an offshore bank loan and a guarantee fee to the relevant bank for the purpose of securing such offshore loan in connection with our restructuring in 2018.

Foreign exchange (loss) gain, net. Our foreign exchange gain, net was RMB3.7 million (US$0.5 million) in the six months ended June 30, 2019 and our foreign exchange loss, net was RMB0.2 million in the six months ended June 30, 2018, as a result of the impact of currency fluctuation on our non-RMB denominated assets and liabilities.

Value added tax refunds. Our VAT refunds decreased significantly to RMB0.3 million (US$0.1 million) in the six months ended June 30, 2019 from RMB93.0 million in the six months ended June 30, 2018, primarily from the decrease of sales by Hangzhou Canaan. Under the tax refund scheme, the VAT payable by a software enterprise is capped, and any amount of VAT beyond the cap will be refunded. We expect Hangzhou Canaan to continue to enjoy the tax refund as long as it remains an accredited software enterprise.

Other income, net. Our other income, net was RMB6.4 million (US$0.9 million) in the six months ended June 30, 2019 and RMB3.0 million in the six months ended June 30, 2018, both of which were primarily from government grants.

Income (loss) before income tax expenses. As a result of the foregoing, our loss before income tax expenses was RMB330.9 million (US$48.2 million) in the six months ended June 30, 2019 and our income before income tax expenses was RMB356.4 million in the six months ended June 30, 2018.

Income tax expenses. Our income tax expenses decreased significantly to nil in the six months ended June 30, 2019 from RMB139.7 million in the six months ended June 30, 2018, due to our net loss in the six months ended June 30, 2019.

Net income (loss). As a result of the foregoing, our net loss was RMB330.9 million (US$48.2 million) in the six months ended June 30, 2019 and our net income was RMB216.8 million in the six months ended June 30, 2018.

Foreign currency translation adjustment, net of nil tax. We recorded RMB16.4 million (US$2.4 million) of positive foreign currency translation adjustment, net of nil tax in the six months ended June 30, 2019 and we recorded RMB37.9 million of negative foreign currency translation adjustment, net of nil tax in the six months ended June 30, 2018 as a result of the translation of the financial statements of our Hong Kong subsidiary whose functional currency is U.S. dollars.

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

Revenue. Our revenue increased by 106.8% to RMB2,705.3 million (US$394.1 million) in 2018 from RMB1,308.1 million in 2017, primarily due to the increase in the sales volume of our Bitcoin mining machines in terms of computing power from 2.1 million Thash in 2017 to 7.2 million Thash in 2018, which in turn was the result of a Bitcoin price hike in late 2017, partially offset by the decrease in the average selling price of our Bitcoin mining machines on a per Thash basis from RMB613 per Thash in 2017 to RMB369 per Thash in 2018 due to the drop of the Bitcoin price in 2018.

Cost of revenue. Our cost of revenue increased by 212.2% to RMB2,197.2 million (US$320.1 million) in 2018 from RMB703.7 million in 2017, primarily due to an increase in the sales volume of our Bitcoin mining machines in terms of computing power from 2.1 million Thash in 2017 to 7.2 million Thash in 2018, partially offset by the decrease in the average cost of our Bitcoin mining machines on a per Thash basis from RMB328 per Thash in 2017 to RMB203 per Thash in 2018. Additionally, we recorded provision for inventories and prepayments write down of RMB786.0 million (US$114.5 million), which increased the cost of revenue in 2018, whereas we did not record any such provision in 2017.

Gross profit. As a result of the foregoing, our gross profit decreased by 15.9% to RMB508.1 million (US$74.0 million) in 2018 from RMB604.4 million in 2017. Our overall gross profit margin decreased significantly from 46.2% in 2017 to 18.8% in 2018, primarily due to the Bitcoin price drop in 2018, which resulted in lower average selling prices of our Bitcoin mining machines in 2018 and an inventories and prepayments write down of RMB786.0 million (US$114.5 million) in response to the stagnant demand for our products driven by the decrease in the Bitcoin price.

Operating expenses. Our total operating expenses increased by 52.6% to RMB375.1 million (US$54.6 million) in 2018 from RMB245.8 million in 2017, primarily due to the increase in our research and development expenses and sales and marking expenses.

- *Research and development expenses*. Our research and development expenses increased by 90.1% to RMB189.7 million (US$27.6 million) in 2018 from RMB99.8 million in 2017, primarily due to the expansion of our research and development projects. Our research and development expenses as a percentage of our revenues decreased to 7.0% in 2018 from 7.6% in 2017.

- *Sales and marketing expenses*. Our sales and marketing expenses increased by 86.9% to RMB38.7 million (US$5.6 million) in 2018 from RMB20.7 million in 2017, primarily due to the increase in the scale of our operations. Our sales and marketing expenses as a percentage of our revenues remained relatively stable.

- *General and administrative expenses.* Our general and administrative expenses increased by 17.1% to RMB146.7 million (US$21.4 million) in 2018 from RMB125.3 million in 2017, primarily due to the increase in the scale of our operations as well as the expenses incurred in connection with our preparing for an initial public offering in 2018 in the amount to RMB44.0 million (US$6.4 million), while, in 2017, we incurred higher share-based compensation expenses of RMB70.3 million. Our general and administrative expenses as a percentage of our revenues decreased to 5.4% in 2018 from 9.6% in 2017 due to economies of scale.

Investment income. Our investment income decreased by 43.5% to RMB3.2 million (US$0.5 million) in 2018 from RMB5.6 million in 2017, primarily due to the decrease in the purchase of investment products.

Interest income. Our interest income increased significantly to RMB4.2 million (US$0.6 million) in 2018 from RMB0.2 million in 2017, due to the interest from a security deposit associated with a bank loan in 2018.

Interest expense and guarantee fee. We recorded interest expense and guarantee fee of RMB53.1 million (US$7.7 million) in 2018 primarily in connection with an offshore bank loan and a guarantee fee to the relevant bank for the purpose of securing such offshore loan in connection with our restructuring in 2018.

Foreign exchange losses, net. Our foreign exchange losses decreased by 0.8% to RMB1.2 million (US$0.2 million) in 2018 from RMB1.2 million in 2017 as a result of the recording of our non-RMB denominated assets and liabilities.

Value added tax refunds. Our VAT refunds increased significantly to RMB110.2 million (US$16.1 million) in 2018 from RMB38.8 million primarily from the increase of sales by Hangzhou Canaan, which was accredited as a software enterprise and enjoyed a VAT refund scheme. Under the tax refund scheme, the VAT payable by a software enterprise is capped, and any amount of VAT beyond the cap will be refunded. We expect Hangzhou Canaan to continue to enjoy the tax refund as long as it remains an accredited software enterprise.

Other (loss) income, net. Our other income was RMB3.8 million (US$0.6 million) in 2018 primary from government grants and our other loss was RMB1.1 million in 2017 primarily from a net loss on disposal of property, equipment and software which was offset by government grants.

Income before income tax expenses. As a result of the foregoing, our income before income tax expenses decreased by 50.1% to RMB200.2 million (US$29.2 million) in 2018 from RMB401.0 million in 2017.

Income tax expenses. Our income tax expenses increased significantly to RMB77.8 million (US$11.3 million) in 2018 from RMB25.2 million in 2017, primarily due to (i) the expiration of a tax-free period from our software enterprise accreditation in 2018 and (ii) a higher taxable income for PRC taxation purposes despite our lower net income in 2018, as the significant inventories and prepayments write down is not deductible for PRC taxation purposes.

Net income. As a result of the foregoing, our net income decreased by 67.4% to RMB122.4 million (US$17.8 million) in 2018 from RMB375.8 million in 2017, and our net margin decreased from 28.7% in 2017 to 4.5% in 2018.

Foreign currency translation adjustment, net of nil tax. We recorded RMB65.2 million (US$9.5 million) of foreign currency translation adjustment, net of nil tax in 2018 as a result of the translation of the financial statements of our Hong Kong subsidiary whose functional currency is U.S. dollars.

Quarterly Results of Operations

The following table presents our unaudited interim condensed consolidated results of operations for the three-month periods ended on the dates indicated. You should read the following table in conjunction with our audited consolidated financial statements and unaudited interim condensed consolidated financial statements and related notes included elsewhere in this prospectus. We have prepared the unaudited interim condensed consolidated quarterly financial information on the same basis as our audited consolidated financial statements which includes all adjustments, consisting only of normal and recurring adjustments, that we consider necessary for a fair representation of our operating results for the quarters presented.

	Three months ended									
	March 31, 2017		June 30, 2017		September 30, 2017		December 31, 2017		March 31, 2018	
	RMB	%	RMB	%	RMB	%	RMB	%	RMB	%
	(in thousands, except for percentages)									
Net revenues:										
Products revenue	162,160	99.8	220,703	99.8	390,176	99.9	530,054	99.3	1,065,423	99.7
Service revenue	320	0.2	246	0.1	418	0.1	3,697	0.7	3,030	0.3
Other revenues	15	0.0	294	0.1	—	—	—	—	166	0.0
Total net revenues	162,495	100.0	221,243	100.0	390,594	100.0	533,751	100.0	1,068,619	100.
Cost of revenues	(92,449)	(56.9)	(132,189)	(59.7)	(188,917)	(48.4)	(290,144)	(54.4)	(282,673)	(26.
Gross profit (loss)	70,046	43.1	89,054	40.3	201,677	51.6	243,607	45.6	785,946	73.5
Operating expenses:										
Research and development expenses	(26,073)	(16.0)	(23,259)	(10.5)	(23,939)	(6.1)	(26,498)	(5.0)	(32,727)	(3.1
Sales and marketing expenses	(904)	(0.6)	(3,593)	(1.6)	(6,667)	(1.7)	(9,560)	(1.8)	(9,116)	(0.9
General and administrative expenses	(15,602)	(9.6)	(15,674)	(7.1)	(13,488)	(3.5)	(80,499)	(15.1)	(30,594)	(2.9

Total operating expenses	(42,579)	(26.2)	(42,526)	(19.2)	(44,094)	(11.3)	(116,557)	(21.8)	(72,437)	(6.8
Income (loss) from operations:										
Interest income	12	0.0	40	0.0	106	0.0	85	0.0	182	0.0
Investment income	131	0.1	1,129	0.5	2,103	0.5	2,235	0.4	791	0.1
Interest expense and guarantee fee	—	—	—	—	—	—	—	—	(716)	(0.1
Foreign exchange (loss) gain, net	(50)	(0.0)	155	0.1	(608)	(0.2)	(684)	(0.1)	(107)	(0.0
Value added tax refunds	—	—	2,764	1.2	14,366	3.7	21,681	4.1	26,429	2.5
Other income (loss), net	7	0.0	202	0.1	39	0.0	(1,372)	(0.3)	2,614	0.2
Income (loss) before income tax expenses	27,567	17.0	50,818	23.0	173,589	44.4	148,995	27.9	742,702	69.5
Income tax expense	(3,929)	(2.4)	(2,479)	(1.1)	(8,762)	(2.2)	(9,983)	(1.9)	(92,657)	(8.7
Net income (loss)	23,638	14.5	48,339	21.8	164,827	42.2	139,012	26.0	650,045	60.8
Foreign currency translation adjustment, net of nil tax	—	—	—	—	(312)	(0.1)	312	0.1	(1,042)	(0.1
Total comprehensive income (loss)	23,638	14.5	48,339	21.8	164,515	42.1	139,324	26.1	649,003	60.7

Notes:

(1)	Includes inventory and prepayment write down provision of RMB786.0 million.
(2)	Includes share-based compensation expenses of RMB214.6 million.

Quarterly Operating Data

The following table sets forth the sales volume and average selling prices generated by our different Bitcoin mining machines for the periods indicated:

	Three months ended											
	March 31, 2017		**June 30, 2017**		**September 30, 2017**		**December 31, 2017**		**March 31, 2018**		**June 30, 2018**	
	Volume	**ASP**	**Volume**	**ASP**	**Volume**	**ASP**	**Volume**	**ASP**	**Volume**	**ASP**	**Volume**	**ASP**
	set	**RMB**	**set**	**RMB**	**set**	**RMB**	**set**	**RMB**	**set**	**RMB**	**set**	**RMB**
A7 series[(1)]	36,668	4,419	53,928	4,090	84,586	4,604	119,341	4,394	20,576	3,710	—	—
A8 series[(2)]	—	—	—	—	—	—	—	—	80,962	12,125	164,773	5,151
A9 series[(3)]	—	—	—	—	—	—	—	—	—	—	—	—
A10 series[(4)]	—	—	—	—	—	—	—	—	—	—	—	—
Total	**36,668**	**4,419**	**53,928**	**4,090**	**84,586**	**4,604**	**119,341**	**4,394**	**101,538**	**10,420**	**164,773**	**5,151**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The following table sets forth the total computing power sold and average selling prices of our Bitcoin mining machines expressed in terms of computing power for the periods indicated:

	Three months ended								
	March 31, 2017		June 30, 2017		September 30, 2017		December 31, 2017		March 31, 2018
	Total ComputingPower Sold	ASP per Thash	Total ComputingPowerSold	ASP perThash	Total ComputingPower Sold	ASP perThash	Total ComputingPowerSold	ASP perThash	Total ComputingPower Sold
	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB	Thash/s	RMB	Thash/s
A7 series[1]	255,626	634	382,997	576	609,514	639	866,501	605	151,131
A8 series[2]	–	–	–	–	–	–	–	–	891,832
A9 series[3]	–	–	–	–	–	–	–	–	–
A10 series[4]	–	–	–	–	–	–	–	–	–
Total	**255,626**	**634**	**382,997**	**576**	**609,514**	**639**	**866,501**	**605**	**1,042,963**

Notes:

(1) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(2) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(3) Mainly includes our A921 and A911 Bitcoin mining machines.

(4) Mainly includes our A1047 Bitcoin mining machines.

The table below sets forth the sales cost, the per unit costs and the selling cost in terms of computing power of our Bitcoin mining machines for the periods indicated:

	Three months ended										
	March 31, 2017			June 30, 2017			September 30, 2017			December 31, 2017	
	Cost[1]	Per unitcost	Cost perThash	Cost[1]	Per unitcost	Cost perThash	Cost[1]	Per unitcost	Cost perThash	Cost[1]	Per unitcost
	RMB inmillions	RMB	RMB	RMB inmillions	RMB	RMB	RMB inmillions	RMB	RMB	RMB inmillions	RMB
A7 series[2]	92.0	2,510	360	131.9	2,445	344	186.8	2,209	307	282.5	2,367
A8 series[3]	–	–	–	–	–	–	–	–	–	–	–
A9 series[4]	–	–	–	–	–	–	–	–	–	–	–
A10 series[5]	–	–	–	–	–	–	–	–	–	–	–
Total	**92.0**	**2,510**	**360**	**131.9**	**2,445**	**344**	**186.8**	**2,209**	**307**	**282.5**	**2,367**

Notes:

(1) Without taking into consideration the inventory and prepayment write down provision of nil, nil, nil, nil, nil, RMB786.0 million (US$114.5 million), nil, nil, nil and RMB0.8 million (US$0.1 million) in the three months ended March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017, March 31, 2018, June 30, 2018, September 30, 2018, December 31, 2018, March 31, 2019 and June 30, 2019, respectively, as well as a realized inventory and prepayment write down of nil, nil, nil, nil, nil, nil, RMB33.8 million (US$4.9 million), RMB37.3 million (US$5.4 million), RMB101.7 million (US$14.8 million), RMB341.6 million (US$49.6 million), respectively, for the same periods.

(2) Mainly includes our A721, A741 and A761 Bitcoin mining machines.

(3) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.

(4) Mainly includes our A921 and A911 Bitcoin mining machines.

(5) Mainly includes our A1047 Bitcoin mining machines.

- Our financial performance generally lags behind the market price of Bitcoin.

- The strong increase in our revenue up to June 30, 2018 reflects the strong increase of Bitcoin price up to the end of 2017. Starting from 2018, Bitcoin price continued to decrease, which resulted in a sharp decrease in the average selling price per unit of computing power of our Bitcoin mining machine from the three months ended June 30, 2018. As a result of the prevailing Bitcoin price and the Bitcoin miners' expectation of further price drop of Bitcoin, we also experienced sharp decreases in sales volume of our Bitcoin mining machine in terms of computing power in the three months ended December 31, 2018 and March 31, 2019 despite a much lower retail price.

- As Bitcoin price started to recover from the second quarter of 2019, the sales volume of our Bitcoin mining machine in terms of computing power also started to increase in the three months ended June 30, 2019. However, we were still unable to price our Bitcoin mining machines above their production cost in this period. Starting in the third quarter of 2019, we have been raising the retail price of our Bitcoin mining machines due to the growing demand from Bitcoin miners who expect further increase of Bitcoin price.

- In view of the stagnant market for Bitcoin mining machines due to decreases in Bitcoin price, we wrote down RMB786.0 million (US$114.5 million) of our inventory and prepayment in the three months ended June 30, 2018, and have been carrying our inventory at their net realizable value ever since.

- In the three months ended June 30. 2019, a number of our ordinary shares was transferred from our existing shareholders to other shareholders who were also our employees below the appraised fair value, and the difference between the transfer price and fair value was recorded as our share-based compensation under general and administrative expenses.

Liquidity and Capital Resources

Our primary source of liquidity historically has been cash generated from our business operations, bank loans and equity contributions from our shareholders, which have historically been sufficient to meet our working capital and capital expenditure requirements.

As of June 30, 2019, we had aggregate cash and cash equivalents of RMB270.4 million (US$39.4 million).

In 2018, we entered into certain short-term loan agreements with various banks with an aggregate principal amount of RMB500.0 million and interest rates ranging from 4.35% to 6.09% per annum. As of June 30, 2019, the aggregate outstanding principal amount under these agreements was RMB200.0 million (US$29.1 million) bearing interest rates ranging from 4.35% to 4.79%.

On April 25, 2018, Canaan HK entered into a facility agreement with China Merchants Bank Co., Ltd., Hong Kong Branch, or CMB HK, as facility agent and CMB International Financial Limited, or CMBI Finance, as security agent, amounting to HK$930 million. Canaan HK drew down HK$921 million under this facility. The maturity of the facility agreement was the earlier of 12 months following closing and the completion of our initial public offering. The interest rate is the Hong Kong InterBank Offered Rate plus 1.3% per annum. In addition, Hangzhou Canaan and Canaan HK paid a guarantee fee of 1% per annum and 0.75% per quarter to secure the borrowing, respectively. Canaan HK repaid the outstanding loans in March 2019 using capital contributions from our shareholders.

The weighted average interest rate for all of our borrowings was approximately 7.14% and 6.45% per annum for the year ended December 31, 2018 and the six months ended June 30, 2019, respectively.

We believe that our existing cash and cash equivalents and anticipated cash flows from operating activities will be sufficient to meet our anticipated working capital requirements and capital expenditures in the ordinary course of business for the next 12 months. We may, however, need additional cash resources in the future if we experience changes in business conditions or other developments, or if we find and wish to pursue opportunities for investments, acquisitions, capital expenditures or similar actions. If we determine that our cash requirements exceed the amount of cash and cash equivalents we have on hand at the time, we may seek to issue equity or debt securities or obtain credit facilities. The issuance and sale of additional equity would result in further dilution to our shareholders. The incurrence of indebtedness would result in increased fixed obligations and could result in operating covenants that would restrict our operations. We cannot assure you that financing will be available in amounts or on terms acceptable to us, if at all.

Our ability to manage our working capital, including receivables and other assets and liabilities and accrued liabilities, may materially affect our financial condition and results of operations.

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

	Year ended December 31,			Six months ended June 30,		
	2017	2018		2018	2019	
	RMB	RMB	US$	RMB	RMB	US$
	(in millions)					
Net cash provided by (used in) operating activities	91.2	(12.7)	(1.9)	(170.7)	6.4	0.9
Net cash provided by (used in) investing activities	(86.8)	84.0	12.2	97.6	(112.2)	(16.3)
Net cash provided by (used in) financing activities	150.0	295.2	43.0	145.2	(169.1)	(24.6)

Net increase/(decrease) in cash and cash equivalents, restricted cash	**154.4**	**366.4**	**53.4**	**72.1**	**(274.9)**	**(40.0)**
Effect of exchange rate changes on cash and cash equivalents, restricted cash	(1.3)	2.3	0.3	0.3	0.1	0.0
Cash and cash equivalents, restricted cash at the beginning of year	23.4	176.5	25.7	176.5	545.2	79.4
Cash and cash equivalents, restricted cash at the end of year	**176.5**	**545.2**	**79.4**	**248.9**	**270.4**	**39.4**

Operating Activities

Net cash provided by operating activities in the six months ended June 30, 2019 was RMB6.4 million (US$0.9 million). The principal items accounting for the difference between our net cash provided by operating activities and our net loss of RMB330.9 million (US$48.2 million) were a RMB221.0 million (US$32.2 million) increase in share-based compensation expense, offset by a RMB347.1 million (US$50.6 million) decrease in prepayments and other current assets.

Net cash used in operating activities in the six months ended June 30, 2018 was RMB170.7 million. The principal items accounting for the difference between our net cash used in operating activities and our net income of RMB216.8 million were a RMB501.2 million increase in inventories, offset by a RMB224.1 million increase in prepayments and other current assets.

Net cash used in operating activities in 2018 was RMB12.7 million (US$1.9 million). The principal items accounting for the difference between our net cash used in operating activities and our net income of RMB122.4 million (US$17.8 million) were a RMB325.8 million (US$47.5 million) increase in inventories and a RMB449.7 million (US$65.5 million) decrease in prepayments and other current assets.

Net cash provided by operating activities in 2017 was RMB91.2 million. The principal items accounting for the difference between our net cash provided by operating activities and our net income of RMB375.8 million were a RMB201.0 million increase in contract liabilities, offset by a RMB587.1 million increase in prepayments and other current assets.

Investing Activities

Net cash used in investing activities was RMB112.2 million (US$16.3 million) in the six months ended June 30, 2019, which was primarily attributable to payment for short-term investments of RMB314.7 million (US$45.8 million), which was partially offset by proceeds from disposal of short-term investments of RMB205.3 million (US$29.9 million).

Net cash provided by investing activities was RMB97.6 million in the six months ended June 30, 2018, which was primarily attributable to proceeds from disposal of short-term investments of RMB971.1 million, which was partially offset by payment for short-term investments of RMB879.5 million.

Net cash provided by investing activities was RMB84.0 million (US$12.2 million) in 2018, which was primarily attributable to proceeds from the disposal of short-term investments of RMB1,498.7 million (US$218.3 million), which was partially offset by purchase of short-term investments of RMB1,405.5 million (US$204.7 million).

Net cash used in investing activities was RMB86.8 million in 2017, which was primarily attributable to payment for short-term investments of RMB941.4 million, which was partially offset by proceeds from the disposal of short-term investments of RMB859.8 million.

Financing Activities

Net cash used in financing activities was RMB169.1 million (US$24.6 million) in the six months ended June 30, 2019, which was attributable to repayment of borrowings of RMB935.7 million (US$136.3 million), which was partially offset by proceeds from issuance of ordinary shares of RMB668.0 million (US$97.3 million) and proceeds from borrowings of RMB100.0 million (US$14.6 million).

Net cash provided by financing activities was RMB145.2 million in the six months ended June 30, 2018, which was attributable to proceeds from borrowings of RMB1,602.2 million, which was partially offset by repayment of borrowings of RMB764.9 million and payment for deemed distribution of RMB692.1 million as part of our corporate reorganization.

Net cash provided by financing activities was RMB295.2 million (US$43.0 million) in 2018, which was attributable to proceeds from borrowings of RMB1,952.2 million (US$284.4 million), which was partially offset by the repayment of borrowings of RMB964.9 million (US$140.6 million) and payment for a deemed distribution of RMB692.1 million (US$100.8 million) as part of our corporate reorganization.

Net cash provided by financing activities was RMB150.0 million in 2017, which consisted of proceeds from capital contributions of shareholders of RMB150.0 million.

Capital Expenditures

We made capital expenditures of RMB2.8 million (US$0.4 million), RMB24.9 million (US$3.6 million) and RMB12.7 million (US$1.8 million) in the six months ended June 30, 2019 and in 2018 and 2017, respectively. Our capital expenditures primarily comprise expenditures for the purchase of equipment and software, intangible assets and other long-term assets. We will continue to make capital expenditures to meet the expected growth of our business.

Commitments

The following table sets forth our contractual obligations as of June 30, 2019:

	Payment due by period

	Total		Less than 1 Year	1 – 3 Years	3 – 5 Years	More than 5 Years
	RMB	US$	RMB			
	(in thousands)					
Short-term debts	200,000	29,133	200,000	–	–	–
Operating lease commitments	31,543	4,595	11,548	19,995	–	–
Total	**231,543**	**33,728**	**211,548**	**19,995**	**–**	**–**

Off-Balance Sheet Arrangements

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

Holding Company Structure

Canaan Inc. is a holding company with no material operations of its own. We conduct our operations through our subsidiaries in Hong Kong and China. Canaan Inc.'s ability to pay dividends depends upon its receipt of dividends from our PRC subsidiaries. If our existing PRC subsidiaries or any newly formed subsidiaries incur debt in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our subsidiaries in China are permitted to pay dividends to us only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under PRC law, each of our subsidiaries in China is required to set aside at least 10% of its after-tax profits each year, if any, to fund certain statutory reserve funds until such reserve funds reach 50% of its registered capital. In addition, our subsidiaries in China may allocate a portion of their after-tax profits based on PRC accounting standards to enterprise expansion funds and staff bonus and welfare funds at their discretion. The statutory reserve funds and the discretionary funds are not distributable as cash dividends. Remittance of dividends by a subsidiary out of China is subject to examination by the banks designated by SAFE. Our PRC subsidiaries have not paid dividends and will not be able to pay dividends until they generate accumulated profits and meet the requirements for statutory reserve funds.

Inflation

Since inception, inflation in China has not materially affected our results of operations. According to the National Bureau of Statistics of China, the year-over-year percentage changes in the consumer price index for December 2017 and 2018 were increases of 1.8% and 1.9%, respectively. Although we have not been materially affected by inflation in the past, we may be affected if China experiences higher rates of inflation in the future.

Quantitative and Qualitative Disclosures about Market Risk

Foreign Exchange Risk

Substantially all of our revenues and substantially all of our expenses are denominated in Renminbi. The functional currency of our company and our Hong Kong subsidiary is the U.S. dollar. The functional currency of our subsidiaries in the PRC is the Renminbi. We use Renminbi as our reporting currency. Monetary assets and liabilities denominated in currencies other than the functional currency are translated into the functional currency at the applicable rates of exchange at the balance sheet date. Transactions in currencies other than the functional currency during the year are converted into functional currency at the applicable rates of exchange prevailing when the transactions occurred. Transaction gains and losses are recognized in the statements of operations.

We do not believe that we currently have any significant direct foreign exchange risk and have not used any derivative financial instruments to hedge exposure to such risk. Although in general our exposure to foreign exchange risks should be limited, the value of your investment in the ADSs will be affected by the exchange rate between the U.S. dollars and the Renminbi because the value of our business is effectively denominated in Renminbi, while the ADSs will be traded in U.S. dollars.

The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the PBOC. The PRC government allowed the Renminbi to appreciate by more than 20% against the U.S. dollar between July 2005 and July 2008. Between July 2008 and June 2010, the exchange rate between the Renminbi and the U.S. dollar was stable and traded within a narrow band. Since June 2010, the Renminbi has fluctuated against the U.S. dollar, at times significantly and unpredictably. On November 30, 2015, the Executive Board of the International Monetary Fund completed its regular five-year review of the basket of currencies that make up the Special Drawing Right, or the SDR, and decided that with effect from October 1, 2016, Renminbi is determined to be a freely usable currency and will be included in the SDR basket as a fifth currency, along with the U.S. dollar, the Euro, the Japanese yen and the British pound. In the fourth quarter of 2016, the Renminbi depreciated significantly in the backdrop of a surging U.S. dollar and persistent capital outflows from China. This depreciation halted in 2017, and the Renminbi appreciated approximately 7% against the U.S. dollar during this one-year period. Starting from the beginning of 2019, the Renminbi has depreciated significantly against the U.S. dollar again. In early August 2019, the PBOC set the Renminbi's daily reference rate at RMB7.0039 to US$1.00, the first time that the exchange rate of Renminbi to U.S. dollar exceeded 7.0 since 2008. With the development of the foreign exchange market and progress towards interest rate liberalization and Renminbi internationalization, the PRC government may in the future announce further changes to the exchange rate system, and we cannot assure you that the Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future.

To the extent that we need to convert U.S. dollars into Renminbi for our operations, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the Renminbi amount we receive from the conversion. Conversely, if we decide to convert Renminbi into U.S. dollars for the purpose of making payments for dividends on our ordinary shares or ADSs or for other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollars amounts available to us.

We estimate that we will receive net proceeds of approximately US$ million from this offering if the underwriters do not exercise their option to purchase additional ADSs, after deducting underwriting discounts and commissions and the estimated offering expenses payable by us. Assuming that we convert the full amount of the net proceeds from this offering into Renminbi, a 10% appreciation of the U.S. dollar against the Renminbi, from the exchange rate of RMB6.8650 for US$1.00 as of June 28, 2019 to a rate of RMB7.5515 to US$1.00, will result in an increase of RMB million in our net proceeds from this offering. Conversely, a 10% depreciation of the U.S. dollar against the Renminbi, from the exchange rate of RMB6.8650 for US$1.00 as of June 28, 2019 to a rate of RMB6.1785 to US$1.00, will result in a decrease of RMB million in our net proceeds from this offering.

Interest Rate Risk

We have not been exposed to material risks due to changes in market interest rates, and we have not used any derivative financial instruments to manage our interest risk exposure. However, we cannot provide assurance that we will not be exposed to material risks due to changes in market interest rates in the future.

After the completion of this offering, we may invest the net proceeds we receive from the offering in interest-earning instruments. Investments in both fixed rate and floating rate interest earning instruments carry a degree of interest rate risk. The fair market value of fixed rate securities may be adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall.

Credit Risk

Financial instruments that potentially expose us to concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments and accounts receivable. We place our cash and cash equivalents with financial institutions with high credit ratings and quality.

We conduct credit evaluations of customers, and generally do not require collateral or other security from our customers. We establish an allowance for doubtful accounts primarily based upon the age of the receivables and factors surrounding the credit risk of specific customers.

Recent Accounting Pronouncements

i. New and amended standards adopted by us:

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) (“ASU 2016-02”), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to classify leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification determines whether lease expense is recognized over the lease term based on an effective interest method for financing leases or on a straight-line basis for operating leases. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expenses for such lease generally on a straight-line basis over the lease term. For public entities, the guidance was effective for annual reporting periods beginning after December 15, 2018 and for interim periods within those fiscal years.

In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842), which provided an optional transition method under which financial statements may be prepared under the revised guidance for the year of adoption, but not for prior years. Under the latter method, entities will recognize a cumulative catch-up adjustment to the opening balance of retained earnings in the period of adoption.

We adopted ASC 842 using the alternative transition method with an effective date of January 1, 2019 for leases that existed on that date. Prior period results continue to be presented under ASC 840 based on the accounting standards originally in effect for such periods. This standard provides a number of optional practical expedients in transition. We applied certain practical expedients to leases that commenced prior to the effective date as follows: (i) elect for each lease not to separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component; (ii) for leases that have lease terms of 12 months or less and does not include a purchase option that is reasonably certain to exercise, we elected not to apply ASC 842 recognition requirements; and (iii) We elected to apply the package of practical expedients for existing arrangements entered into prior to January 1, 2019 to not reassess (a) whether an arrangement is or contains a lease, (b) the lease classification applied to existing leases, and (c) initial direct costs.

In connection with the adoption of ASC 842, on January 1, 2019, We recorded an impact of RMB48.9 million on its assets and RMB48.0 million on its liabilities for the recognition of operating lease right-of-use-assets and operating lease liabilities, respectively, which are primarily related to the lease of our offices and warehouses. The adoption of ASC 842 did not have a material impact on our results of operations or cash flows.

ii. New and amended standards not yet adopted by us:

In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, or ASU 2016-13. This guidance requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. The measurement of expected credit losses is based on historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability. In November 2018, the FASB issued ASU 2018-19, Codification Improvements to Topic 326, Financial Instruments-Credit Losses, or ASU

2018-19, which clarifies certain topics included within ASU 2016-13. ASU 2016-13 and ASU 2018-19 are effective for the annual reporting period beginning after December 15, 2019, including interim periods within that reporting period. We are currently evaluating the impact on our consolidated financial statements of the adoption of this guidance.

In October 2018, the FASB issued ASU 2018-17, Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities, which amends the guidance for determining whether a decision-making fee is a variable interest and requires organizations to consider indirect interests held through related parties under common control on a proportional basis rather than as the equivalent of a direct interest in its entirety. The standard is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. We are currently evaluating the impact of this accounting standard update on our consolidated financial statements.

Industry Overview

INDUSTRY OVERVIEW

`Overview of the IC Industry`

ICs are the foundation of the technology sector and are found in virtually every electronic hardware and computing device. According to Frost & Sullivan, the total size of the global IC market was US$401.6 billion in 2018, and the overall IC industry sales revenue in China increased at a CAGR of 21.3% from US$45.6 billion in 2014 to US$98.7 billion in 2018, with forecasted sales reaching US$193.8 billion by 2023 at a CAGR of 14.4%.

In the IC industry, fabless IC design is a mature business model widely adopted globally. Companies with strong design capabilities adopt the fabless model to focus exclusively on IC design and are able to avoid huge capital expenditures by taking advantage of the access to capacity provided by the foundry industry. The fabless IC design industry in China, in terms of sales revenue, has also grown significantly at a CAGR of 25.5% from US$15.5 billion in 2014 to US$38.5 billion in 2018, accounting for 35.2% of the global fabless IC design industry in 2018. Driven by the advancement of process technology and continual support from the government, the fabless IC design industry in China is forecasted to further grow at a CAGR of 15.6% to reach US$79.4 billion in 2023, according to Frost & Sullivan. Other characteristics of the IC industry include: (1) a mismatch between supply and demand which might lead to inventory overstock or understock; and (2) the requirement of continuous research and development investment to sustain competitiveness.

As new technologies such as big data, AI, blockchain and IoT emerge and generate immense demand for processing and computing ICs, ASIC, FPGA, CPU and GPU chips experienced growth from 2014 to 2018. The growth of the market for ASIC chips, which are customized for a particular use and offer strong computing power and superior power-efficiency, is expected to surpass those of other types of ICs and to grow at a 5-year CAGR of 15.8% from 2018 to 2023. In comparison, the processing chip industry is expected to grow at a CAGR of 8.0% in terms of sales revenue from 2018 to 2023.

`Market Size Breakdown of Global Processing IC Chip Industry by Sales Revenue (in US$ Billion)`

Note: The IC market is formed by processing segments including CPU, GPU, FPGA, ASIC and others. Non-processing chips, including memory, baseband chips, radio frequency chips and others, are not included in the above chart.

Source: Frost & Sullivan

`Overview of Blockchain Applications with ASIC`

`Overview of Blockchain Industry`

Blockchain is an open-source peer-to-peer decentralized digital ledger comprising a series of data blocks that are linked and secured using cryptography. Transactions are validated by nodes who agree to a protocol that determines the true state of the ledger. The digital ledger is continuously growing as new blocks are added to it to record the most recent transactions in a linear, chronological order. The information is stored across a network of a large number of computers all over the world with no central intermediary involved.

Blockchain technology holds significant potential to dramatically disrupt a broad spectrum of industries beyond the storage and transfer of value. Blockchain technology also has the potential to turbocharge the effectiveness and profitability of most businesses, or even to revolutionize the world economy. Cryptocurrencies may be the most obvious application of the blockchain, but the transparent and immutable nature of the distributed ledger technology presents a multitude of practical use cases. For example, the blockchain-based application in financial services has the potential to revolutionize international payments, making them faster, cheaper, and more secure with lower counterparty risk, which would ultimately make our society more productive. Further, the trade finance blockchain platform can improve and accelerate the financing of international trade. Similarly, in the public sector, blockchain-based applications can allow for better traceability and proof of transaction and can manage the digital identity of people and ownership and transaction information on different assets such as real property and vehicles in order to increase efficiency and reduce fraud.

`Overview of Bitcoin and Blockchain Mining Economics`

Bitcoin, introduced to the world in December 2008, is the first cryptocurrency and has become the most important cryptocurrency in terms of public recognition and transaction volume. As the largest and most secure public blockchain network, Bitcoin has proven the efficacy of blockchain technology. Further development of Bitcoin will help to expand the blockchain industry and ecosystem. The massive amount of computing power required to operate the Bitcoin network will continue to drive the development and innovation of IC solutions for complex computational problems. Bitcoin is designed with a finite supply of 21 million. The number of Bitcoin reward per new block is designed to halve approximately every four years, and Bitcoins will be fully mined out by the year 2140. As of June 30, 2019, 17.8 million Bitcoins have already been mined.

“Mining” is the process of adding transaction records to Bitcoin’s blockchain, which serves to confirm transactions to the rest of the network. Mining is intentionally designed to be resource-intensive and difficult so that the number of blocks found each day by miners remains steady. Individual blocks must contain a proof of work to be considered valid.

Bitcoin mining serves to both add transactions to the blockchain and to release new Bitcoin. The mining process involves compiling recent transactions into blocks and trying to solve a computationally difficult puzzle. The first participant who solves the puzzle gets to place the next block on the blockchain and claim the rewards. The rewards incentivize mining and include both the transaction fees (paid to the miner in the form of Bitcoin) as well as the newly released Bitcoin.

The chart below illustrates the Bitcoin industry value chain and key players, according to Frost & Sullivan. The Bitcoin industry consists of five major elements, namely hardware supply, operation of mining farm and mining pool, trading and payment. Hardware suppliers, such as Canaan, mainly focus on mining IC design and mining machine manufacture as well as sales of mining machines. Mining farms usually refer to physical mining sites where operators offer customers custodian services for their mining hardware. Operation of mining pools refers to services that enable miners to contribute their computing power and split mining rewards. Trading refers to services provided by cryptocurrency exchanges for consumers to buy and sell cryptocurrency. Payment refers to services provided by Bitcoin payment processors, which enables merchants and businesses to receive payments in Bitcoins from individuals for goods sold and services rendered.

Value Chain of the Bitcoin Industry

Source: Frost & Sullivan The demand and price of Bitcoin mining machines are primarily determined by the expected economic return of Bitcoin mining activities, which is significantly affected by the Bitcoin price, as well as other factors such as the electricity price, the hash rate of mining equipment, the total network hash rate and the difficulty of mining.

The total network hash rate and the mining difficulty, which indicates the complexity of the task that miners need to solve to create the block, are positively correlated in the sense that the more difficult mining on the network becomes, the more hash rate is needed, leading to additional demands for mining hardware within the network. According to Frost & Sullivan, from 2014 to 2018, the hash rate of the Bitcoin network experienced an upward trend, despite some fluctuations. As of the end of June 2019, the hash rate of the Bitcoin network reached approximately 62 Ehash/s.

The Bitcoin price rose stratospherically by 1,289.0% in 2017. As the value of Bitcoin became more extensively recognized, more investments rushed into the market, which led to the sharp increase of the Bitcoin price during the year. As a result, an increasing number of miners have been seeking more high-performance cryptocurrency mining hardware to offset the fast-growing mining difficulties.

Bitcoin Hash Rate and Price

Source: Frost & Sullivan From 2009 to June 2019, the total mining revenue, including mining rewards and transaction fees, experienced fluctuations and increased from approximately US$8.6 thousand in July 2010 to approximately US$559.7 million in June 2019. There were two halving events, or times when the amount of Bitcoins awarded for solving a block is halved, which occurred in November 2012 and July 2016. After the first halving event in November 2012, mining revenue increased nearly ten times from US$2.5 million in November 2012 to US$23.9 million in October 2013. After the second halving event in July 2016, mining revenue increased from US$49.2 million in July 2016 to US$179.8 million in June 2017. As suggested by the historical data, the halving event would generally stimulate the Bitcoin price and further increase the total mining revenue in the long run.

Based on the value chain analysis, the Bitcoin mining revenue can be viewed as being shared among various parties:

- Upstream suppliers for Bitcoin mining machine manufacturers
- Bitcoin mining machine manufacturers
- Bitcoin miners
- Bitcoin holders

Bitcoin mining machine manufacturers typically price their products based on a payback period of 150 to 300 days of Bitcoin mining, which is defined as the period of time for a miner to recover the costs of Bitcoin mining and the purchase price of the machines based on the market prevailing Bitcoin price. It is estimated that their total sales would be equivalent to around 60% of the total Bitcoin mining revenue in 2017 and 2018. While Bitcoin miners currently rely on mining rewards, which are the newly released Bitcoins when blocks are created, for the majority of their revenue, the reduction in Bitcoin supply will cause most of the revenue to be generated from Bitcoin transaction fees in the long run.

Bitcoin Mining Revenues and Transaction Fee Percentage (in US$ Million)

Source: Frost & Sullivan According to Bitcoin.com, the range of Bitcoin daily closing price during the last 12 months as of July 21, 2019 was between US$3,202 to US$12,806. The range of total computing power of Bitcoin network during the last 12 months as of July 21, 2019 was between 34.8 EH/s to 68.3 EH/s. According to Frost & Sullivan, the payback cycle analysis discussed below utilizes the specifications of Canaan’s A921 Bitcoin mining machine assuming Bitcoin miner purchase this machine at its production costs of approximately RMB220 per Thash/s, based on different utility cost assumption (Case 1: Based on utility price at RMB0.2 per kWh; Case 2: Based on utility price at RMB0.4 per kWh).

Illustrative Sensitivity Analysis of Payback Period (Number of Days)

Notes:

(1)	*Above indicative analysis is based on various assumptions which may not reflect the actual payback cycle.*
(2)	*Canaan's A921 system product has a computing power of 20 Thash/s and power consumption of 1,800 Watt.*
(3)	*The symbol " * " denotes scenarios where the value of Bitcoin rewarded is not able to cover the cost of the Bitcoin mining machine.*
(4)	*Other key assumptions for the above payback cycle analysis includes (i) daily fixed rewards of 1,800 (current theoretical reward level) Bitcoins available across the entire Bitcoin network, which are distributed uniformly across miners by the computing power to which the miners contribute; (ii) the Bitcoin mining machine operates 24 hours per day.*
(5)	*For simplicity purposes, the payback cycle analysis also applies certain assumptions, which in reality would vary across miners and evolve over time. These assumptions include (i) Bitcoin prices staying at a constant level during the payback period and mining revenues being measured with given Bitcoin spot rate; (ii) the network computing power staying at a constant level throughout the payback period; (iii) miners incurring constant electricity costs; (iv) Miners not receiving any transaction fees; (v) miners not incurring operational costs other than initial purchase cost of the Bitcoin mining machine and utility costs; and (vi) no halving event of Bitcoin occurs during the payback period.*

As shown in the table above, given a constant utility cost at RMB0.4 per kWh, assuming Bitcoin price of US$7,000 and network computing power of 50 EH/s as well as holding all other above assumptions constant, the actual payback cycle at that particular moment would be 259 days, which is in line with Bitcoin miner's expectation, making the sale of Bitcoin mining machines above the cost of RMB220 per Thash viable. However, a potential buyer of Bitcoin mining machine may take into consideration of increase in network computing power to 70 EH/s in view of launch of new generation of Bitcoin mining machines by major market players, therefore making the expected payback cycle to be 611 days and difficult to justify a price tag of RMB220 per Thash. In contrast, another potential buyer of Bitcoin mining machine may consider his or her personal bullish view of future Bitcoin price and expect a future Bitcoin price of US$9,000, thereby expecting the payback cycle to be 164 days. Manufacturers of Bitcoin mining machine typically make judgment on prevailing Bitcoin miner sentiment and price their products accordingly.

Cryptocurrency mining machines comprise the overwhelming majority of blockchain hardware. The global Bitcoin mining hardware industry is predominately comprised of ASIC-based Bitcoin mining hardware. According to Frost & Sullivan, the market size of the global Bitcoin mining machine industry in terms of revenue increased from RMB1.1 billion in 2014 to RMB21.4 billion in 2018, representing a CAGR of 110.0%. In the next five years, the market size of the global Bitcoin mining machine market in terms of revenue is expected to increase to RMB31.7 billion in 2023, representing a CAGR of 8.2%. It is likely that the price of Bitcoin in late 2019 would continue to fluctuate in the mid-to-high price range. As compared with the beginning of 2019, the market size of the ASIC-based mining machine in the second half year of 2019 is estimated to recover but the total revenue in 2019 would still decrease by approximately 23.4% from 2018, which is mainly influenced by the decrease of the Bitcoin price at the beginning of 2019. The next halving event is designed to occur in 2020. Generally, the halving event would cause a positive influence on the Bitcoin mining market by driving the Bitcoin price up. Therefore, the market for ASIC-based Bitcoin mining machines is anticipated to increase faster than it has in 2019 and eventually reach approximately RMB31.7 billion by 2023.

Market Size of ASIC-based Bitcoin Mining Hardware Industry, by Revenue (in RMB Billion)

Note: the market size refers to the sales revenue of ASIC-based mining machines and accessories made by professional manufacturers. The chart uses the exchange rate of US$1 to RMB6.616.

Source: Frost & Sullivan

Competitive Landscape of the ASIC-based Bitcoin Mining Machine Industry

The global ASIC-based Bitcoin mining machine market is relatively concentrated with a few large competitors. Most of the leading players are based in the PRC. We are ranked second globally and in the PRC among fabless designers of ASIC-based Bitcoin mining machines in terms of shipment of Bitcoin mining machines and total share of computing power for the six months ended June 30, 2019, according to Frost & Sullivan. For the six months ended June 30, 2019, our market share in terms of computing power sold amounted to 21.9%, up from 15.3% for the same period in 2018, and our market share in terms of shipment of Bitcoin mining machines amounted to 23.3%, according to Frost & Sullivan.

Ranking	Company Name	Estimated Sales Volume(Thousand Sets)	Market Share (Sales Volume) (%)	Estimated ComputingPower Sold(Million TH/S)	Market Share (Computingpower) (%)
	BitMain Technologies Holding Company ("Bitmain")	700.2	64.5	11.6	65.2
	Canaan Inc.	253.3	23.3	3.9	21.9
	Ebang International Holdings Inc.	93.0	8.6	1.4	7.9
	Top three total	**1,046.5**	**96.4**	**16.9**	**95.0**
	Total	**1,085.4**	**100**	**17.8**	**100**

Note: the above ranking only considers the producers of end products, which do not include GPU card producers. The results in the above table are based on the report which we requested Frost & Sullivan to prepare and for which we paid a fee.

According to Frost & Sullivan, our range of Bitcoin mining machines offer strong computing power, low energy consumption, high reliability and high performance-to-price ratio compared to those of its peers. However, Bitmain has raised multiple rounds of financing from investors and therefore has established certain funding advantages over us. Given that the leading IC foundry, namely TSMC, typically has limited production capacity and reserves such capacity for customers who are able to make prepayments first, Bitmain has been able to reserve more production capacity by relying on its funding advantages to offer larger amounts of prepayments. Therefore, Bitmain has had more products available for sale, which allowed it to capture more market share.

Additionally, unlike us, Bitmain accepts cryptocurrency to settle transactions for their mining hardware sales, which attracts more customers that would prefer such settlement method. According to Frost & Sullivan, these factors have contributed to our market position relative to Bitmain.

Overview of AI Application with ASIC

AI is a branch of computer science that makes it possible for machines to learn from structured data sets, adjust to new inputs and perform human-like tasks. AI processes include training (the acquisition of information and rules for using the information), inference (using rules to reach approximate or definite conclusions) and self-correction. Some of AI's functions include voice recognition, object detection, predictive analysis and machine vision.

Driven by the growing volume of big data, the increasing adoption of AI-related applications and services, and the increasing demand for intelligent virtual assistants, the global AI industry has experienced strong growth in recent years. According to Frost & Sullivan, the global AI industry is expected to continue its upward trend with a CAGR of 33.2% from RMB396.3 billion in 2018 to RMB1,660.6 billion in 2023, with China outperforming the global average at an estimated CAGR of 51.0% during the same period, reaching RMB285.8 billion at the end of 2023.

Key Trends of AI Chips Market

AI chips can be broadly categorized into two categories: cloud AI chips targeting cloud training and inference and edge AI chips used on a specific smart device mainly for inference purposes. AI chips targeting cloud training and inference are generally used for processing big data on the cloud server, in the process of which an AI model is trained to analyze the data, learn from the data and obtain the intelligence to perform analysis and conduct inference. On the other hand, edge AI chips would be used mainly for inference at the edge with machine learning models that have been trained on the cloud, which effectively addresses the issues faced by cloud AI chips such as latency, bandwidth, and privacy concerns. Edge AI chips and cloud AI chips accounted for 43.9% and 56.1%, respectively, of the total AI chips market in 2018. Underpinned by the rapid development of IoT and 5G technology, it is expected that the edge AI chips and cloud AI chips together will achieve a CAGR of approximately 45.1%, while the global edge AI chip segment will register a higher CAGR of approximately 62.1% as compared to a CAGR of approximately 22.3% for the cloud edge AI chip segment from 2018 to 2023.

In China, network operators such as China Telecom and China Unicom are moving toward 5G to deliver differentiated services for enterprise and vertical markets. As the fundamental component, edge chips can play an important role to facilitate the offering of AI services for companies and consumers. While edge AI computing power is expected to have strong demand in the future, power consumption and costs are two of the key constraints of wide adoption of edge AI technology. Benefiting from the lower cost, higher power efficiency and various downstream IoT applications, ASIC edge AI chips are anticipated to grow at a faster CAGR and gain a larger market share from 21.3% in 2018 to approximately 40.9% in 2023, according to Frost & Sullivan.

Market Size of China Edge AI Chip Industry, by Revenue (in RMB Billion)

Note: The market size includes revenue generated by foreign players in China.

Source: Frost & Sullivan

Key AI Application Scenarios

The rapid development of IoT technology creates substantial demand for artificial intelligence chips. In recent years, IoT technologies have moved from to-business end and to-government end toward to-customer end. The application of IoT appliances and devices of to-customer end has been increasing due to the growing focus on smart retail and the rising implementation of automation in homes in recent years.

Edge devices cover various IoT application scenarios. In the future, many edge devices in AI application scenarios will mainly perform inference computing, which requires the edge devices to have sufficient inference computing ability. As compared with cloud computing, edge computing transfers intelligent computing to edge devices, and the computing process is performed on distributed device nodes of smart devices (such as mobile phones), rather than in centralized cloud environments. Edge computing is carried out in local network, which greatly reduces the processing time and bandwidth cost of network transmission. It can also save more energy for edge devices with limited power and prolong the service life of devices.

Emerging advancements in hardware and modules drive the development of AI and AI driven IoT devices at the edge are booming in China. As IoT devices become more common and incorporate more processing power, a vast amount of data is being generated on the outer "edge" of computing networks. Traditionally, the data produced by IoT devices is relayed back to a central network server. Once that data is processed, further instructions are sent back to the devices out on the edge of the network, which may cause latency, bandwidth, and privacy concerns. Edge computing offers a solution to these problems by relocating crucial data processing to the edge of the network.

The future of network infrastructure is unlikely to be found solely on the edge or in the cloud, but rather somewhere in between the two. By combining the data-gathering potential of edge computing with the storage capacity and processing power of the cloud, companies can keep their IoT devices running fast and efficiently without sacrificing valuable analytical data that could help them improve services and drive innovation.

Business intelligence and life intelligence are two key verticals of IoT application and are expected to be the driving force in the AI field. The market shares of the business intelligence and life intelligence segments accounted for 8.3% and 19.9% of the AI-empowered vertical industries in 2018, respectively, and are expected to increase to 15.9% and 26.1% in 2023, respectively.

- *Business Intelligence.* Business intelligence encompasses, among others, smart building, smart retail and smart industrial applications. With regard to smart building, AI technology is used in conjunction with information technology to optimize overall building performance, and is also applied to access control systems, smart locks and smart meters. With regard to smart retail, AI technology can be applied by businesses for analytical purposes to empower sales growth, create business opportunities and enhance operational efficiency. AI technology also enables merchants to provide personalized experiences for customers, such as deploying smart sensors throughout their stores to provide customers with relevant and targeted purchasing information. In addition, AI technology can help merchants to identify and track each individual item for better inventory management. With regard to smart industrial applications, AI technology can be applied in logistic solutions, including intelligent sorting and transportation in complex warehousing environments. According to Frost & Sullivan, the market size of business intelligence in China amounted to RMB970.6 million in 2018, and is expected to increase to RMB29.6 billion in 2023 at a CAGR of 98.1%.

- *Life Intelligence.* Life intelligence mainly refers to the application in smart homes, which enables users to control various smart devices such as air conditioners and kitchen appliances, remotely and locally. Life intelligence also includes other IoT applications such as smart toys. According to Frost & Sullivan, the market size of life intelligence in China amounted to RMB2.3 billion in 2018, and is expected to grow at a CAGR of 84.1% to RMB48.7 billion in 2023.

Market Size of AI-Empowered Vertical Industries in China (in RMB Million)

Note: The above chart includes software and services, which cover SaaS and Platform as a Service, AI software development kit, as well as hardwares such as AI embedded smart IoT devices.

Competitive Landscape of Global and China AI Chips

Due to advances in both AI technology and ICs, both the global and Chinese AI chip markets have started to flourish over the past few years, with leading IC designers and high-tech companies, such as Intel, Nvidia, Google and Amazon, as well as new players rushing into the market. Despite the competition, the AI chip industry is still in its early stages with limited commercially available applications. As the AI chip industry develops, the market is expected to expand, taking into account the potential rise in supply and unpredictable demand. However, new market entrants may lack manufacturing experience and may need time to build up their competitiveness. Only a few players have developed commercialized products.

Among a wide range of applications in edge AI chips, Apple and Qualcomm have been leading global players in AI-powered smartphone chips, while Huawei and Cambricon have successfully integrated AI processing units onto their smartphone processor Kirin. Most domestic players in China are focusing on consumer IoT scenarios such as smart home, smart building and smart retail markets by taking advantage of consumption upgrades and the deployment of the 5G network. These companies include, among others, Canaan, Hisilicon and Rockship. As the IoT industry continues to grow rapidly, more diversified needs and application scenarios will emerge. Driven by user needs, innovation in AI chip technologies will facilitate a more closely connected research and development process and commercializing process and will eventually form an open, mutually beneficial industry ecosystem.

Market Drivers of AI Chips in China

China's AI Chips market is expected to continue growing over the next few years. We believe the main drivers are:

- *Increasing capital investment.* Artificial intelligence chips are enjoying increasing capital support as more investors are becoming interested in the industry. Capital from technology companies and investors are flowing into this industry, which will further improve innovations of AI chips and provide huge market potential in different market sectors.

- *Development of 5G technology.* The development of 5G technology is an accelerator of many aspects of the technology sector, including the development of the AI chips market. 5G will increase the speed and efficiency of data transmission from edge to cloud for processing. 5G technology has officially entered the stage of infrastructure layout, and commercial use is planned to begin in 2020.

- *More application scenarios.* Chinese AI chips, which previously were mostly applied to security-related functions, are being applied to smart IoT devices such as smart speakers, smart TV, smart wearables and smartphones in recent years.

- *Favorable government policies.* In July 2017, the State Council of China released the "New Generation Artificial Intelligence Development Plan" (LOGO). This policy outlines China's strategy to build a domestic AI industry worth nearly US$150 billion in the next few years and to become the leading AI power by 2030.

Business

BUSINESS

Mission

Our mission is to make supercomputing available for everyone and to enable the wide adoption of blockchain and AI technologies for better living.

Overview

We provide supercomputing solutions through our proprietary high performance computing ASICs. Our visionary management team has a clear strategy to commercialize supercomputing technology. In January 2013, Mr. Nangeng Zhang, our chairman and chief executive officer, and his team, invented and delivered one of the first Bitcoin mining machines incorporating ASIC technology. Our founders and management team have a clear strategy to commercialize supercomputing technology. We initially dedicated our research and development efforts to ASIC applications for Bitcoin mining, which rapidly built up our know-how of ASIC design. Such experience provided us with a solid foundation in terms of both technology and capital resources, which better prepared us for further research and development involving AI chips. We were the second largest designer and manufacturer of Bitcoin mining machines globally in terms of computing power sold in the six months ended June 30, 2019, according to Frost & Sullivan. During the same period, our Bitcoin mining machines sold accounted for 21.9% of the combined computing power of all the Bitcoin mining machines sold in the global market, according to Frost & Sullivan. In September 2018, we became the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance. As we are a fabless IC designer, the ICs that we design are manufactured, packaged and tested by industry-leading suppliers, including TSMC, Samsung STATS ChipPac, ASE and SPIL.

We have developed significant advantages in our business and technological capabilities, including the following:

- Our mastery of the whole IC design process;

- Our years of accumulated engineering experience in applying theoretical research to the mass production of new products, producing in aggregate over 130 million chips in 2017, 2018 and the six months ended June 30, 2019;
- Our ability to achieve a fast time-to-market with our products and our successful early monetization of the ASIC design in blockchain applications have provided us with an early advantage with respect to both technology and capital reserve to pursue our strategic initiatives;
- Our breakthroughs in various technological fields to improve ASIC performance, such as low voltage and high power efficiency operations and high computing density, all of which are crucial features for ASICs for blockchain and AI solutions;
- Our ownership of most of the intellectual property we employ, and our accumulation of valuable know-how and multiple generations of proprietary silicon data through our years of ASIC design experience;
- Our ability to provide a holistic AI solution to our customers, including AI chips, algorithm development and optimization, hardware module, end-product and software services; and
- Our close and trusted partnerships with leading global suppliers, which have enabled us to achieve high-quality, high yield rate and stable production, with a 100% success rate for all of our seven tape-outs.

Our total revenues increased by 106.8% from RMB1,308.1 million in 2017 to RMB2,705.3 million (US$394.1 million) in 2018. During the same period, our net income decreased by 67.4% from RMB375.8 million to RMB122.4 million (US$17.8 million). Our total revenues decreased by 85.2% from RMB1,947.1 million in the six months ended June 30, 2018 to RMB288.8 million (US$42.1 million) in the six months ended June 30, 2019. Our net income was RMB216.8 million in the six months ended June 30, 2018 and our net loss was RMB330.9 million (US$48.2 million) in the six months ended June 30, 2019. Our adjusted net income (loss), a non-GAAP measure defined as net income (loss) excluding share-based compensation, was RMB471.3 million of adjusted net income in 2017 as compared to RMB141.0 million (US$20.5 million) of adjusted net income in 2018, and RMB226.2 million of adjusted net income in the six months ended June 30, 2018 as compared to RMB109.9 million (US$16.0 million) of adjusted net loss in the six months ended June 30, 2019. See “Summary Consolidated Financial and Operating Data—Non-GAAP Financial Measures.”

Our Competitive Strengths

We believe that the following strengths contribute to our success and differentiate us from our competitors:

We are a leading provider of supercomputing solutions.

According to Frost & Sullivan, blockchain and AI have the potential to disrupt every industry in the economy, and we believe computing power is the key bottleneck for blockchain and AI performance. In order to facilitate more integration of blockchain and AI technologies into people’s work and daily lives, we believe it is necessary that the computing power for these technologies become energy efficient, affordable and reliable so that the applications can be supported. In view of this, we expect ASICs to play a crucial role in supporting the development and accessibility of blockchain and AI technologies as ASICs can provide equivalent computing power with remarkably high power efficiency and low cost, as compared with other types of chips.

We believe that we are one of the few companies in the world to possess advanced technological know-how throughout the ASIC design process, including algorithm development and optimization, standard cell design and optimization, low voltage and high power efficiency operations, design of high performance system and heat dissipation technology. We believe that our deep know-how in designing and the mass production of high power efficiency ASICs in Bitcoin mining machines enables us to capture and sustain a leadership position in both the blockchain and AI fields. Further, our years of experience and deep know-how enable us to achieve high computing power with reduced size and increased power efficiency of ASICs, which is fundamental to designing commercially successful ASICs for AI applications.

We secure our competitiveness in blockchain applications with superior tapeout success and proprietary silicon data. We were the second largest designer and manufacturer of Bitcoin mining machines globally in terms of computing power sold in the six months ended June 30, 2019, accounting for 21.9% of the combined computing power of all the Bitcoin mining machines sold in the global market, according to Frost & Sullivan. Since June 2015, we have completed a total of seven tape-outs for 28nm, 16nm and 7nm ASICs at a 100% success rate. The high tape-out frequency and success rate as well as superior final test yield demonstrates our strong design capabilities and sophisticated operations. We own most of the intellectual property we employ, and we have accumulated valuable know-how and multiple generations of proprietary silicon data through our years of ASIC design experience.

On the other hand, we were the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance in September 2018, which is widely recognized as a milestone for hardware advancement in the AI edge computing field, according to Frost & Sullivan. Our AI chip is a one stop integrated solution under SoC architecture with voice and image recognition capabilities that can seamlessly integrate different algorithms to handle a wide range of application scenarios, including smart homes, smart retail and intelligent driving. Tirelessly honing our IC design capability and product strength and following our long-term research and development roadmap, we have been continuously advancing the technology and performance of our products, and we are in a position to innovate with our partners to launch AI-facing best practices, empowering end customers with high-performance, all-scenario industry AI solutions.

We are able to achieve a fast time-to-market.

Mr. Nangeng Zhang, our chairman and chief executive officer, and his team, invented and delivered one of the first cryptocurrency mining machines to incorporate ASIC technology. We were also among the first to recognize the advantage of ASICs for AI application and initiated research and development in the field beginning in 2016, enjoying first-mover advantage in the development of ASICs for AI application.

Since 2017, we have released four generations of Bitcoin mining products. We believe our ability to deliver new products with high performance more quickly provides us with a strategic advantage given that the performance requirements in Bitcoin mining continue to rapidly evolve. For our AI chips, we collaborate closely with our customers and technology partners to understand and help them identify their needs to commercialize our innovations into our products, such as scenario-based algorithm development and optimization, and continue to optimize our products based on immediate feedback from our customers. We design our ASICs in-house, enabling us to leverage proprietary silicon data for next generation products. Furthermore, from our past 100% successful tape-outs, we own the most critical silicon data that gives us advantages to deliver the most advanced product ahead of our competitors.

Our design capability and fast time-to-market are evidenced by the fact that we were the first to deliver 7nm ASICs, a highly advanced process technology.

We were the first in the industry to deliver commercial edge computing AI chips on Risc-V architecture and self-developed neural-network accelerator with outstanding performance.

Besides high computing power and high energy efficiency, edge-based AI processing involves low latency and offers better protection for confidentiality of the proprietary data, making ASICs the most promising candidate to perform edge-based AI tasks, according to Frost & Sullivan. After we initiated the research and development process for the application of ASICs for AI solutions in 2016, we released the first generation of our AI chip, K210, in September 2018, which is embedded with our self-developed neural-network accelerator that enables leading voice and image recognition functionalities which can be widely applied in smart homes, smart buildings and other IoT applications.

We were the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural network accelerator with outstanding performance, which is widely deemed to be a milestone for hardware advancement in the AI edge-computing field, according to Frost & Sullivan. Compared with other IC architecture, Risc-V does not require high royalty fee payments and is suitable for IoT hardware adoption due to its flexibility and open-source characteristics. Further, the code of Risc-V is simple, elegant and very well suited for edge computing, according to Frost & Sullivan, and our self-developed neural-network accelerator enables hardware acceleration to increase power efficiency and enhance performance.

Our K210 chip offers a one stop integrated solution under SoC architecture that enables multiple functions of AI, including machine vision and machine hearing functions, and is able to achieve increased power efficiency compared to other systems with the same computing power. In addition, our edge computing AI chips protect and enhance the confidentiality of proprietary data. Compared with the AI chips offered by competitors, our single AI chip can handle a wider range of AI application scenarios.

Our K210 chip is widely accepted and recognized for its cutting-edge technology and commercialization potential. As of June 30, 2019, we have shipped over 26,000 K210 chips and development kits to AI product developers, the majority of which are from overseas, and we have initiated cooperation with over 20 AI algorithm companies to co-develop holistic AI solutions for end consumers. Most edge devices have no learning capability now and everything is run on rule-based systems. Our AI products and services upgrade the infrastructure so that all the edge devices are intelligent, which will enhance the robustness of our AI development ecosystem and ultimately provide a better experience for end consumers. We have also actively explored collaboration with business partners and integrated our AI chips in different IoT vertical markets, such as smart home, smart building and smart retail.

We jointly developed and launched, with the AI platform of a leading Chinese technology company, a core processing module for AI operations, which is characterized by its compactness, excellent performance, ease of development and verification by developers, and suitability to be used as a development platform or to be applied directly in products. Our cooperation with this company demonstrates our unique value as an edge computing hardware provider in its AI ecosystem. We also have a mutually beneficial strategic cooperation with iSoftStone, in which we provide iSoftStone with support for AI chip hardware and relevant algorithm optimization and have access to iSoftStone's vast customer network.

Our outstanding production track record and strong supply chain management ensure our product quality and production capability.

We have an outstanding mass production track record and have established strong supply chain management through partnerships with leading global production partners throughout our IC production processes, which ensure our product quality and production stability as well as accumulating feedback from actual production which we use to continuously improve our test yield. Since June 2015, we have completed a total of seven tape-outs for 28nm, 16nm and 7nm ASICs with a 100% success rate. The high tape-out frequency and success rate demonstrates our strong design capacities, sophisticated operations and strong supply chain management capability.

We have access to the 7nm process, currently a highly advanced production process according to Frost & Sullivan, with our partnership with TSMC, the leading IC foundry globally, with whom we have developed an established, trusted, stable and mutually beneficial relationship since early 2015. We were selected by TSMC as one of the first few partners for the tape-out of 7nm ASICs, demonstrating our position as a top tier IC designer globally. We also work extensively with ASE, STATS ChipPac and SPIL, which are among the largest IC packaging and testing services providers in the world, for IC packaging and testing services. Currently, as we have achieved sufficient production volume and our product range has widened, we are in a position to work with different foundries and IC packaging and testing services providers for different products and are still able to secure a favorable price and production capacity allocation. By diversifying our suppliers, we will be able to mitigate supply chain risks and better meet fluctuating demand.

We believe we are one of the few companies that is able to develop such strong relationships with these leading production partners due to our advanced research and development capabilities, rich product engineering experiences, robust capital position and the business opportunities our products present to these leading production partners.

Our ability to make sustainable investments in AI technology.

With solid proprietary technology as a result of our research and development investments and fast time-to-market of our products, we have achieved early commercialization and monetization for the ASIC design in blockchain applications. As a result, we have managed to be financially resilient and mostly self-sufficient. In 2017, 2018 and the six months ended June 30, 2019, we sold a total of 294,523 units, 559,137 units and 253,352 units of Bitcoin mining machines, respectively, representing a total computing power sold of 2,114,637 Th/s, 7,158,666 Th/s and 3,896,788 Th/s and generating RMB1,296.5 million, RMB2,642.7 million (US$385.0 million) and RMB279.5 million (US$40.7 million) of revenue, respectively.

As of June 30, 2019, we have raised in total RMB977.1 million (US$142.3 million) of funding in our three series of equity financing. We believe the successful commercialization of our ASIC products in blockchain application has provided us with an early advantage with respect to both technology and capital reserve for long-term development.

We have a visionary management team, as well as a talented research and development team.

Our management team is focused on the development trends of leading technologies. They have a clear strategy to commercialize supercomputing technology. We initially dedicated our research and development efforts to ASIC applications for Bitcoin mining, which rapidly built up our know-how of ASIC design. Such experience provides us with a solid foundation in terms of both technology and capital resources, which better prepares us for further research and development involving AI chips.

Our co-founders possess complementary expertise in IC design and manufacturing and software development. Building on these skills, our co-founders have been able to effectively identify and monetize business opportunities in blockchain technology. Mr. Nangeng Zhang and his team are credited with inventing one of the first Bitcoin mining machines to incorporate ASIC technology.

We are dedicated to the technological development of ASIC applications in blockchain and AI. Unlike many of our industry peers, we have never been involved in cryptocurrency speculation or any cryptocurrency mining activities. We are persistently focused on technological development, design and research, and are deeply committed to the long-term development of the blockchain and AI industries. We are passionate about leveraging our current position in the blockchain and AI industries to support and elevate those industries.

Our core research and development team has remained stable, working together with the co-founders for over four years. We had a research and development team of 127 members as of June 30, 2019, with an average of seven years of industry experience.

Our Growth Strategies

We intend to grow our business using the following key strategies:

Strengthen our leadership position in supercomputing solutions.

We believe in the long-term growth potential of blockchain and edge computing applications in AI. As a result, we will continue to introduce IC solutions offering higher performance for blockchain and AI applications with customized software development and services. We envision ourselves to be the preeminent provider of computing power for Blockchain technology in the future and in the process facilitate the growth of the Blockchain industry. We will continue to upgrade our Bitcoin mining machines with enhanced performance and competitiveness by incorporating the most advanced technologies. In addition, for our AI products, we will continue to enhance the performance and functionalities of our AI chips and provide a holistic AI solution to end customers. We strive to offer the most user-friendly, cost effective AI solution for our customers.

Continue to invest in high power efficiency IC design.

We aspire to develop advanced IC designs for supercomputing hardware and innovative applications. We will follow a market-oriented research and development approach to ASIC production process and physical design, and we will focus on projects that have a relatively clear path toward market acceptance and commercialization opportunities.

We have consolidated the research and development of back-end and physical design for both our blockchain and AI products into our high power efficiency design group, in order to consolidate internal technology and provide comprehensive support to both business lines. We will continue to invest in research and development and attract talent to strengthen our technology development capabilities for our high-power efficiency design group. We will also continue to provide internal training and development to our current employees.

Continue to introduce new AI products.

We will continue to design and launch AI chips and other ASICs for AI applications, as well as educate and explore the market for software and application/end-use partners for our AI ASICs. We will initially focus on edge computing and continue to explore applications in the fields of smart retail and intelligent driving. We are currently developing the second generation of our 28nm AI chip, which is expected to have significant improvement of computing power and power-efficiency compared to the previous generation. We plan to commence mass production of the second generation chip in the first quarter of 2020. In addition, we plan to introduce the third generation of our AI chip in the second half of 2020. The third generation will use the 12nm process technology and is expected to be applicable to both edge and cloud computing. We will continue to release new generations of our AI chip.

As our AI chip operation is still relatively young, it currently only accounts for a small percentage of our overall business. In the future, we plan to achieve a more balanced mix for our Bitcoin mining machine business and AI chip business.

Enhance our AI platform business model to build on our AI products.

Leveraging our AI chip as the core hardware, we plan to create an AI SaaS platform to enable holistic AI service incorporating hardware, algorithm and software for end customers to create a complete and open ecosystem. Tailoring the needs of different IoT scenarios, our AI SaaS platform will enable us and our business partners to offer an optimized combination of AI chip model, algorithms and customized software and user interface for AI end customers. For example, in order to facilitate the application of smart lock, our low cost, high performance AI SoC is combined with different algorithms and provides conditional access as a service. The customers do not have to be bothered with underlying infrastructure and we charge the customers by number of entrances per month rather than by one time hardware purchase. Through our AI SaaS platform, we also expect to be able to provide data analytics in the long run. The implementation of this strategy will simplify the development process of AI solutions, ensure a better experience for end customers, and also create a constant revenue stream generated from the SaaS service we provide in the future.

Continue to enhance our supply chain management.

We plan to strengthen our supply chain management capability by improving internal coordination among procurement, manufacturing and quality control, as well as upgrading our management software. In addition, we intend to deploy an enhanced inventory management system based on dynamic sales projections and to adopt a more prudent policy for prepayment to suppliers. We will also enhance our supply chain capability, including production management, design quality, working capital efficiency and final test yields.

We are devoted to upgrading our relationships with production partners, such as establishing direct communication with teams in charge of production decision-making at our suppliers and enhancing our bargaining power. We will selectively explore collaboration opportunities with new partners who have leading technologies and sufficient capacities to enhance our production flexibility and operating efficiency. For example, with a view to diversifying our IC packaging and testing suppliers, we commenced our cooperation with SPIL in 2017. We will also adopt a multi-foundry strategy and explore collaboration with new foundries in order to diversify our supply chain.

Continue to expand our overseas operations.

We plan to further diversify our business geographically as well as explore new markets globally. To achieve this, we plan to establish overseas offices in Singapore, Japan, the United States and Israel to facilitate local marketing campaigns so as to enhance our overseas exposure and expand our overseas customer base. We also plan to recruit talent for research and development, investment, and sales for our overseas offices. We intend to increase our international sales team to meet the increased demand from overseas markets. We also intend to pursue strategic overseas investment opportunities, such as identifying and acquiring suitable companies that would help us reach our expansion goals.

Our Business Model

We are a fabless IC designer that provides advanced semiconductor solutions for supercomputing hardware. We are engaged in the front-end and back-end of IC design, which are the major components of the IC product development chain. We currently sell Bitcoin mining machines under our AvalonMiner brand that feature our proprietary ASICs which we design in-house, as well as ASICs designed for AI applications. We also sell Bitcoin mining machine parts and offer after-sales technical services for our products. In addition, we started to lease our Bitcoin mining machine in July 2019 to achieve better liquidity management when the Bitcoin price is low. We typically lease our Bitcoin mining machines for a period of six months, but with the option, at the mutual agreement of the parties, of ending the lease in three months. Our customer is responsible for the maintenance of the Bitcoin mining machines during the lease period.

See forth below is a diagram illustrating the production process of our IC products:

We closely partner with industry-leading third-party suppliers to fabricate, test and package the IC products we design. For our Bitcoin mining machine, we assemble the final Bitcoin mining machines by integrating the ICs produced by us and related components we procure. Our strong design capability has ensured that we have achieved a 100% tape-out success rate to date. Our front-end design capability ensures the robustness of our ICs, which can recover from any logic fault. Further, we carry out a complete verification process notwithstanding the significant time pressure to roll out new designs. We use FPGA based prototyping and simulation to ensure that the functionality and performance of our products are consistent with their design intent. Moreover, our rich experiences from previous tape-outs provide us with a vast amount of data that enable us to more accurately estimate the product's power efficiency, performance and yield rate at the back-end design stage.

We have endeavored to leverage the trend of early and large-scale adoption of advanced process technologies to build a world-class semiconductor company. We aim to continuously introduce ICs of higher performance and power efficiency for application in both the blockchain and AI fields.

Our Products

Bitcoin Mining Solutions

In 2009, CPUs were the initial Bitcoin mining solution. As the requirements for computing power grew, Bitcoin miners gradually migrated to chips with stronger computing power, including GPU and FGPA. In 2013, Mr. Nangeng Zhang, our chairman and chief executive officer, began to offer ASIC-based hardware as a more effective Bitcoin mining solution.

Set forth below is a summary of the milestones and status of the development of our ASICs developed for Bitcoin mining solutions.

Asics	Status and expected timeline*
28nm	• Production end of life
16nm, First Generation	• Production end of life
16nm, Second Generation	• Mass production of final products in 4th quarter 2017
16nm, Third Generation	• Mass production of final products in 2nd quarter 2018
7nm, First Generation	• Mass production of final products in 3rd quarter 2018
16nm, Fourth Generation	• Mass production of final products in July 2019
8nm, First Generation	• Mass production in September 2019 (expected)

* The expected timeline of the mass production of 8nm ASICs is based on our best estimates, which can be affected by factors beyond our control, including but not limited to, delays cause by our suppliers.

Since our incorporation in 2013, we have offered a single line of Bitcoin mining machines, under the AvalonMiner brand. The AvalonMiner Bitcoin mining machines feature our proprietary ASICs, and the ASICs are integrated with components procured by us including a circuit board, PMU boards, a cooling fan, heat sensors, and enclosed with an aluminum casing. We typically introduce new series of Bitcoin mining machines every year incorporating the latest technological development in terms of ASIC design and process technology. We also sell Bitcoin mining machine parts, mainly battery packs, that our customers, especially our overseas customers, purchase along with Bitcoin mining machines.

Set forth below are certain specifications of our selected AvalonMiner products.

Bitcoin Mining Machine	Release Date	ASICs	Number of ASICs in EachProduct	Computing Power(GH/s)	Power Consumption(W/GHs)
A6	November 2015	28nm	80	3,500	0.30
A721	November 2016	16nm, First Generation	72	6,000	0.15
A741	January 2017	16nm, First Generation	88	7,300	0.16
A761	December 2017	16nm, First Generation	104	8,800	0.15
A821	January 2018	16nm, Second Generation	104	11,000	0.11
A841	March 2018	16nm, Second Generation	104	13,000	0.10
A851	July 2018	16nm, Third Generation	104	14,500	0.10
A852	April 2019	16nm, Third Generation	104	15,000	0.10
A921	August 2018	7nm, First Generation	104	20,000	0.09
A911	January 2019	16nm, Third Generation	204	19,500	0.09
A1047	April 2019	16nm, Fourth Generation	240	37,000	0.06
A1066	July 2019	16nm, Fourth Generation	342	50,000	0.06

ASICs for AI Applications

We began to develop ASICs for AI applications in 2016 and completed the tape-out of our AI chips in June 2018. Our AI chips are miniaturized chips characterized by high-performance and low energy consumption. Each AI chip is designed with an artificial neural-network and high-performance processors, which mainly provides heterogeneous, real-time and off-line AI applications. In September 2018, we released the first generation of our AI chip, Kendryte K210, and we began mass production in the fourth quarter of 2018. K210 is a SoC that integrates machine vision and machine hearing functions. We were the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance.

Through the development of various generations of ASICs for Bitcoin mining, we have accumulated rich experience in reducing the size and increasing the power efficiency of the ASICs while achieving high computing power, which is fundamental to designing commercially successful ASICs for AI applications. Specifically, using TSMC's ultra-low-power 28nm advanced process with dual-core 64-bit processors for better power efficiency, stability and reliability, K210 is able to achieve low voltage and high power efficiency compared to other systems with the same processing power. K210's computing power is 0.576TOPS, and the SoC's power consumption is 300mW, achieving superior power-efficiency compared with what our competitors offer, according to Frost & Sullivan. Further, K210 is a SoC and provides a "single" chip solution, as compared with competing products that require separate chips to perform. As such, our AI chips will involve less set up costs for our customers and are able to avoid potential function loss when any of the chips malfunctions.

Set forth below is a summary of the milestones and status of the development of our AI products.

Product	Status
Kendryte K210—28nm	• Released in September 2018
	• Mass production and shipment of final products in 4th quarter 2018

K210 empowers our clients to provide AI solutions in the field of IoT through its machine vision and machine hearing capabilities. Details of these capabilities are set out below:

- *Machine Vision.* K210 is a highly adaptive embedded machine vision solution. It can perform convolutional neural-network calculations with high power efficiency. It is capable of object detection, image classification, face detection and recognition, obtaining size and coordinates of targets in real time and analyzing the type of detected targets in real time.

- *Machine Hearing.* K210 comes with a high-performance microphone array audio processor capable of real-time source orientation detection, sound field imaging, beamforming, voice wake-up and speech recognition.

Our AI chips' capabilities have the potential to be applied in a number of AI solutions in the field of IoT that involve automation, image and voice recognition, motion control and authentication. We currently focus on the following applications:

- *Smart Homes.* K210 can be applied in smart home appliances and security systems, including air conditioners, microwave ovens, gas meters, speakers, robot vacuum, electronic door locks featuring facial recognition functions, and household monitoring systems.

- *Agriculture.* K210 can increase crop yields when used for AI-powered agricultural monitoring, pest and disease monitoring and automated control.
- *Smart Retail.* K210 can power AIoT devices in smart retail to elevate customer experience, including supporting facial recognition for payment, automatically classifying items in vending machines, and tracking and analyzing customer flows.
- *Surveillance and Security.* AI applications in image and voice recognition can be used by companies, schools or hotels for security purposes.
- *Advanced driver-assistance systems.* K210 can empower image or video capturing devices installed in cars to detect human movements and facial expression for driver fatigue warning.

Our AI chips can also be used for the following applications:

- *Smart Industrial Applications.* K210 can be applied in logistics solutions, including intelligent sorting and transportation in complex warehousing environments, smart industrial machinery and robots, monitoring of electrical equipment, equipment fault detection and analysis of industrial equipment data. End users of such applications will mainly be logistics companies and manufacturers who wish to become more cost-efficient.
- *Medical Industry.* K210 can be utilized in medical solutions, including intelligent auxiliary diagnosis and treatment, medical image recognition, medicine identification search, medicine excavation, health management and medical care.
- *Education.* K210 can enhance the process of providing education to students and help teachers improve their teaching methods by allowing for the use of educational robots, virtual tutors, self-adaptive/personalized teaching, intelligent interactive platforms, educational efficiency inspection, teaching interaction and educational review. In addition, our AI chips can be utilized in body gesture detection or emotion detection technologies to identify child abuse, bullying or school violence incidents.
- *Authentication.* Image and voice recognition can also be used as an authentication method for devices, such as AI-powered face unlock for smartphones, and commercial transactions, such as ATM and bank transactions.

To enhance the robustness of our AI development ecosystem and ultimately to provide better user experiences, we offer comprehensive developer support to facilitate the development of AI applications. In particular, we provide schematic diagrams, reference printed circuit board and comprehensive design guidelines for hardware engineers, and we provide software development kits, debugging tools, an integrated development environment and their source codes for software engineers. We have also actively explored collaboration with business partners, including iSoftStone, and have integrated our AI chips in different IoT vertical markets, such as smart lock, smart toy and smart meter.

Sales and Marketing

We have assembled a dedicated team of marketing personnel and software engineers to focus on the development and marketing of our AI products. Our AI marketing team is organized around application scenarios, with dedicated team members. To generate interest from our customers, we also actively promote our latest research and development achievements and display our sample products. In particular, we started to market our AI chips in the first half of 2018. We are also in the process of working with a number of industry participants in the industries of smart city management systems, smart home devices, lighting solutions, smart apparel, telecommunications, intelligent entertainment devices and intelligent security devices, to further explore their interest in our AI products. In addition, we participate in industry associations, including the Zhejiang Software Industry Association, the Zhejiang Blockchain Technology Application Association, the Chinese Private Technology Entrepreneur Association, the Hangzhou Association of Enterprises with Foreign Investment and the China Communications Industry Association (IoT Application Branch), which help us acquire customers and discover potential partners.

Our Customer Base

Bitcoin Mining Machines

We generally provide our Bitcoin mining products to individual or corporate customers on a first-pay-first-serve basis, while we prioritize potential customers whom we believe have stronger potential for a longer-term relationship. However, we do not restrict or control the end-use of our Bitcoin mining products.

Except for situations where our Bitcoin mining products have major defects upon delivery, our customers cannot return or exchange their purchases for upgrades, despite the possibility that their old Bitcoin mining products may no longer be economical for Bitcoin mining for them.

In 2017 and 2018, we sold RMB1,303.1 million and RMB2,698.3 million (US$393.1 million) of Bitcoin mining products, respectively, out of which RMB110.7 million and RMB647.7 million (US$94.3 million), respectively, were sold to our overseas customers in over 55 countries, representing 8.5% and 23.9%, respectively, of our total revenue for Bitcoin mining products. For the six months ended June 30, 2018 and 2019, we sold RMB1,941.7 million and RMB287.2 million (US$41.8 million) of Bitcoin mining products, respectively, out of which RMB484.2 million and RMB35.1 million (US$5.1 million), respectively, were sold to our overseas customers in 28 countries, representing 24.9% and 12.2%, respectively, of our total revenue for Bitcoin mining products.

AI Applications

Our target customers are companies that are in the IoT industry, including, among others, those engaged in intelligent security solutions, smart appliances and instruments, intelligent medical solutions, logistic solutions, AI-powered educational solutions, robotics and authentication. We plan to increase our sales and marketing efforts to cover major customer groups in the IoT field. We currently focus on customers operating in large to mid-sized cities. While our current distribution method is to sell our AI ASICs directly to AI product developers, we plan to also sell our products through distributors in the future. We are already in talks with a number of local and overseas distributors.

K210 has received strong interest from the Risc-V developer community. As of June 30, 2019, we have shipped over 26,000 AI chips and development kits to AI product developers, the majority of which are from overseas, and we have initiated cooperation with more than 30 AI algorithm companies to develop holistic AI solutions for end consumers.

Research and Development

We became a global pioneer in offering ASIC solutions for blockchain computation purposes as a result of the work done by our research and development team led by our chairman and chief executive officer, Mr. Zhang. Mr. Zhang and his team are credited with inventing one of the first cryptocurrency mining machines incorporating ASIC technology. Further, leveraging our knowledge and experience in ASIC technology, we began developing ASICs for AI application in 2016 and became the first in the industry to deliver commercial edge computing AI chips on Risc-V architecture and self-developed neural-network accelerator with outstanding performance, which is widely recognized as a milestone for hardware advancement in the AI edge computing field, according to Frost & Sullivan.

To implement our research and development roadmap and our plan to diversify our product offering, members of our research and development team are primarily organized under two focus groups, including (i) a high power-efficiency computing group consisting of 61 team members, which is responsible for chip design and optimization and (ii) an AI products group consisting of 50 team members, which are responsible for the design of our Kendryte series including algorithm optimization and end application, both as of June 30, 2019.

As of June 30, 2019, our research and development team is comprised of 127 members, representing approximately 44.4% of our total employees, with an average of seven years of industry experience. Our research and development team includes 61 members with a master's degree or above. In addition to Mr. Zhang, Mr. Wu heads our research and development efforts and has extensive experience in the industry. Mr. Wu holds a bachelor degree in computer science and technology from Beijing University of Posts and Telecommunications and a master's degree in software engineering from Beihang University. The members of our research and development team have relevant educational backgrounds, including undergraduate and advanced degrees in computational science and design and other relevant fields, and many are fluent in multiple coding languages. Many of our research and development personnel have gained relevant design and engineering experiences at other leading IC design houses.

We believe we are one of the few companies in the world to possess advanced technological know-how for ASIC design, including algorithm development and optimization, standard cell design and optimization, low voltage and high power efficiency operations, design of high performance system and heat dissipation technology. We were also the first in the industry to deliver commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance for commercial adoption. We are devoted to in-house research and development of core advanced technologies, such as energy-efficient computing. As it requires a substantial amount of time and production engineering experience to integrate the results of research and development and master the core technologies in the ASICs field, we have created high barriers to entry against our competitors.

We were recognized by the Ministry of Science and Technology, the Ministry of Finance and the State Administration of Taxation of the PRC as a High-tech Enterprise in 2016 and maintained that designation in 2017 and 2018.

Research and Development Achievements

Our research and development efforts have yielded significant results which enable us to establish our brand recognition and our competitive position. Some of our research and development results are protected by copyrights and patents while the rest are part of our proprietary trade secrets. As of June 30, 2019, we have registered a total of 59 patents in the PRC, including two inventions, 46 utility model patents and 11 exterior design patents. As of the same date, we have registered 70 software copyrights and 30 IC layout-design rights in the PRC. In particular, we have been focusing on designing ASICs utilizing the most advanced process technologies available and achieved the following technological breakthroughs:

- mass production of 28 nm ASICs in 2015, which positioned us among the leading global players using the then most advanced process technology in the world;
- mass production of the first generation of 16nm ASICs in 2016, which made us among the first-movers in the world to use this advanced process technology on blockchain-related ASICs;
- mass production of the second generation of 16nm ASICs in 2017;
- mass production of the third generation of 16nm ASICs in 2018;
- mass production of the fourth generation of 16nm ASICs in 2019;
- release and mass production of the first generation of ASICS for AI application in 2018;
- 7nm ASICs design tape-out in April 2018 and mass production by TSMC began in August 2018; and
- 8nm ASIC design tape-out in June 2019 and the anticipated mass production of 8mm ASIC design in September 2019.

Research and Development Roadmap

The core strength of our capabilities consists of designing products with high computing power and high energy efficiency. We aspire to develop advanced IC designs for supercomputing hardware and innovative applications, including blockchain and AI. We follow a market-oriented research and development approach, and we focus on research and development projects that have a relatively clear path toward market acceptance and commercialization

opportunities. We are also able to diversify the application of our technology from pure blockchain application to the AI field, and we plan to increase our investment in the development of our AI chips and the establishment of an AI development ecosystem by providing AI chips with better performance and fostering an interactive developer community using our products.

Production

Our Fabless Model

We do not directly manufacture ICs used for our products. Instead, we utilize what is known as a fabless model, whereby we cooperate with world-class production partners for all phases of the manufacturing process of our ICs, including wafer fabrication and packaging and testing. Under the fabless model, we are able to leverage the expertise of industry leaders that are certified by the ISO in such areas as fabrication, assembly, quality control and assurance, reliability and testing. In addition, the fabless model allows us to avoid many of the significant costs and risks associated with owning and operating various fabrication and packaging and testing facilities. Our fabrication partner is responsible for procurement of the majority of the raw materials used in the production of our ICs. As a result, we can focus our resources on research and development, product design and additional quality assurances.

We closely work with leading global production partners, including TSMC and Samsung for IC fabrication, and SPIL (which was acquired by ASE in April 2018), ASE and STATS ChipPac for IC packaging and testing. TSMC is the world's largest dedicated foundry for semiconductor. ASE and JCET, the ultimate parent company of STATS ChipPac, are among the largest IC packaging and testing service providers in the world.

IC Fabrication

We work with TSMC, currently our main IC fabrication partner, to formulate semi-annual purchase plans in order for them to allocate their production resource, and we place actual orders according to our business needs. After we place our orders, and once TSMC accepts our orders, we are required to prepay in full in order to secure production capacity from TSMC. It takes an average of approximately three months from the time when we place our order to the delivery of wafers. We started our cooperation with TSMC in 2013, and we do not maintain any long-term contract or framework agreement.

Packaging and Testing

We started our cooperation with ASE in 2014, STATS ChipPac in 2013 and SPIL in 2017. According to our agreements, we provide rolling forecasts and firm orders for our packaging and testing partners to purchase necessary materials. We typically settle with our packaging and testing partners on a monthly basis and we are required to pay them within 30 days upon receipt of invoices.

Assembly Plant

We currently operate an assembly plant located in Hebei Province that has a gross floor area of 7,538.5 square meters. Subject to the amount of ICs we can obtain from our production partners, we have the flexibility to adjust the production capacity of our Bitcoin mining machines. For example, we can adjust the assembly worker's shifts in response to the purchase orders we receive.

Quality Control

We emphasize quality control in all aspects of our operations. From product development, component sourcing to product assembly and delivery, we strictly control the quality of our products and components, to ensure our Bitcoin mining machines meet our stringent internal standards as well as international and industry standards. As a result, the average malfunction rate of our Bitcoin mining machines is much lower than the industry average, according to Frost & Sullivan. We also require our fabrication, packaging and testing service providers to apply their stringent quality control standards. In particular, we have attained the CE certification and U.S. Federal Communication Commission certification for some of our AvalonMiner products.

We have implemented various quality-control checks into our production process and the IC fabrication process by our production partners. In addition, we provide timely and effective after-sales services and support to our users.

We devote significant resources to quality control of our products with a dedicated team.

Warranty and After Sales Services

We provide warranties of not longer than six months, which we believe is in line with prevailing industry practice. Our warranties cover regular maintenance services and parts and labor for repairs. The components used in our products are typically covered by warranties provided by the respective suppliers.

We have devised a standard operating procedure for customer service. We collect and record customer feedback and complaints from different channels and make timely responses in order to achieve customer satisfaction.

We accept exchanges of our Bitcoin mining machines only for major defects. We believe our exchange policy is consistent with relevant PRC laws and regulations governing product quality and consumer rights and interests. We have not received any requests for exchange which individually or in aggregate has had a material adverse effect on our business and financial condition. In addition, as of the date of this prospectus, we have not experienced any product recall that adversely impacted our reputation, business operations or financial condition.

Competition

Cryptocurrency mining machines comprise the overwhelming majority of blockchain hardware. The global Bitcoin mining machine market is relatively concentrated with a few large players. Most of the leading players are based in the PRC. We are the second largest Bitcoin mining machine designer and manufacturer globally in terms of market share of computing power sold in the six months ended June 30, 2019, according to Frost & Sullivan. In the six months ended June 30, 2019, the total computing power of all the Bitcoin mining machines sold by us accounted for approximately 21.9% of the combined computing power of all the Bitcoin mining products sold in the global market, according to Frost & Sullivan.

Our competitors include many well-known domestic and international players. We expect that competition in the Bitcoin mining industry will continue to be intense as we compete not only with existing players that have been focused on Bitcoin mining, but also new entrants that include well-established players in the semiconductor industry, and players who were not predisposed to this industry in the past. In the IC industry for AI products, we expect to face competition from existing and new players that are more established than us. Some of these competitors may also have stronger brand names, greater access to capital, longer histories, longer relationships with their suppliers or customers and more resources than we do.

Intellectual Property

We regard our patents, IC layout and design rights, copyrights, trademarks, domain names, know-how, proprietary technologies and similar intellectual property as critical to our success, and we rely on a combination of protections provided by patents, IC layout design rights, copyrights, trademark and trade secret law and confidentiality agreements, non-compete agreements and nondisclosure agreement with our employees and others to protect our proprietary rights. As of the date of this prospectus, we had registered 53 trademarks in the PRC and one trademark in the United States.

As of the date of this prospectus, we have registered a total of 59 patents in the PRC, including two inventions, 46 utility model patents and 11 exterior design patents. As of the same date, we have registered 70 software copyrights and 30 IC layout-design rights in the PRC. Proprietary know-how that is not patentable and proprietary technologies and processes for which patents, IC layout design rights and copyrights are difficult to enforce are also of significant importance to our operations. We rely on trade secret protection and confidentiality agreements to safeguard our interests in this respect. Certain elements in our operations are not covered by patents, IC layout design rights or copyrights. We have taken security measures to protect these elements.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our technology. Monitoring unauthorized use of our technology is difficult and costly, and we cannot be certain that the steps we have taken will prevent misappropriation of our technology. From time to time, we may have to resort to litigation to enforce our intellectual property rights, which could result in substantial costs and diversion of our resources.

We have in the past entered and may continue in the future to enter into IP licensing agreements with third parties for the use of their proprietary technologies, primarily software development tools, in the development of our products. Third parties may initiate litigation against us alleging infringement of their proprietary rights or breach of a licensing agreement or declaring their non-infringement of our intellectual property rights. In the event of a successful claim of infringement or breach of a licensing agreement and our failure or inability to develop non-infringing technology or license the infringed or similar technology or cure the breach on a timely basis, our business could be harmed. Moreover, even if we are able to license the infringed or similar technology, license fees could be substantial and may adversely affect our results of operations.

See "Risk Factors—Risks Relating to Our Business and Industry—If we fail to adequately protect our IP rights, our ability to compete effectively or to defend ourselves from litigation could be impaired, which could reduce our total revenue and increase our costs" and "Risk Factors—Risks Relating to Our Business and Industry—We may face IP infringement claims or other related disputes, which could be time-consuming, costly to defend or settle and result in the loss of significant rights and lower sales."

Insurance

We do not maintain business liability or interruption insurance, which, based on publicly available information available to us relating to IC design companies based in the PRC, is in line with customary industry practice in the PRC. Any uninsured occurrence of business disruption, litigation or natural disaster, or significant damages to our uninsured equipment or facilities could have a material adverse effect on our results of operations. See "Risk Factors—Risks Relating to Our Business and Industry—Our insurance coverage is limited and may not be adequate to cover potential losses and liabilities. A significant uninsured loss or a loss in excess of our insurance coverage could have a material adverse effect on our results of operations and financial condition."

Employees

As of June 30, 2019, we employed a total of 286 employees that are classified as follows:

Function	Number of Employees	Percentage of Total Number ofEmployees
Management	43	15.0%
Sales and marketing	29	10.1%
Research and development	127	44.4%
Others	87	30.4%
Total	**286**	**100.0%**

We operate in a highly competitive and fast-growing industry in which recruiting and retaining talent is crucial to our continued growth and profitability. We compensate our employees based on historical contributions, potential for further contributions, as well as the market rate for qualified talent. We are committed to attracting and retaining top talent in the industry, and our emolument policy reflects that commitment. We offer various incentives to our employees including performance-based bonuses and share-based compensation. We also provide accidental insurance for the benefit of our employees. Pursuant to local regulations in each of the regions where we operate, we make contributions to various employee benefit plans. Employee benefits covered by these arrangements include employee benefits required by PRC laws and regulations as well as incentives for increasing production quantity, accommodations, meals and travel allowances. We believe that maintaining a stable and motivated workforce is critical to the success of our business. As a

fast-growing company, we believe we are able to provide our employees with ample career development choices and advancement opportunities. We organize and launch various training programs on a regular basis for our employees. We believe that the current emolument policy has contributed to our ability to attract, incentivize and retain talents in such a competitive and fast-growing industry.

Properties

We lease all our properties in China in connection with our business operations. They mainly include premises for our assembly plants, warehouses and offices. As of June 30, 2019 , we occupied a total of 16 properties with an aggregate gross floor area of approximately 17,245 square meters.

Environmental Matters

We are subject to PRC environmental laws and regulations including the Environmental Protection Law of the PRC. These laws and regulations govern a broad range of environmental matters, including air pollution, noise emissions and water and waste discharge. We consider the protection of the environment to be important and have implemented measures in the operation of our business to ensure our compliance with all applicable requirements under PRC environmental laws and regulations. Due to the nature of our operations, the waste we produce is not hazardous and has minimal impact on the environment.

Our operations are subject to regulation and periodic monitoring by local environmental authorities. If we fail to comply with present or future laws and regulations, we could be subject to fines, suspension of production or cessation of operations.

Legal Proceedings

We are currently not a party to, and we are not aware of any threat of, any legal, arbitral or administrative proceedings, which, in our opinion, is likely to have a material and adverse effect on our business, financial conditions or results of operations. We may from time to time become a party to various legal, arbitral or administrative proceedings arising in the ordinary course of our business.

Regulation

REGULATION This section summarizes the principal current PRC laws and regulations relevant to our business and operations.

We are a fabless IC designer in the PRC. This section sets forth a summary of the applicable PRC laws, rules, regulations, government and industry policies and requirements that have a significant impact on our operations and business in the PRC. This summary does not purport to be a complete description of all the laws and regulations, which apply to our business and operations. Investors should note that the following summary is based on relevant laws and regulations in force as of the date of this prospectus, which may be subject to change.

PRC Policies and Regulations relating to the IC Industries

Investments in the PRC conducted by foreign investors and foreign-owned enterprises shall comply with the Guidance Catalog of Industries for Foreign Investment (2019 Version) (LOGO LOGO), or the Foreign Investment Catalog, which was jointly promulgated by the Ministry of Commerce of the PRC, or MOFCOM, and the National Development and Reform Commission of the PRC, or NDRC, on June 30, 2019 and to be effective on July 30, 2019. The Foreign Investment Catalog contains specific provisions guiding market access of foreign capital, stipulating in detail different areas of entry, which include encouraged foreign-invested industries. Our business falls within the category of encouraged foreign-invested industries, according to catalogs 281, 282, 286, 287, 290 and 291 of encouraged foreign invested industries listed in the Foreign Investment Catalog.

Pursuant to Provisions for Guiding the Foreign Investment Direction (LOGO), projects with foreign investment fall into 4 categories, namely encouraged, permitted, restricted and prohibited. Projects with foreign investment that are encouraged, restricted or prohibited shall be listed in the Foreign Investment Catalog. Projects with foreign investment not listed as encouraged, restricted or prohibited projects are permitted projects.

As demonstrated by The Circular of the State Council on Printing and Distributing Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry (LOGO LOGO) issued on June 24, 2000, the PRC continues to enact policies encouraging new and advanced technology and supporting the software and IC industries.

Pursuant to the Circular of the State Council on Printing and Distributing Policies for Further Encouraging the Development of the software Industry and the Integrated Circuit Industry (LOGO LOGO) effective from January 28, 2011 and the Announcement of the State Administration of Taxation on Issues Concerning the Accreditation and the Administration for Software and Integrated Circuit Enterprises (LOGO) effective from May 30, 2012 (abolished on May 29, 2016), the following financial and tax policies were formulated:

(i)	Preferential value-added tax policies for software enterprises shall continue to be implemented;
(ii)	Relevant preferential business tax policies shall be further implemented and improved. Eligible software enterprises shall be exempt from business tax and relevant procedures applicable to them shall be simplified;
(iii)	Upon certification, corporate income tax, or EIT, shall be exempt or levied thereon at half of the statutory rate of 25%;
(iv)	Granting software and IC manufacturing enterprises more preferential policies on investment and financing in central budgets, policy-oriented financial institutions and commercial institutions;
(v)	Other preferential policies on intellectual properties, research and development human resources, input and output and marketing; and

(vi) Key software industries falling within the State's planned industries layout that are not eligible for preferential tax exemption in a given year will have enterprise income tax levied at the reduced rate of 10%.

PRC Policies and Regulations relating to the Bitcoin Industry

The policies and regulations relating to the Bitcoin industry do not have a direct impact on the Company. However they could have an impact on the Company's customers in the PRC, which could indirectly impact the demand for the Company's Bitcoin mining machines.

According to the Circular on Prevention of Risks from Bitcoin jointly promulgated by People's Bank of China, Ministry of Industry and Information Technology, China Banking Regulatory Commission, China Securities Regulatory Commission, or CSRC, and China Insurance Regulatory Commission on December 3, 2013, or the Circular, Bitcoin shall be a kind of virtual commodity in nature, which shall not be in the same legal status with currencies and shall not be circulated as currencies and used in markets as currencies. The Circular also provides that financial institutions and payment institutions shall not engage in business in connection with Bitcoin.

According to the Announcement on Prevention of Risks from Offering and Financing of Tokens promulgated by seven PRC governmental authorities including the People's Bank of China on September 4, 2017, or the Announcement, activities of offering and financing of tokens, including initial coin offerings, have been forbidden in the PRC since they may be suspected to be considered as illegal offering of securities or illegal fundraising. All so-called token trading platform should not (i) engage in the exchange between any statutory currency with tokens and "virtual currencies," (ii) trade or trade the tokens or "virtual currencies" as central counterparties, or (iii) provide pricing, information agency or other services for tokens or "virtual currencies." The Announcement further provides that financial institutions and payment institutions shall not engage in business in connection with transactions of offering and financing of tokens.

PRC Laws and Regulations relating to Intellectual Property Rights

Trademark

The Trademark Law of the PRC (LOGO) was promulgated on March 1, 1983 with the last amendment effective from May 1, 2014. The implementing regulations of Trademark Law of the PRC (LOGO LOGO) was promulgated on August 3, 2002 by the State Council and amended on April 29, 2014 and became effective on May 1, 2014. These current effective laws and regulations provide the basic legal framework for the regulations of trademarks in the PRC, covering registered trademarks including commodity trademarks, service trademarks, collective marks and certificate marks. The Trademark Office under the SAMR is responsible for the registration and administration of trademarks in the PRC. Trademarks are granted on a term of 10 years commencing on its registration date. Six months prior to the expiration of the 10-year term, an application may renew the trademark for another 10 years.

Under the Trademark Law, any of the following acts may be regarded as an infringement of the exclusive right to use a registered trademark:

- Use of a trademark that is identical with or similar to a registered trademark on the same or similar kind of commodities without the authorization of the trademark registrant;
- Sale of commodities infringing upon the exclusive right to use a registered trademark;
- Counterfeiting or making, without authorization, representations of a registered trademark, or sale of such representation of a registered trademark; and
- Infringing upon other person's exclusive right to use a registered trademark in other ways and causing damages.

Violation of the Trademark Law may result in imposition of fines, confiscation and destruction of infringing commodities.

Patent

Pursuant to the Patent Law of the PRC (LOGO), or the Patent Law of the PRC, promulgated on March 12, 1984 with the last amendment effective from October 1, 2009, and the Implementing Regulations of the Patent Law of the PRC (LOGO) promulgated on June 15, 2001 with the last amendment effective from February 1,2010, respectively, an inventor or a designer may apply to the State Intellectual Property Office, or the SIPO for the grant of an invention patent, an utility model patent or a design patent. According to the Patent Law of the PRC, the right to apply for a patent (a patent application) and of registered patent can be transferred upon completion of registration with SIPO. The patent right duration is 20 years for invention and 10 years for utility model and design, starting from the date of application. A patentee is obligated to pay annual fee beginning with the year in which the patent right is granted. Failure to pay the annual fee may result in a termination of the patent right duration.

Copyright

The Copyright Law of PRC (LOGO), promulgated on September 7, 1990 with the last amendment effective from April 1, 2010, protects copyright and explicitly covers computer software copyright. The Regulations on the Protection of Computer Software (LOGO), promulgated on December 20, 2001 and amended on January 30, 2013 and came into force on March 1, 2013, protects the rights and interests of the computer software copyright holders and encourages the development of the software industry and information economy. In the PRC, software developed by PRC citizens, legal persons or other organizations are automatically protected immediately after its development, whether published or not. Foreigners or stateless persons having software first published within the territory of the PRC enjoy copyright in accordance with these regulations. Software owned by foreigners or stateless persons are protected in the PRC under these regulations according to an agreement signed between the country to which the foreigner belongs or the habitual residence of its developer and the PRC or according to the international conventions the PRC participated in. A software copyright owner may register with the software registration institution recognized by the copyright administration department of the State Council. A registration certificate issued by the software registration institution is a preliminary proof of the registered items. On February 20, 2002, the National Copyright Administration of the PRC

promulgated the Measures for the Registration of Computer Software Copyright (LOGO), which came into force on the date of promulgation and outlines the operational procedures for registration of software copyright, as well as registration of software copyright licenses and transfer contracts. The copyright Protection Center of PRC is mandated as the software registration agency under the regulations.

Layout Designs of Integrated Circuits

The regulations on the Protection of Layout Designs of Integrated Circuits (LOGO LOGO) was promulgated by the State Council on April 2, 2001 and became effective on October 1, 2001, and the Detailed Implementing Rules of the Regulations on the Protection of Layout Designs of Integrated Circuits (LOGO LOGO) were promulgated by SIPO, the authority to receive and examine applications for registrations of layout IC designs, on September 18, 2001 and came into effect on October 1,2001, or collectively the Layout-design Regulations.

Pursuant to the Layout-design Regulations, layout-design created by a PRC citizen, legal person or other organization shall be eligible for the exclusive right of layout-design in accordance with the Layout-design Regulations. The holder of the right of a layout design shall enjoy the following exclusive right:

(1) Reproducing a protected layout-design in its entirety or any part thereof that complies with the requirement of originality; and

(2) Commercially exploiting a protected layout-design, an IC incorporating a protected layout-design, or an article incorporating such an IC.

The exclusive right of a layout-design is acquired after it is registered with the intellectual property administration department of the State Council. Any unregistered layout-design shall not be protected under the Layout-design Regulations. The term of protection of the exclusive right of a layout-design shall be 10 years starting from the date of filling for registration or from the date on which it was first commercially exploited anywhere in the world, whichever expires earlier. However, no matter whether it has been registered or commercially exploited, a layout-design shall no longer be protected under the Layout-design Regulations 15 years after the date of the completion of its creation.

Any layout-design, if no application for its registration has been filled with the intellectual property administration department of the State Council within two years from the date on which it was first commercially exploited anywhere in the world, shall no longer be registered by the intellectual property administration department of the State Council.

The following acts, without the authorization of the holder of the right of a layout-design, would constitute an infringement of the layout-design:

(1) reproducing a protected layout-design in its entirety or any part thereof that complies with the requirement of originality;

(2) importing, selling, or otherwise distributing for commercial purposes a protected layout design, an IC incorporating such a layout-design, or an article incorporating such an IC.

The amount of compensation for the damage caused by an infringement of the exclusive right of a layout-design shall be the profits which the infringer has earned through the infringement or the losses suffered by the person whose right was infringed, including the reasonable expenses paid by the infringed person for the purposes of stopping the infringement.

Domain Name

Internet domain name registration and related matters are primarily regulated by the Administrative Measures on Internet Domain Names (LOGO) issued by the Ministry of Industry and Information Technology (LOGO), or the MIIT, on August 24, 2017 which became effective on November 1, 2017, the Implementing Rules of Domain Name Registration (LOGO LOGO) issued by China Internet Network Information Center (LOGO), or the CINIC, which became effective on May 29, 2012, and the Measures on Domain Name Disputes Resolution (LOGO LOGO) issued by CINIC which became effective on September 1, 2014. Domain name registrations are handled through domain name service agencies established under the relevant regulations, and the applicants become domain name holders upon successful registration. Domain name disputes shall be submitted to institutions authorized by the CINIC for resolution.

PRC Laws relating to Product Quality

The Product Quality Law of the PRC (LOGO) was promulgated on February 22, 1993 and amended on July 8, 2000, August 27, 2009 and December 29, 2018, respectively. The product quality supervision department under the State Council is responsible for nationwide product quality supervision. All the relevant departments under the State Council are in charge of product quality supervision according to their respective responsibilities. Local product quality supervision departments at or above the county level are responsible for product quality supervision within their own administrative areas.

Manufacturers and sellers shall establish and improve their internal product quality management systems and rigorously implement quality norms, quality responsibilities and corresponding measures for their assessment.

The PRC government encourages the use of scientific quality management methods and adoption of advanced science and technology, and encourages enterprises to ensure that their product quality reach or surpass trade standards, national standards and international standards. The entities and individuals that have made outstanding achievements in exercising advanced management of product quality and in bringing product quality up to the advanced international levels shall be awarded.

PRC Laws relating to Production Safety

The Work Safety Law of the PRC (LOGO) promulgated on June 29, 2002, with the latest amended version effective from December 1, 2014, is the principal law governing the supervision and administration of production safety in the PRC. Entities engaged in production and business activities within the territory of the PRC shall abide by the relevant legal requirements such as providing its staff with training on production safety and providing safe

working environment in compliance with relevant laws and regulations. Any entities unable to provide the required safe working environment may not engage in production activities. Any failure to comply with the aforesaid provisions or to rectify noncompliance within a time limit may subject the relevant entities to fines and penalties, suspension of operations, ceasing of operations, or even criminal liability in severe situations.

PRC Laws and Regulations relating to Taxation

Enterprise Income Tax

According to the Corporate Income Tax Law of the PRC (LOGO), or the EIT Law which was promulgated by the National People's Congress on March 16, 2007 with the latest amended version effective from December 29, 2018, and its implementing rules, a unified EIT rate of 25% is applied equally to both domestic enterprises and foreign invested enterprises, excluding non-resident enterprises. The EIT rate could be reduced to 15% for High-tech enterprises in need of special support from the PRC government.

Pursuant to the newly revised Administrative Measures for the Accreditation of High-tech Enterprises (LOGO), or the Administrative Measures, which became effective on January 1, 2016, High-tech enterprises, which are recognized in accordance with the Administrative Measures, may apply for the tax preferential policy in accordance with the EIT Law and the Implementing Measures thereof, the Law of PRC Concerning the Administration of Tax Collection (LOGO) and Implementing Rules of the Law of the PRC Concerning the Administration of Tax Collection (LOGO). The qualified high-tech enterprises would be taxed at a rate of 15% on EIT. The validity period of High-tech enterprises shall be three years from the date of issuance of the certificate of High-tech enterprise. After obtaining the High-tech enterprise qualification, such enterprise shall retain its financial statements together with details of its research and development activities and other technological innovation activities for future reference in accordance with the requirements of the tax authority and other relevant authorities. Where a significant change occurred such as change of name or other conditions related to the High-tech enterprises identified (e.g., separation, merger, restructuring and change of business), such enterprise shall report it to the relevant competent tax authority, which would accredit such enterprise within three months. Upon such accreditation, the High-tech enterprise would either remain its qualification or be disqualified. For enterprises undergoing a change of name, the authority would re-issue the certificate with the certificate number and duration of validity remains unchanged.

Pursuant to the Announcement of the State Administration of Taxation on Several Issues Concerning the Enterprise Income Taxes on the Indirect Transfer of Properties by Non-resident Enterprises (LOGO LOGO) promulgated and with effect from February 3, 2015, or Circular 7, and Announcement of the State Administration of Taxation on Issues Relating to Withholding at Source of Income Tax of Non-resident Enterprises (LOGO) promulgated on December 1, 2017 with last amendment on June 15, 2018, or Circular 37, where a non-resident enterprise indirectly transfers equities and other properties of a PRC resident enterprise, or PRC Taxable Properties, to evade its obligation of paying EIT by implementing arrangements that are not for bona fide commercial purpose, such indirect transfer shall be re-identified and recognized as a direct transfer of equities and other properties of the PRC resident enterprise, in accordance with the provisions of Article 47 of the EIT Law. PRC Taxable Properties in this announcement include properties of a PRC entity or establishment located in the PRC, real estate in the PRC and an equity investment in a PRC resident enterprise, that are directly held by a non-resident enterprise and proceeds from such transfer shall be subject to EIT in the PRC in accordance with the PRC tax laws. An indirect transfer of PRC Taxable Properties refers to a transfer by a non-resident company of an equity interest or other similar right or interest in an overseas enterprise (excluding the PRC resident enterprise registered overseas), or the Overseas Enterprises, that in turn directly or indirectly holds the PRC Taxable Properties, which effectively has the same or a similar effect as a direct transfer of such PRC Taxable Properties. Circular 7 also provides that an indirect transfer of PRC Taxable Properties, which satisfies one of the following conditions, will not be subject to the aforesaid provisions:

- A non-resident enterprise buys and sells the shares of one same overseas listed company in a public stock exchange; and
- If the non-resident enterprise directly held and transferred PRC Taxable Properties, the proceeds derived thereof would be exempt from EIT under the applicable tax treaty or arrangement.

Value-added Tax

Pursuant to the Provisional Regulations on Value-Added Tax of the PRC (LOGO) promulgated by the Stated Council on December 13, 1993 with the latest amended version effective from November 19, 2017, and its implementing rules (LOGO) promulgated by MOF on December 25, 1993 and revised on December 18, 2008 and October 28, 2011, respectively, tax payers engaging in sale of goods, provision of processing services, repairs and replacement services or importation of goods within the territory of the PRC shall pay value-added tax, or the VAT. Unless stated otherwise, the rate of value-added tax is 17%.

Pursuant to the Notice on Value-added Tax Policies of Software Products (LOGO), a general taxpayer who sells its self-develop software products and borne a VAT more than 3%, could enjoy a levy-refund policy on VAT after being taxed at the fixed rate of 17%. However, in practice, such general taxpayer should present the license of software products (LOGO) or registration certificates of software copyrights (LOGO) to prove the software products were developed and produced by its own.

In April 2018, MOF and SAT jointly promulgated the Circular of the Ministry of Finance and the State Administration of Taxation on Adjustment of Value-Added Tax Rates (LOGO LOGO), or Circular 32, according to which (i) for VAT taxable sales or imports of goods originally subject to value-added tax rates of 17% and 11% respectively, such tax rates were adjusted to 16% and 10%, respectively; and (ii) for exported goods originally subject to a tax rate of 17% and an export tax refund rate of 17%, the export tax refund rate was adjusted to 16%. Circular 32 became effective on May 1, 2018 and superseded existing provisions which were inconsistent with Circular 32.

Pursuant to the Announcement on Relevant Policies for Deepening Value-Added Tax Reform (LOGO) ,which was promulgated by MOF, State Administration of Taxation and the General Administration of Customs on March 20, 2019, where (i) for VAT taxable sales or imports of goods originally subject to value-added tax rates of 16%, such tax rates shall be adjusted to 13%; (ii) for the exported goods originally subject to a tax rate of 16% and an export tax refund rate of 16%, the export tax refund rate shall be adjusted to 13%.

PRC Laws and Regulations relating to Dividend Distribution

Under the Law of the PRC on Wholly Foreign-Owned Enterprises (LOGO), which was promulgated by the National People's Congress of the PRC in 1986 and revised by the Standing Committee of National People's Congress on October 31, 2000 and September 3, 2016, foreign-invested enterprises in the PRC may pay dividends only out of their accumulated profits, if any, determined in accordance with PRC accounting standards and regulations. In addition, wholly foreign-owned enterprises in the PRC are also required to allocate at least 10% of their respective accumulated profits after tax each year, if any, to certain reserve funds unless these accumulated reserves have reached 50% of the registered capital of such enterprises. These reserves are not distributable as cash dividends.

According to the EIT Law and its implementing rules, dividends paid to investors of an eligible PRC resident enterprise can be exempted from EIT and dividends paid to foreign investors are subject to a withholding tax rate of 10%, unless relevant tax agreements entered into by the PRC government provide otherwise.

The PRC and the government of Hong Kong entered into the Arrangement between the Mainland of the PRC and the Hong Kong Special Administrative Region for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Incomes (LOGO LOGO), or the Arrangement, on August 21, 2006. According to the Arrangement, 5% withholding tax rate shall apply to the dividends paid by a PRC company to a Hong Kong resident, provided that such Hong Kong resident directly holds at least 25% of the equity interests in the PRC company, and 10% of withholding tax rate shall apply if the Hong Kong resident holds less than 25% of the equity interests in the PRC company.

Pursuant to the Circular on Relevant Issues Relating to the Implementation of Dividend Clauses in Tax Treaties (LOGO), which was promulgated by the State Administration of Taxation, or SAT, and became effective on February 20, 2009, all of the following requirements shall be satisfied where a fiscal resident of the other party to a tax agreement needs to be entitled to such tax agreement treatment as being taxed at a tax rate specified in the tax agreement for the dividends paid to it by a PRC resident company: (i) such a fiscal resident who obtains dividends shall be a company as provided in the tax agreement; (ii) owner's equity interests and voting shares of the PRC resident company directly owned by such a fiscal resident reaches a specified percentage; and (iii) the equity interests of the PRC resident company directly owned by such a fiscal resident, at any time during the 12 months prior to obtaining the dividends, reach a percentage specified in the tax agreement.

According to the Tentative Administrative Measures on Tax Convention Treatment for Non-Residents (LOGO), which was promulgated by the SAT on August 24, 2009 and became effective on October 1, 2009, where a non-resident enterprise that receives dividends from a PRC resident enterprise wishes to enjoy the favorable tax benefits under the tax arrangements, it shall submit an application for approval to the competent tax authority. Without being approved, the non-resident enterprise may not enjoy the favorable tax treatment provided in the tax agreements.

However, the Tentative Administrative Measures on Tax Convention Treatment for Non-Residents (LOGO) has been repealed by the Administrative Measures on Tax Convention Treatment for Non-Resident Taxpayers (LOGO), which was promulgated by the SAT on August 27, 2015 and became effective on November 1, 2015 with last amendment on June 15, 2018, where a non-resident enterprise that receives dividends from a PRC resident enterprise, it could directly enjoy the favorable tax benefits under the tax arrangements at tax returns, and subject to the subsequent regulation of the competent tax authority.

PRC Laws and Regulations relating to Labor

Pursuant to the PRC Labor Law (LOGO) promulgated on July 5, 1994 and effective from January 1, 1995, and last revised on August 27, 2009, as well as the PRC Labor Contract Law (LOGO) promulgated on December 29, 2018, revised on December 28, 2012 and effective from July 1, 2013, if an employment relationship is established between an entity and its employees, written labor contracts shall be executed between them. The relevant laws stipulate the maximum number of working hours per day and per week, respectively. Furthermore, the relevant laws also set forth the minimum wages. The entities shall establish and develop systems for occupational safety and sanitation, implement the rules and standards of the PRC government on occupational safety and sanitation, educate employees on occupational safety and sanitation, prevent accidents at work and reduce occupational hazards.

Pursuant to the Interim Regulations on Levying Social Insurance Premiums (LOGO) promulgated on January 22, 1999 and revised on March 24, 2019, Decisions of the State Council on Modifying the Basic Endowment Insurance System for Enterprise Employees (LOGO LOGO) promulgated on December 3, 2005, Decision on Establishment of Basic Medical System for Urban Employee (LOGO) issued by State Council with effect from December 14, 1998, the Regulations on Unemployment Insurance (LOGO) effective from January 22, 1999, Regulations on Work-Related Injury Insurance (LOGO) promulgated on April 27, 2003 with effect from January 1, 2004, and as amended on December 20, 2010, and the Interim Measures concerning the Maternity Insurance for Enterprise Employees (LOGO) promulgated on December 14, 1994 with effect from January 1, 1995, employers are required to register with the competent social insurance authorities and provide their employees with welfare schemes covering pension insurance, unemployment insurance, maternity insurance, work-related injury insurance and medical insurance.

Pursuant to the Social Insurance Law of the PRC (LOGO), which became effective on July 1, 2011 with last amendment on December 29, 2019, all employees are required to participate in basic pension insurance, basic medical insurance schemes and unemployment insurance, which must be contributed by both the employers and the employees. All employees are required to participate in work-related injury insurance and maternity insurance schemes, which must be contributed by the employers. Employers are required to complete registrations with local social insurance authorities. Moreover, the employers must timely make all social insurance contributions. Except for mandatory exceptions such as force majeure, social insurance premiums may not be paid late, reduced or be exempted. Where an employer fails to make social insurance contributions in full and on time, the social insurance contribution collection agencies shall order it to make all or outstanding contributions within a specified period and impose a late payment fee at the rate of 0.05% per day from the date on which the contribution becomes due. If such employer fails to make the overdue contributions within such time limit, the relevant administrative department may impose a fine equivalent to 1–3 times the overdue amount.

Pursuant to the Administrative Regulations on the Housing Provident Fund (LOGO) effective from April 3, 1999, amended on March 24, 2002 and March 24, 2019, enterprises are required to register with the competent administrative centers of housing provident fund and open bank accounts for housing provident funds for their employees. Employers are also required to timely pay all housing fund contributions for their employees. Where an employer fails to submit and deposit registration of housing provident fund or fails to go through the formalities of opening housing provident fund accounts for its employees, the housing provident fund management center shall order it to go through the formalities within a prescribed time limit. Failing to do so at the expiration of the time limit will subject the employer to a fine of not less than RMB10,000 and up to RMB50,000. When an employer fails to pay housing provident fund due in full and in time, housing provident fund center is entitled to order it to rectify, failing to do so would result in enforcement exerted by the court.

PRC Laws and Regulations relating to Foreign Exchange

Foreign Exchange

Pursuant the Administrative Regulations of the PRC on Foreign Exchange (LOGO) promulgated by the State Council on January 29, 1996 and amended on August 1, 2008 with effect from August 5, 2008, and various regulations issued by the State Administration of Foreign Exchange (LOGO), or the SAFE, and other PRC regulatory agencies, foreign currency could be exchanged or paid through two different accounts, namely current account and capital account. Payment of current account items, including commodity, trade and service-related foreign exchange transactions and other current payment, may be made by conversion between Renminbi and foreign currencies without approval of the SAFE, but are subject to procedural requirements including presenting relevant documentary evidence of such transactions. Capital account items, such as direct equity investment, loans and repatriation of investment, require the prior approval from or registration with the SAFE or its local branch for conversion between Renminbi and the foreign currency, and remittance of the foreign currency outside the PRC.

SAFE Circular 59

On November 19, 2012, SAFE promulgated the Circular of Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment (LOGO LOGO), or SAFE Circular 59, which became effective on December 17, 2012, with last amendment on October 10, 2018. SAFE Circular 59 substantially amends and simplifies the current foreign exchange procedure. According to SAFE Circular 59, the opening of various special purpose foreign exchange accounts (e.g. pre-investment expenses account, foreign exchange capital account, asset realization account, guarantee account) no longer requires SAFE's approval. Furthermore, multiple capital accounts for the same entity may be opened in different provinces, which was not possible before the issuance of SAFE Circular 59. Reinvestment of lawful incomes derived by foreign investors in the PRC (e.g. profit, proceeds of equity transfer, capital reduction, liquidation and early repatriation of investment) no longer requires SAFE's approval or verification, and purchase and remittance of foreign exchange as a result of capital reduction, liquidation, early repatriation or share transfer in a foreign-invested enterprise no longer requires SAFE's approval.

SAFE Circular 19

On March 30, 2015, SAFE promulgated the Circular on Reforming the Management Approach regarding the Settlement of Foreign Exchange Capital of Foreign-invested Enterprises (LOGO LOGO), or SAFE Circular 19, which came into effect on June 1, 2015. According to SAFE Circular 19, the foreign exchange capital of foreign-invested enterprises, or the FIE, shall be subject to a discretional foreign exchange settlement, or the Discretional Foreign Exchange Settlement. The Discretional Foreign Exchange Settlement refers to the foreign exchange capital in the capital account of an FIE for which the rights and interests of monetary contribution has been confirmed by the local foreign exchange bureau (or the book-entry registration of monetary contribution by the banks) and can be settled at the banks based on the actual operational needs of the FIE. The proportion of Discretional Foreign Exchange Settlement of the foreign exchange capital of an FIE is temporarily determined as 100%. Renminbi converted from a foreign exchange capital will be kept in a designated account and if an FIE needs to make further payment from such account, it still needs to provide supporting documents and go through the review process with the banks.

Furthermore, SAFE Circular 19 stipulates that the use of capital by foreign-invested enterprises shall follow the principles of authenticity and self-use within the business scope of enterprises. The capital of an FIE and capital in Renminbi obtained by the FIE from foreign exchange settlement shall not be used for the following purposes:

(1)	directly or indirectly used for the payment beyond the business scope of the enterprises or the payment prohibited by relevant laws and regulations;
(2)	directly or indirectly used for investment in securities unless otherwise provided by relevant laws and regulations;
(3)	directly or indirectly used for granting the entrust loans in Renminbi (unless permitted by the scope of business), repaying the inter-enterprise borrowings (including advances by the third party) or repaying the bank loans in Renminbi that have been sub-lent to the third party; and
(4)	paying the expenses related to the purchase of real estate that is not for self-use (except for the foreign-invested real estate enterprises).

SAFE Circular 37

On July 4, 2014, Circular of the State Administration of Foreign Exchange on Issues Concerning Foreign Exchange Administration over the Overseas Investment and Financing and Round-trip Investment by Domestic Residents via Special Purpose Vehicles (LOGO LOGO), or SAFE Circular 37, became effective on July 4, 2014. Pursuant to SAFE Circular 37, SAFE and its branches shall enforce registration management for establishment of a special purpose vehicle, or SPV, by domestic residents (including domestic institutions and domestic resident individuals, and domestic resident individuals shall refer to PRC citizens holding the identity cards for PRC domestic residents, military identity certificates or identity certificates for armed police force, and overseas individuals that do not hold any domestic legitimate identity certificates but have habitual residences within the territory of the PRC due to

relationships of economic interests). Prior to contributing domestic and overseas legitimate assets or interests to an SPV, a domestic resident shall apply to SAFE for foreign exchange registration of overseas investment. Where a registered overseas SPV undergoes changes of its domestic resident individual shareholders, name, operating period or other basic information, or experiences substantial changes including without limitation the increase or reduction of registered capital by domestic resident individuals, transfer or replacement of equity and merger or split, the SPV shall go through modification registration of foreign exchange for overseas investment with SAFE. Where a non-listed SPV uses its own equity interests or options to grant equity incentives to the directors, supervisors and senior management of a domestic enterprise under its direct or indirect control, as well as other employees in employment or labor relationships with the aforesaid company, relevant domestic resident individuals may, before exercising their rights, apply to SAFE for foreign exchange registration of the SPV.

SAFE Circular 13

Pursuant to Circular on Further Simplifying and Improving the Direct Investment-related Foreign Exchange Administration Policies (LOGO), or SAFE Circular 13, which was promulgated by SAFE on February 13, 2015 and became effective on June 1, 2015, the foreign exchange registration under domestic direct investment and the foreign exchange registration under overseas direct investment will be directly reviewed and handled by banks in accordance with SAFE Circular 13, and SAFE and its branches shall perform indirect regulation over the foreign exchange registration via banks.

Management

MANAGEMENT

Directors, Executive Officers and Senior Management

The following table sets forth certain information relating to our current directors, executive officers and senior management.

Name	Age	Position/Title
Nangeng Zhang	36	Chairman and Chief Executive Officer
Jianping Kong	34	Director and Co-Chairman
Jiaxuan Li	34	Director
Qifeng Sun	39	Director
Hong Zhang*	46	Independent Director
Xiaohu Yang*	53	Independent Director
Mei Luo*	43	Independent Director
Li Zhang	34	Vice President
Quanfu Hong	36	Vice President of Finance
Jingjie Wu	32	Vice President of Technology
Shaoke Li	35	Secretary to the Board

* Has accepted appointment as one of our independent directors, effective upon the SEC's declaration of effectiveness of our registration statement on Form F-1, of which this prospectus is a part.

Nangeng Zhang has served as our Chairman of the Board and chief executive officer since our inception. Mr. Zhang has approximately 11 years of experience in electronic device design, engineering, manufacturing, quality control and research and development and is responsible for formulating and overseeing our overall development strategies and operations. Before founding our company, Mr. Zhang was an assistant researcher at the Beijing Remote Sensing and Communication Technology Institution, a research institution which specializes in research and development and production and marketing of antenna, detector, photoelectric measuring equipment, mid-wave infrared camera, from August 2005 to July 2008. Mr. Zhang received a bachelor's degree in electronic information engineering and a master's degree in software engineering from Beihang University in the PRC in July 2005 and July 2010, respectively. From September 2010 to October 2013, Mr. Zhang was pursuing a Ph.D. degree at Beihang University.

Jianping Kong has served as our director since May 2018. Mr. Kong has approximately 11 years of experience in business and corporate management, including serving as executive director and general manager at both Hangzhou Weidi Tu Technology Co., Ltd. and Zhejiang Weiji Technology Co., Ltd. since July 2019, executive partner at Hangzhou Shuxin Investment Limited Partnership since November 2015 and director at Zhejiang Shubei Investment Management Co., Ltd. since October 2015. Mr. Kong currently also serves as chairman of the board of Hangzhou Hengtong Cloud Information Technology Co., Ltd., a company listed on PRC National Equities Exchange and Quotations (NEEQ: 838316). Mr. Kong received a bachelor's degree in law from Wenzhou University in the PRC in June 2008 and a EMBA from Tsinghua University.

Jiaxuan Li has served as our director since December 2015. Mr. Li has nine years of experience in IC design. Prior to joining us, Mr. Li served as an IC engineer responsible for researching, planning and overseeing IC design and production at Vimicro Corporation, a Chinese fabless chip company which specializes in research and development and production and marketing of multimedia processors for personal computers and mobile phones, from July 2010 to July 2013. Mr. Li received a bachelor's degree in computer science and technology from Harbin Institute of Technology in the PRC in July 2008 and a master's degree in software engineering from Beihang University in the PRC in July 2010, respectively.

Qifeng Sun has served as our director since May 2018. Mr. Sun is responsible for overseeing our sales and marketing activities in China and has approximately ten years of experience in business and corporate management. He has served as executive director at Hangzhou Weitu Technology (Beijing) Co., Ltd. since October 2017, executive partner at Hangzhou Pite Dier Investment Limited Partnership since November 2015, director at Linan Bite Tiancheng Technology Co., Ltd. since March 2015 and director at Yi Bite Number Technology (Beijing) Co., Ltd. since January 2014. Mr. Sun also serves as a director of Hangzhou Hengtong Cloud Information Technology Co. Ltd., a company listed on PRC National Equities Exchange and Quotations (NEEQ: 838316).

Hong Zhang will serve as our independent director immediately upon the SEC's declaration of effectiveness of our registration statement on Form F-1, of which this prospectus is a part. He has approximately 15 years of experience in teaching business management at prestigious schools. He has served several positions at the PBC School of Finance at Tsinghua University since 2014, including his current position as chair professor. Prior to that, Mr. Zhang had worked at INSEAD in Singapore as an assistant professor from 2004 to 2014. Mr. Zhang received a Ph.D. in financial economics from Yale University in December 2004.

Xiaohu Yang will serve as our independent director immediately upon the SEC's declaration of effectiveness of our registration statement on Form F-1, of which this prospectus is a part. He has approximately 25 years of experience in computer science. Mr. Yang has served several positions at Zhejiang University, including researcher at the School of Computer Science, deputy director of Institute of Computer Software and Associate Dean of Academy of Internet Finance since 1994. Previously, Mr. Yang served as vice president of Zhejiang Zheda Insigma Group Co., Ltd., a company listed on the Shanghai Stock Exchange (SH: 600797), from June 2006 to September 2013. Mr. Yang currently serves as deputy chairman of Zhejiang Province Block Chain Technology Application Association. Mr. Yang received a doctorate degree in engineering from Zhejiang University in the PRC in December 1993.

Mei Luo will serve as our independent director immediately upon the SEC's declaration of effectiveness of our registration statement on Form F-1, of which this prospectus is a part. She has approximately 12 years of experience in teaching accounting. Ms. Luo joined Tsinghua University in June 2007 and is currently an associate professor of the Department of Accounting at the School of Economics and Management of Tsinghua University. Ms. Luo served as an independent non-executive director of Beijing Gehua CATV Network Co., Ltd., a company listed on the Shanghai Stock Exchange (SH: 600037), from March 2013 to March 2019, and as an independent non-executive director of and the chairman of the audit committee of Bank of Gansu Co., Ltd., a company listed on the Stock Exchange (SEHK: 2139), since 2017. Ms. Luo received a bachelor's degree in accounting from Tsinghua University in the PRC in June 1998 and a doctorate degree in business administration from University of California, Berkeley in the United States in December 2004.

Li Zhang has served as our vice president since March 2018. Ms. Zhang has approximately ten years of experience in accounting, investment and business management and is responsible for overseeing our capital markets, investments, AI business and legal matters. Prior to joining us in March 2018, Ms. Zhang worked as a senior auditor at PricewaterhouseCoopers Zhong Tian LLP from October 2009 to September 2012. She later worked as a senior manager at the acquisition and financing department of Guotai Junan Securities from December 2012 to June 2014. After that, Ms. Zhang served as a vice president and secretary of the board at Hangzhou Shunwang Technology Co., Ltd., a company listed on the Shenzhen Stock Exchange (SZ: 300113) until August 2017. From September 30, 2015, Ms. Zhang has also served as a director of Ci Wen Media Co., Ltd., a company listed on the Shenzhen Stock Exchange (SZ: 002343). Ms. Zhang obtained a bachelor's degree and a master's degree in automobile engineering from Tsinghua University in the PRC in 2006 and 2009, respectively. She also obtained a EMBA from Peking University in July 2019. Ms. Zhang is a non-practicing member of the Chinese Institute of Certified Public Accountants.

Quanfu Hong has served as our vice president of finance since July 2016. Mr. Hong has more than 14 years of experience in accounting and finance and is responsible for overseeing our financial matters. Prior to joining us in July 2016, Mr. Hong served as an auditor and audit manager at BDO China Shu Lun Pan CPAs, an accounting firm, from July 2005 to February 2013, and the financial director at Pure Pearl Group Co., Ltd., currently known as Innovative Medical Management Co., Ltd., a company listed on the Shenzhen Stock Exchange (SZ: 002173), from March 2013 to April 2016. Mr. Hong obtained a bachelor's degree in finance from the University of Anhui in Hefei, Anhui Province in July 2005. Mr. Hong has also been a non-practicing member of The Chinese Institute of Certified Public Accountants since February 2006, a member of The China Certified Tax Agents Association since June 2009 and a Certified Public Valuer since September 2008.

Jingjie Wu has served as our vice president of technology since February 2018. Mr. Wu has approximately eight years of experience in chip design and software engineering and is responsible for overseeing our technology development and IC supply chain operation. Prior to joining us in September 2013, Mr. Wu worked as a chip design engineer at Ingenic Semiconductor Co., Ltd., a company listed on the Shenzhen Stock Exchange (SZ: 300223), from November 2011 to September 2013. Mr. Wu received a master's degree in software engineering from Beihang University in the PRC in 2011.

Shaoke Li has served as the secretary to our board of directors since October 2017. Mr. Li has ten years of experience in international trade and investment and is responsible for overseeing board of directors related matters. Prior to joining us in October 2017, Mr. Li served as the general manager of international trade department of Shangyu Group Co., Ltd., a manufacturer of valves and pumps, from June 2009 to May 2011, a staff member of international trade department at Bank of Wenzhou from August 2011 to January 2014, the director of capital markets department at Yifang (Shanghai) Commercial Factoring Co., Ltd. from March 2014 to October 2016, the legal representative and vice general manager of investment at Yifang Investment Co., Ltd., an investment company from February 2015 to October 2016, and was a partner at Zhejiang Yinxinggu Capital, an investment fund, from November 2016 to July 2017. Mr. Li obtained a bachelor's degree in accountancy from the Concordia University in Canada in October 2008.

Board of Directors

Our board of directors will consist of seven directors upon the SEC's declaration of effectiveness of our registration statement on Form F-1, of which this prospectus is a part. A director is not required to hold any shares in our company to qualify to serve as a director. A director who is in any way, whether directly or indirectly, interested in a contract, transaction or proposed contract or transaction with us is required to declare the nature of his or her interest at a meeting of the directors. A director may vote with respect to any contract or any proposed contract or arrangement in which he or she is interested, and if he or she does so his or her vote shall be counted and he or she may be counted in the quorum at any meeting of our directors at which any such contract

or proposed contract or arrangement is considered. The directors may exercise all the powers of the company to borrow money, to mortgage or charge its undertaking, property and uncalled capital, and to issue debentures or other securities whenever money is borrowed or as security for any debt, liability or obligation of the company or of any third party.

Duties of Directors

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

Terms of Directors and Executive Officers

Our directors may be elected by a resolution of our board of directors, or by an ordinary resolution of our shareholders, pursuant to our amended and restated memorandum and articles of association. Each of our directors will hold office until his or her earlier resignation or removal or the expiration of his or her term as provided in the written agreement with our company, if any. A director will cease to be a director if, among other things, the director (i) becomes bankrupt or makes any arrangement or composition with his or her creditors; (ii) dies or is found to be or becomes of unsound mind, (iii) resigns his or her office by notice in writing to the company, (iv) without special leave of absence from the board of directors is absent from three consecutive meetings of the board of directors and the board resolves that his office be vacated, or (v) is removed from office pursuant to any other provisions of our amended and restated articles of association. Our officers are elected by and serve at the discretion of the board of directors.

Board Committees

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. As a foreign private issuer, we are permitted to follow home country corporate governance practices under the Nasdaq Stock Market Rules. Each committee's members and functions are described below.

Audit Committee

At the time of the completion of this offering, our audit committee will initially consist of Hong Zhang, Xiaohu Yang and Mei Luo. Mei Luo will be the chairman of our audit committee. We expect Mei Luo to satisfy the criteria of an audit committee financial expert as set forth under the applicable rules of the SEC. We expect each of Hong Zhang, Xiaohu Yang and Mei Luo to satisfy the requirements for an "independent director" within the meaning of the Nasdaq Stock Market Rules and will meet the criteria for independence set forth in Rule 10A-3 of the United States Securities Exchange Act of 1934, as amended, or the Exchange Act. Our audit committee will consist solely of independent directors.

The audit committee oversees our accounting and financial reporting processes and the audits of our financial statements. Our audit committee is responsible for, among other things:

- selecting, and evaluating the qualifications, performance and independence of, the independent auditor;
- pre-approving or, as permitted, approving auditing and non-auditing services permitted to be performed by the independent auditor;
- considering the adequacy of our internal accounting controls and audit procedures;
- reviewing with the independent auditor any audit problems or difficulties and management's response;
- reviewing and approving related party transactions between us and our directors, senior management and other persons specified in Item 6B of Form 20-F;
- reviewing and discussing the quarterly financial statements and annual audited financial statements with management and the independent auditor;
- establishing procedures for the receipt, retention and treatment of complaints received from our employees regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;
- meeting separately, periodically, with management, internal auditors and the independent auditor; and
- reporting regularly to the full board of directors.

Compensation Committee

Our compensation committee will initially consist of Jiaxuan Li, Mei Luo and Xiaohu Yang. Xiaohu Yang will be the chairman of our compensation committee. We expect each of Mei Luo and Xiaohu Yang to satisfy the requirements for an "independent director" within the meaning of the Nasdaq Stock Market Rules.

Our compensation committee will be responsible for, among other things:

- reviewing, evaluating and, if necessary, revising our overall compensation policies;
- reviewing and evaluating the performance of our directors and executive officers and determining the compensation of our directors and executive officers;
- reviewing and approving our executive officers' employment agreements with us;
- determining performance targets for our executive officers with respect to our incentive compensation plan and equity-based compensation plans;
- administering our equity-based compensation plans in accordance with the terms thereof; and
- carrying out such other matters that are specifically delegated to the compensation committee by our board of directors from time to time.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee will initially consist of Xiaohu Yang, Hong Zhang and Nangeng Zhang. Nangeng Zhang will be the chairman of our nominating and corporate governance committee. We expect each of Xiaohu Yang and Hong Zhang to satisfy the requirements for an "independent director" within the meaning of the Nasdaq Stock Market Rules.

Our nominating and corporate governance committee will be responsible for, among other things:

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

Code of Ethics and Corporate Governance

We have adopted a code of ethics, which is applicable to all of our directors, executive officers and employees. We will make our code of ethics publicly available on our website.

In addition, our board of directors has adopted a set of corporate governance guidelines covering a variety of matters, including approval of related party transactions. Our corporate governance guidelines also provide that any adoption of a new share award scheme and any material amendments to such plans will be subject to the approval of our non-executive directors. The guidelines reflect certain guiding principles with respect to our board's structure, procedures and committees. The guidelines are not intended to change or interpret any applicable law, rule or regulation or our amended articles of association.

Qualification

There is no requirement for our directors to own any shares in our company in order for them to qualify as a director.

Employment Agreements and Indemnification Agreements

We have entered into employment agreements with each of our executive officers. We may terminate their employment for cause at any time for certain acts, such as a material breach of our company's employment principles, policies or rules, a material failure to perform his or her duties, misappropriation or embezzlement or a criminal conviction. We may also terminate any executive officer's employment without cause by giving written notice. In such cases, an executive officer is entitled to severance payments and benefits. An executive officer may terminate his or her employment at any time by giving written notice, in which case the executive officer will not be entitled to any severance payments or benefits.

Our executive officers have also agreed not to engage in any activities that compete with us or to directly or indirectly solicit the services of any of our employees, for a certain period after the termination of employment. Each executive officer has agreed to hold in strict confidence any trade secrets of our company, including technical secrets, marketing information, management information, legal information, third-party business secrets and other kinds of confidential information. Each executive officer also agrees to perform his or her confidentiality obligation and protect our company's trade secrets in a way consistent with the policies, rules and practices of our company. Breach of the above confidentiality obligations would be deemed a material breach of our company's employment policies and we are entitled to seek legal remedies.

We have entered into indemnification agreements with each of our directors and executive officers. Under these agreements, we agree to indemnify our directors and executive officers against certain liabilities and expenses incurred by such persons in connection with claims made by reason of their being a director or officer of our company.

We have entered into director agreements with each of our independent directors. These agreements set forth the services to be provided and compensation to be received by our independent directors, as well as the independent directors' obligations in terms of confidentiality, non-competition and non-solicitation.

Compensation of Directors and Executive Officers

The directors may determine remuneration to be paid to the directors. The compensation committee will assist the directors in reviewing and approving the compensation structure for the directors. The directors may exercise all the powers of our company to borrow money, mortgage or charge its undertaking, property and uncalled capital and issue debentures or other securities whether outright or as security for any debt obligations of our company or of any third party.

In 2018, we and our subsidiaries paid aggregate compensation and benefits of RMB5.4 million (US$0.8 million) to our directors and executive officers as a group. We did not pay any other cash compensation or benefits in kind to our directors and executive officers.

2018 Share Award Scheme

We adopted a share award scheme in April 2018, or the 2018 Share Award Scheme, which provided for the grant of restricted shares. We have granted all 25,812 restricted shares, before the one-for-2,000 share division, authorized under the 2018 Share Award Scheme. As of the date of this prospectus, after the share division, 51,624,000 restricted shares exist under the 2018 Share Award Scheme, out of which 5,962,461 restricted shares have been canceled due to departing employees, 27,897,436 restricted shares will vest upon the completion of this offering, 2,030,769 restricted shares will vest on November 21, 2019, 7,866,667 restricted shares will vest on November 21, 2020 and 7,866,667 restricted shares will be vested on November 21, 2021. Our board of directors may at any time amend and alter the 2018 Share Award Scheme, subject to certain exceptions.

Principal Shareholders

PRINCIPAL SHAREHOLDERS The following table sets forth information as of the date of this prospectus with respect to the beneficial ownership of our ordinary shares by:

- each of our directors and executive officers;
- our directors and executive officers as a group; and
- each person known to us to own beneficially 5% or more of our ordinary shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to, or the power to receive the economic benefit of ownership of, the securities. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire within 60 days, including through the exercise of any option or other right or the conversion of any other security.

The total number of ordinary shares outstanding as of the date of this prospectus is 2,222,222,222, including 52,027,157 restricted shares.

The total number of ordinary shares outstanding after completion of this offering will comprise Class A ordinary shares and 356,624,444 Class B ordinary shares, which is based upon (i) the designation of all ordinary shares directly held by Flueqel Ltd., a company which is indirectly wholly owned by a trust of which Nangeng Zhang and his family members are the beneficiaries, into 356,624,444 Class B ordinary shares on a one-for-one-basis upon the completion of this offering; (ii) the designation of all of the remaining outstanding ordinary shares into 1,865,597,778 Class A ordinary shares on a one-for-one-basis upon the completion of this offering; and (iii) Class A ordinary shares issued in connection with this offering (assuming the underwriters do not exercise their option to purchase additional ADSs). The underwriters may choose to exercise the over-allotment option in full, in part or not at all.

	Ordinary Shares Beneficially Owned Prior toThis Offering		Ordinary Shares Beneficially Owned After This Offering			
	Number	%	Number of Class Aordinaryshares	Number of Class Bordinaryshares	% of total ordinaryshares on anas-convertedbasis	% of voting powerimmediatelyafter thisoffering††
Directors and Executive Officers: *						
Jiaxuan Li[(1)]	359,971,112	16.2				
Nangeng Zhang[(2)]	356,624,444	16.0				
Jianping Kong[(3)]	267,913,333	12.1				
Qifeng Sun[(4)]	129,897,777	5.8				
Quanfu Hong	**	**				
Jingjie Wu	**	**				
Hong Zhang†	—	—				
Xiaohu Yang†	—	—				
Mei Luo†	—	—				
Li Zhang	—	—				
Shaoke Li	—	—				

Directors and Executive Officers as a Group	1,128,404,908	50.8
Principal Shareholders:		
Ouroboros Ltd.[1]	359,971,112	16.2
Flueqel Ltd.[2]	356,624,444	16.0
Urknall Ltd.[7]	226,002,222	10.2
Xiangfu Liu[5]	226,002,222	10.2
HK Jiaji Science and Technology Limited[6]	195,035,556	8.8
Wlyl Ltd.[3]	193,440,000	8.7

	Ordinary Shares Beneficially Owned Prior toThis Offering		**Ordinary Shares Beneficially Owned After This Offering**			
	Number	%	**Number of Class Aordinaryshares**	**Number of Class Bordinaryshares**	**% of total ordinaryshares on anas-convertedbasis**	**% of voting powerimmediatelyafter thisoffering††**
Enguang Li[8]	130,031,112	5.9				

Notes:

* The business address for our directors and executive officers is 30/F, Dicara Silver Tower, 29 Jiefang East Road, Jianggan District, Hangzhou 310016, People's Republic of China.

** Beneficially owns less than 1% of our outstanding shares.

† Expected to become a director immediately upon the effectiveness of the registration statement of which this prospectus forms a part.

†† For each person and group included in this column, percentage of voting power is calculated by dividing the voting power beneficially owned by such person or group by the voting power of all of our Class A and Class B ordinary shares as a single class. In respect of matters requiring a shareholder vote, each Class A ordinary share will be entitled to one vote and each Class B ordinary share will be entitled to 15 votes. Each Class B ordinary share is convertible into one class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances.

(1) Represents 359,971,112 ordinary shares held by Ouroboros Ltd., a company incorporated under the laws of the British Virgin Islands, which is indirectly wholly owned by a trust of which Jiaxuan Li and his family members are the beneficiaries. The registered address of Ouroboros Ltd. is Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands.

(2) Represents 356,624,444 ordinary shares held by Flueqel Ltd., a company incorporated under the laws of the British Virgin Islands, which is indirectly wholly owned by a trust of which Nangeng Zhang and his family members are the beneficiaries. The registered address of Flueqel Ltd. is Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands.

(3) Represents (i) 74,473,333 ordinary shares held by three corporations wholly owned by Jianping Kong; and (ii) 193,440,000 ordinary shares held by Wlyl Ltd., a company incorporated under the laws of the British Virgin Islands, which is indirectly wholly owned by a trust of which Jianping Kong is the beneficiary. The registered address of Wlyl Ltd. is Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG1110, British Virgin Islands. In June 2019, Wlyl Ltd. acquired a total of 103,440,000 ordinary shares from other shareholders, including 16,728,889 ordinary shares from Flueqel Ltd., 4,708,014 ordinary shares from SuperchipAi Limited, 22,264,444 ordinary shares from Ouroboros Ltd., and 54,446,667 ordinary shares from Urknall Ltd.

(4) Represents (i) 78,786,666 ordinary shares held by two corporations wholly owned by Qifeng Sun; and (ii) 51,111,111 ordinary shares held by Tothemoon Ltd., a company incorporated under the laws of the British Virgin Islands, which is indirectly wholly owned by a trust of which Qifeng Sun is the beneficiary. The registered address of Tothemoon Ltd. is Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG1110, British Virgin Islands.

(5) Represents 226,002,222 ordinary shares held by Urknall Ltd., a company incorporated under the laws of the British Virgin Islands with registered address at Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands.

(6) HK Jiaji Science and Technology Limited, a company incorporated under the laws of Hong Kong with registered address at Suite 1113A, 11/F, Ocean Centre, Harbour City 5 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong, is indirectly controlled by Yao Yongjie.

(7) Urknall Ltd., a company incorporated under the laws of the British Virgin Islands with registered address at Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands, is wholly owned by Xiangfu Liu. In June 2019, Urknall Ltd. sold a total of 165,335,556 ordinary shares, including 54,446,667 ordinary shares to Wlyl Ltd. and 16,666,667 ordinary shares to Root Grace Ltd.

(8) Represents 130,031,112 ordinary shares held by Root Grace Ltd., a company incorporated under the laws of the British Virgin Islands with registered address at Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands, which is wholly owned by Enguang Li. In June 2019, Root Grace Ltd. acquired a total of 26,003,112 ordinary shares, including 16,666,667 ordinary shares from Urknall Ltd.

As of the date of this prospectus, none of our outstanding ordinary shares are held by record holders in the United States. We are not aware of any arrangements that may, at a subsequent date, result in a change of control of our company.

Historical Changes in Our Shareholding

See "Description of Share Capital—History of Securities Issuances" for historical changes in our shareholding.

Related Party Transactions

RELATED PARTY TRANSACTIONS

Employment Agreements and Indemnification Agreements

See "Management—Employment Agreements and Indemnification Agreements."

Private Placements

See "Description of Share Capital—History of Securities Issuances."

Share Award Scheme

See "Management—2018 Share Award Scheme."

Other Transactions with Related Parties

In October 2017, Hangzhou Canaan entered into a share transfer agreement to dispose its 100% equity interest in its wholly owned subsidiaries Canaan Creative Hong Kong Co., Ltd. and Canaan Creative AB to BUMHUS OÜ, a company controlled by Mr. Xiangfu Liu, one of our principal shareholders, at a cash consideration of US$760,000 (equivalent to approximately RMB5.0 million). On the disposal date, the amounts due from these subsidiaries of RMB10.5 million to us were accounted for as our receivables. We received the receivables of RMB15.5 million in the year ended December 31, 2018.

Description of Share Capital

DESCRIPTION OF SHARE CAPITAL We are an exempted company incorporated in the Cayman Islands with limited liability and our affairs are governed by our memorandum and articles of association, and the Companies Law of the Cayman Islands, as amended, which we refer to as the Cayman Companies Law, and the common law of the Cayman Islands.

As of the date of this prospectus, our authorized share capital is US$50,000 divided into 1,000,000,000,000 ordinary shares of par value US$0.00000005 each. As of the date of this prospectus, there were 2,222,222,222 ordinary shares issued and outstanding. All of our issued and outstanding ordinary shares are fully paid. Immediately upon the completion of this offering, there will be Class A ordinary shares and 356,624,444 Class B ordinary shares, assuming the underwriters do not exercise the over-allotment option. Following the completion of this offering, our authorized share capital will be US$50,000 divided into 999,682,488,667 Class A ordinary shares of per value US$0.00000005 each and 356,624,444 Class B ordinary shares of par value US$0.00000005 each.

Our shareholders have approved the adoption of an amended and restated memorandum and articles of association, which we refer to as our post-listing articles, which will become effective immediately prior to the completion of this offering and will replace our memorandum and articles of association in its entirety.

The following are summaries of certain material provisions of our post-listing articles and the Cayman Companies Law insofar as they relate to the material terms of our ordinary shares.

Ordinary Shares

General

All of our issued and outstanding ordinary shares are fully paid and non-assessable. Our ordinary shares are divided into Class A ordinary shares and Class B ordinary shares. Holders of our Class A ordinary shares and Class B ordinary shares will have the same rights except for voting and conversion rights. Each Class A Ordinary Share shall entitle the holder thereof to one vote on all matters subject to vote at our general meetings, and each Class B ordinary share shall entitle the holder thereof to 15 votes on all matters subject to vote at our general meetings. Our ordinary shares are issued in registered form, and are issued when registered in our register of shareholders. Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their ordinary shares. We may not issue shares to bearer.

Conversion

Each Class B ordinary share is convertible into one Class A ordinary share at any time at the option of the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances. Upon any sale, transfer, assignment or disposition of Class B ordinary shares by a holder thereof to any person who is not an affiliate of such shareholder, or upon a change of ultimate beneficial ownership of any Class B ordinary share to any person who is not an affiliate of the registered shareholder of such Class B ordinary share, such Class B ordinary shares shall be automatically and immediately converted into the same number of Class A ordinary shares.

Dividends

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

Voting Rights

Immediately prior to the completion of this offering, our authorized share capital will consist of Class A ordinary shares and Class B ordinary shares. Holders of our Class A ordinary shares and our Class B ordinary shares shall, at all times, vote together as one class on all matters submitted to a vote by our shareholders at any general meeting of our company. Each Class A ordinary share shall be entitled to one vote, and each Class B ordinary share shall be entitled to 15 votes, on all matters subject to a vote at general meetings of our company.

Voting at any meeting of shareholders is by a show of hands, unless a poll is demanded by the chairman or one or more shareholders present in person or by proxy of the Company entitled to vote, and, unless a poll is so demanded, a declaration by the chairman of that a resolution has, on a show of hands, been carried or carried unanimously, or by a particular majority, or lost and an entry to that effect in the minutes of the proceedings of the Company, shall be conclusive evidence of the fact, without proof of the number of proportion of the votes recorded in favor of, or against that resolution.

Procedural and administrative matters are those that are not on the agenda of the general meeting and relate to the chairman's duties to maintain the orderly conduct of the meeting or allow the business of the meeting to be properly and effectively dealt with, while affording all shareholders a reasonable opportunity to express their views.

Transfer of Shares

Any of our shareholders may transfer all or any of his or her ordinary shares by an instrument of transfer in any usual or common form or any other form approved by our board of directors, executed by or on behalf of the transferor.

Our board of directors may, in its absolute discretion, decline to register any transfer of any ordinary share that has not been fully paid up or is subject to a company lien. Our board of directors may also decline to register any transfer of any ordinary share unless:

- the instrument of transfer is lodged with us, accompanied by the certificate for the ordinary shares to which it relates and such other evidence as our board of directors may reasonably require to show the right of the transferor to make the transfer;
- the instrument of transfer is in respect of only one class of ordinary shares;
- the instrument of transfer is properly stamped, if required;
- the ordinary share transferred is fully paid and free of any lien in favor of us;
- any fee related to the transfer has been paid to us; and
- in the case of any transfer to joint holders, the transfer is not to more than four joint holders.

If our directors refuse to register a transfer, they shall within one month after the date on which the instrument of transfer was lodged, to send to each of the transferor and the transferee notice of such refusal.

Winding Up

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

The liquidator may, with the sanction of a special resolution of our shareholders, divide amongst the shareholders in species or in kind the whole or any part of the assets of our company, and may for such purpose set such value as the liquidator deems fair upon any property to be divided as aforesaid and may determine how the division shall be carried out as between our shareholders or different classes of shareholders.

We are an exempted company with limited liability incorporated under the Cayman Companies Law, and under the Cayman Companies Law, the liability of our shareholders is limited to the amount, if any, unpaid on the shares respectively held by them. Our memorandum of association contains a declaration that the liability of our members is so limited.

Redemption, Repurchase and Surrender of Ordinary Shares

We may issue shares on terms that such shares are subject to redemption, at our option or at the option of the holders thereof, on such terms and in such manner as may be determined by our board of directors. Our company may also repurchase any of our shares provided that the manner and terms of such purchase have been approved by our board of directors or by ordinary resolution of our shareholders (but no repurchase may be made contrary to the terms or manner recommended by our directors), or as otherwise authorized by our post-listing articles. Under the Cayman Companies Law, the redemption or repurchase of any share may be paid out of our company's profits or out of the proceeds of a new issue of shares made for the purpose of such redemption

or repurchase, or out of capital (including share premium account and capital redemption reserve) if our company can, immediately following such payment, pay its debts as they fall due in the ordinary course of business. In addition, under the Cayman Companies Law no such share may be redeemed or repurchased (a) unless it is fully paid up, (b) if such redemption or repurchase would result in there being no shares outstanding or (c) if the company has commenced liquidation. In addition, our company may accept the surrender of any fully paid share for no consideration.

Calls on Ordinary Shares and Forfeiture of Ordinary Shares

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

General Meetings of Shareholders

As a Cayman Islands exempted company, we are not obliged by the Cayman Companies Law to call shareholders' annual general meetings. Our post-listing articles provide that we may (but are not obliged to) in each year hold a general meeting as our annual general meeting in which case we shall specify the meeting as such in the notices calling it, and the annual general meeting shall be held at such time and place as may be determined by our directors.

Shareholders' general meetings may be convened by a majority of our board of directors or by our chairman. Advance notice of at least ten business days is required for the convening of our annual general shareholders' meeting (if any) and any other general meeting of our shareholders. A quorum required for any general meeting of shareholders consists of at least one shareholder present or by proxy, representing not less than one-third in nominal value of the total issued voting shares in our company.

The Cayman Companies Law provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. However, these rights may be provided in a company's articles of association. Our post-listing articles provide that upon the requisition of shareholders representing in aggregate not less than one-third of the votes attaching to the issued and outstanding shares of our company entitled to vote at general meetings, our board will convene an extraordinary general meeting and put the resolutions so requisitioned to a vote at such meeting. However, our post-listing articles do not provide our shareholders with any right to put any proposals before annual general meetings or extraordinary general meetings not called by such shareholders.

Proceedings of Board of Directors

Our post-listing articles provide that our business is to be managed and conducted by our board of directors. The quorum necessary for board meetings may be fixed by the board and, unless so fixed at another number, will be a majority of the directors.

Our post-listing articles provide that the board may from time to time at its discretion exercise all powers of our company to raise capital or borrow money, to mortgage or charge all or any part of the undertaking, property and assets (present and future) and uncalled capital of our company and issue debentures, bonds and other securities of our company, whether outright or as collateral security for any debt, liability or obligation of our company or of any third party.

Changes in Capital

Our shareholders may from time to time by ordinary resolution:

- increase our share capital by such sum, to be divided into shares of such classes and amount, as the resolution shall prescribe;
- consolidate and divide all or any of our share capital into shares of a larger amount than our existing shares;
- sub-divide our existing shares, or any of them, into shares of a smaller amount; or
- cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of our share capital by the amount of the shares so canceled.

Our shareholders may by special resolution, subject to confirmation by the Grand Court of the Cayman Islands on an application by our company for an order confirming such reduction, reduce our share capital or any capital redemption reserve in any manner permitted by law.

Inspection of Books and Records

Holders of our ordinary shares will have no general right under the Cayman Companies Law to inspect or obtain copies of our list of shareholders or our corporate records (except for our memorandum and articles of association). However, we will provide our shareholders with annual audited financial statements. See "Where You Can Find More Information."

Exempted Company

We are an exempted company with limited liability duly incorporated and validly existing under the Cayman Companies Law. The Cayman Companies Law distinguishes between ordinary resident companies and exempted companies. Any company that is registered in the Cayman Islands but conducts business mainly outside of the Cayman Islands may apply to be registered as an exempted company. The requirements for an exempted company are essentially the same as for an ordinary company except for the exemptions and privileges listed below:

- an exempted company does not have to file an annual return of its shareholders with the Registrar of Companies of the Cayman Islands;

- an exempted company's register of members is not open to inspection;
- an exempted company does not have to hold an annual general meeting;
- an exempted company may issue no par value, negotiable or bearer shares;
- an exempted company may obtain an undertaking against the imposition of any future taxation (such undertakings are usually given for 20 years in the first instance);
- an exempted company may register by way of continuation in another jurisdiction and be deregistered in the Cayman Islands;
- an exempted company may register as a limited duration company; and
- an exempted company may register as a segregated portfolio company.

"Limited liability" means that the liability of each shareholder is limited to the amount unpaid by the shareholder on that shareholder's shares of the company (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil). Upon the closing of this offering, we will be subject to reporting and other informational requirements of the Exchange Act, as applicable to foreign private issuers. We may follow the home country practice for certain corporate governance practices after the closing of this offering which may differ from the Nasdaq Stock Market Rules. The Nasdaq Stock Market Rules require that every company listed on the Nasdaq Global Market hold an annual general meeting of shareholders. In addition, our post-listing articles allow our directors to call extraordinary general meetings of our shareholders pursuant to the procedures set forth in our post-listing articles.

Differences in Corporate Law

The Cayman Companies Law is derived, to a large extent, from the older Companies Acts of England, but does not follow recent statutory enactments in England and accordingly there are significant differences between the Cayman Companies Law and the current Companies Act of England. In addition, the Cayman Companies Law differs from laws applicable to United States corporations and their shareholders. Set forth below is a summary of certain significant differences between the provisions of the Cayman Companies Law applicable to us and the laws applicable to companies incorporated in the State of Delaware.

Mergers and Similar Arrangements

The Cayman Companies Law permits mergers and consolidations between the Cayman Islands companies and between the Cayman Islands companies and the non-Cayman Islands companies. For these purposes, (a) "merger" means the merging of two or more constituent companies and the vesting of their undertaking, property and liabilities in one of such companies as the surviving company, and (b) a "consolidation" means the combination of two or more constituent companies into a consolidated company and the vesting of the undertaking, property and liabilities of such companies to the consolidated company. In order to effect such a merger or consolidation, the directors of each constituent company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each constituent company, and (b) such other authorization, if any, as may be specified in such constituent company's articles of association. The plan must be filed with the Registrar of Companies of the Cayman Islands together with, among other things, a declaration as to the solvency of the consolidated or surviving company, a list of the assets and liabilities of each constituent company and an undertaking that a copy of the certificate of merger or consolidation will be given to the members and creditors of each constituent company and that notification of the merger or consolidation will be published in the Cayman Islands Gazette. Court approval is not required for a merger or consolidation which is effected in compliance with these statutory procedures.

A merger between a Cayman parent company and its Cayman subsidiary or subsidiaries does not require authorization by a resolution of shareholders of that Cayman subsidiary if a copy of the plan of merger is given to every member of that Cayman subsidiary to be merged unless that member agrees otherwise. For this purpose, a company is a "parent" of a subsidiary if it holds issued shares that together represent at least ninety percent (90%) of the votes at a general meeting of the subsidiary.

The consent of each holder of a fixed or floating security interest of a constituent company is required unless this requirement is waived by a court in the Cayman Islands.

Except in certain limited circumstances, a shareholder of a Cayman Islands constituent company who dissents from the merger or consolidation is entitled to payment of the fair value of his or her shares (which, if not agreed between the parties, will be determined by the Cayman Islands court) upon dissenting from a merger or consolidation, provided the dissenting shareholder complies strictly with the procedures set out in the Cayman Companies Law. The exercise of such dissenter rights will preclude the exercise by the dissenting shareholder of any other rights to which he or she might otherwise be entitled by virtue of holding shares, except for the right to seek relief on the grounds that the merger or consolidation is void or unlawful.

Separately from the statutory provisions relating to mergers and consolidations, the Cayman Companies Law also contain statutory provisions that facilitate the reconstruction and amalgamation of companies by way of schemes of arrangement, provided that the arrangement is approved by a majority in number of each class of shareholders and creditors with whom the arrangement is to be made, and who must, in addition, represent three-fourths in value of each such class of shareholders or creditors, as the case may be, that are present and voting either in person or by proxy at a meeting, or meetings, convened for that purpose. The convening of the meeting or meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder has the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it determines that:

- the statutory provisions as to the required majority vote have been met;
- the shareholders have been fairly represented at the meeting in question and the statutory majority are acting bona fide without coercion of the minority to promote interests adverse to those of the class;
- the arrangement is such that may be reasonably approved by an intelligent and honest man of that class acting in respect of his interest; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Cayman Companies Law.

The Cayman Companies Law also contains a statutory power of compulsory acquisition which may facilitate the "squeeze out" of dissenting minority shareholder upon a tender offer. When a tender offer is made and accepted by holders of 90% of the shares affected within four months of the offer being made, the offeror may, within a two-month period commencing on the expiration of such four-month period, require the holders of the remaining shares to transfer such shares to the offeror on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands but this is unlikely to succeed in the case of an offer which has been so approved unless there is evidence of fraud, bad faith or collusion.

If an arrangement and reconstruction by the way of scheme of arrangement is thus approved, or if a tender offer is made and accepted in accordance with the foregoing statutory procedures, a dissenting shareholder would have no rights comparable to appraisal rights, save that objectors to a takeover offer may apply to the Grand Court of the Cayman Islands for various orders that the Grand Court of the Cayman Islands has a broad discretion to make, which would otherwise ordinarily be available to dissenting shareholders of Delaware corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

Shareholders' Suits

In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company and as a general rule, a derivative action may not be brought by a minority shareholder. However, based on English law authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, the Cayman Islands court can be expected to follow and apply the common law principles (namely the rule in *Foss v. Harbottle* and the exceptions thereto) so that a non-controlling shareholder may be permitted to commence a class action against or derivative actions in the name of the company to challenge:

- an act which is illegal or *ultra vires* with respect to the company and is therefore incapable of ratification by the shareholders;
- an act which, although not *ultra vires*, requires authorization by a qualified (or special) majority (that is, more than a simple majority) which has not been obtained; and
- an act which constitutes a "fraud on the minority" where the wrongdoers are themselves in control of the company.

Indemnification of Directors and Executive Officers and Limitation of Liability

The Cayman Companies Law does not limit the extent to which a company's memorandum and articles of association may provide for indemnification of officers and directors, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against dishonesty, willful default or fraud or the consequences of committing a crime. Our post-listing articles provide that we shall indemnify our officers and directors against all actions, proceedings, costs, charges, expenses, losses, damages or liabilities incurred or sustained by such directors or officer, other than by reason of such person's dishonesty, willful default or fraud, in or about the conduct of our company's business or affairs (including as a result of any mistake of judgment) or in the execution or discharge of his duties, powers, authorities or discretions, including without prejudice to the generality of the foregoing, any costs, expenses, losses or liabilities incurred by such director or officer in defending (whether successfully or otherwise) any civil proceedings concerning our company or its affairs in any court whether in the Cayman Islands or elsewhere. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation. In addition, we intend to enter into indemnification agreements with our directors and executive officers that will provide such persons with additional indemnification beyond that provided in our post-listing articles.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Anti-Takeover Provisions in Our Articles

Some provisions of our post-offering articles of association may discourage, delay or prevent a change in control of our company or management that shareholders may consider favorable, including provisions that authorize our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders.

However, under the Cayman Islands law, our directors may only exercise the rights and powers granted to them under our post-offering articles of association, as amended and restated from time to time, for a proper purpose and in what they believe in good faith to be in the best interests of our company.

Directors' Fiduciary Duties

Under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components: the duty of care and the duty of loyalty. The duty of care requires that a director acts in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of, and disclose to shareholders, all material information

reasonably available regarding a significant transaction. The duty of loyalty requires that a director acts in a manner he or she reasonably believes to be in the best interests of the corporation. He or she must not use his or her corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interests of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, a director must prove the procedural fairness of the transaction, and that the transaction was of fair value to the corporation.

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company and therefore it is considered that he owes the following duties to the company—a duty to act bona fide in good faith in the best interests of the company, a duty not to make a personal profit based on his or her position as director (unless the company permits him to do so), a duty not to put himself in a position where the interests of the company conflict with his or her personal interest or his or her duty to a third party, and a duty to exercise powers for the purpose for which such powers were intended. A director of a Cayman Islands company owes to the company a duty to act with skill and care. It was previously considered that a director need not exhibit in the performance of his or her duties a greater degree of skill than may reasonably be expected from a person of his or her knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands.

Shareholder Proposals

Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. The Delaware General Corporation Law does not provide shareholders an express right to put any proposal before the annual meeting of shareholders, but in keeping with common law, Delaware corporations generally afford shareholders an opportunity to make proposals and nominations provided that they comply with the notice provisions in the certificate of incorporation or bylaws. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Cayman Companies Law provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. However, these rights may be provided in a company's articles of association. Our post-offering articles of association allow our shareholders holding in aggregate not less than one-third of the votes attaching to the issued and outstanding shares of our company entitled to vote at general meetings to requisition an extraordinary general meeting of our shareholders, in which case our board is obliged to convene an extraordinary general meeting and to put the resolutions so requisitioned to a vote at such meeting. Our post-offering articles of association provide no other right to put any proposals before annual general meetings or extraordinary general meetings. As a Cayman Islands exempted company, we are not obligated by law to call shareholders' annual general meetings. However, our corporate governance guidelines require us to call such meetings every year.

Cumulative Voting

Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled on a single director, which increases the shareholder's voting power with respect to electing such director. The Cayman Islands law does not prohibit cumulative voting, but our post-offering articles of association do not provide for cumulative voting. As a result, our shareholders are not afforded any fewer protections or rights on this issue than shareholders of a Delaware corporation.

Removal of Directors

Under the Delaware General Corporation Law, a director of a corporation with a classified board may be removed only for cause with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under our post-offering articles of association, directors may be removed by ordinary resolution of our shareholders. An appointment of a director may be on terms that the director shall automatically retire from office (unless he has sooner vacated office) at the next or a subsequent annual general meeting or upon any specified event or after any specified period in a written agreement between the company and the director, if any; but no such term shall be implied in the absence of express provision. In addition, a director's office shall be vacated if the director (i) becomes bankrupt or makes any arrangement or composition with his creditors; (ii) is found to be or becomes of unsound mind or dies; (iii) resigns his office by notice in writing to the company; (iv) without special leave of absence from our board of directors, is absent from three consecutive meetings of the board and the board resolves that his office be vacated or; (v) is removed from office pursuant to any other provisions of our post-offering amended and restated memorandum and articles of association.

Transactions with Interested Shareholders

The Delaware General Corporation Law contains a business combination statute applicable to Delaware public corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation or bylaws that is approved by its shareholders, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or a group who or which owns or owned 15% or more of the target's outstanding voting stock or who or which is an affiliate or associate of the corporation and owned 15% or more of the corporation's outstanding voting stock within the past three years. This has the effect of limiting the ability of a potential acquirer to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an

interested shareholder, the board of directors approves either the business combination or the transaction which resulted in the person becoming an interested shareholder. This encourages any potential acquirer of a Delaware corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

The Cayman Islands law has no comparable statute. As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although The Cayman Islands law does not regulate transactions between a company and its significant shareholders, the fiduciary duties owed by our directors do require that such transactions must be entered into bona fide in the best interests of the company and for a proper corporate purpose and not with the effect of constituting a fraud on the minority shareholders.

Dissolution; Winding Up

Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board of directors.

Under the Cayman Companies Law, our company may be wound up by either a special resolution of our shareholders or, if our company is unable to pay its debts as they fall due, by an ordinary resolution of our shareholders. In addition, a company may be wound up by an order of the courts of the Cayman Islands. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

Variation of Rights of Shares

Under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under our post-offering articles of association, if our share capital is divided into more than one class of shares, we may materially and adversely vary the rights attached to any class only with the consent in writing of the holders of not less than two-thirds of the issued shares of that class or with the sanction of an ordinary resolution passed at a separate meeting of the holders of the shares of that class.

Amendment of Governing Documents

Under the Delaware General Corporation Law, a corporation's certificate of incorporation may be amended only if adopted and declared advisable by the board of directors and approved by a majority of the outstanding shares entitled to vote, and the bylaws may be amended with the approval of a majority of the outstanding shares entitled to vote and may, if so provided in the certificate of incorporation, also be amended by the board of directors. Under the Cayman Companies Law and our post-offering articles of association, our memorandum and articles of association may only be amended by special resolution of our shareholders.

Rights of Non-Resident or Foreign Shareholders

There are no limitations imposed by our post-offering articles of association on the rights of non-resident or foreign shareholders to hold or exercise voting rights on our shares. In addition, there are no provisions in our post-offering articles of association governing the ownership threshold above which shareholder ownership must be disclosed.

Directors' Power to Issue Shares

Under our post-offering articles of association, our board of directors is empowered to issue or allot shares or grant options, restricted shares, RSUs, share appreciation rights, dividend equivalent rights, warrants and analogous equity-based rights with or without preferred, deferred, qualified or other special rights or restrictions. In particular, pursuant to our post-listing articles, our board of directors has the authority, without further action by the shareholders, to issue all or any part of our capital and to fix the designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions therefrom, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of our ordinary shares.

History of Securities Issuances

The following is a summary of our securities issuances since our inception.

Ordinary Shares

Upon our incorporation in the Cayman Islands in February 2018 in connection with our offshore reorganization, we issued 1,000, 1,000, 1,000 and 1,000 shares to Flueqel Ltd., Ouroboros Ltd., Urknall Ltd. and JPKONG LTD respectfully, for a consideration at a then par value of US$0.0001 per share on the same day.

In order to reflect the then onshore interest of our various stakeholders in Hangzhou Canaan, our company issued and allotted a total of 1,000,000 shares for a consideration at a then par value of US$0.0001 per share to the British Virgin Islands companies held by the then shareholders of Hangzhou Canaan based on their relative interests in Hangzhou Canaan.

Description of American Depositary Shares

DESCRIPTION OF AMERICAN DEPOSITARY SHARES

American Depositary Shares

The Bank of New York Mellon, as depositary, will register and deliver American Depositary Shares, also referred to as ADSs. Each ADS will represent Class A ordinary shares (or a right to receive Class A ordinary shares) deposited with The Hongkong and Shanghai Banking Corporation Limited, as custodian for the depositary in Hong Kong. Each ADS will also represent any other securities, cash or other property that may be held by the depositary. The deposited shares together with any other securities, cash or other property held by the depositary are referred to as the deposited securities. The depositary's office at which the ADSs will be administered and its principal executive office is located at 240 Greenwich Street, New York, New York 10286.

You may hold ADSs either (A) directly (i) by having an American Depositary Receipt, also referred to as an ADR, which is a certificate evidencing a specific number of ADSs, registered in your name, or (ii) by having uncertificated ADSs registered in your name, or (B) indirectly by holding a security entitlement in ADSs through your broker or other financial institution that is a direct or indirect participant in The Depository Trust Company, also called DTC. If you hold ADSs directly, you are a registered ADS holder, also referred to as an ADS holder. This description assumes you are an ADS holder. If you hold the ADSs indirectly, you must rely on the procedures of your broker or other financial institution to assert the rights of ADS holders described in this section. You should consult with your broker or financial institution to find out what those procedures are.

Registered holders of uncertificated ADSs will receive statements from the depositary confirming their holdings.

As an ADS holder, we will not treat you as one of our shareholders and you will not have shareholder rights. Cayman Islands law governs shareholder rights. The depositary will be the holder of the shares underlying your ADSs. As a registered holder of ADSs, you will have ADS holder rights. A deposit agreement among us, the depositary, ADS holders and all other persons indirectly or beneficially holding ADSs sets out ADS holder rights as well as the rights and obligations of the depositary. New York law governs the deposit agreement and the ADSs. The rights of holders of Class A ordinary shares (including Class A ordinary shares represented by ADSs) are governed by the laws of the Cayman Islands.

The following is a summary of the material provisions of the deposit agreement. For more complete information, you should read the entire deposit agreement and the form of ADR. See "Where You Can Find More Information" for directions on how to obtain copies of those documents.

Dividends and Other Distributions

How will you receive dividends and other distributions on the shares?

The depositary has agreed to pay or distribute to ADS holders the cash dividends or other distributions it or the custodian receives on shares or other deposited securities, upon payment or deduction of its fees and expenses. You will receive these distributions in proportion to the number of shares your ADSs represent.

Cash. The depositary will convert any cash dividend or other cash distribution we pay on the shares into U.S. dollars, if it can do so on a reasonable basis and can transfer the U.S. dollars to the United States. If that is not possible or if any government approval is needed and cannot be obtained, the deposit agreement allows the depositary to distribute the foreign currency only to those ADS holders to whom it is possible to do so. It will hold the foreign currency it cannot convert for the account of the ADS holders who have not been paid. It will not invest the foreign currency and it will not be liable for any interest.

Before making a distribution, any withholding taxes, or other governmental charges that must be paid will be deducted. See "Taxation". The depositary will distribute only whole U.S. dollars and cents and will round fractional cents to the nearest whole cent. *If the exchange rates fluctuate during a time when the depositary cannot convert the foreign currency, you may lose some of the value of the distribution.*

Shares. The depositary may distribute additional ADSs representing any shares we distribute as a dividend or free distribution. The depositary will only distribute whole ADSs. It will sell shares which would require it to deliver a fraction of an ADS (or ADSs representing those shares) and distribute the net proceeds in the same way as it does with cash. If the depositary does not distribute additional ADSs, the outstanding ADSs will also represent the new shares. The depositary may sell a portion of the distributed shares (or ADSs representing those shares) sufficient to pay its fees and expenses in connection with that distribution.

Rights to purchase additional shares. If we offer holders of our securities any rights to subscribe for additional shares or any other rights, the depositary may (i) exercise those rights on behalf of ADS holders, (ii) distribute those rights to ADS holders or (iii) sell those rights and distribute the net proceeds to ADS holders, in each case after deduction or upon payment of its fees and expenses. To the extent the depositary does not do any of those things, it will allow the rights to lapse. *In that case, you will receive no value for them.* The depositary will exercise or distribute rights only if we ask it to and provide satisfactory assurances to the depositary that it is legal to do so. If the depositary will exercise rights, it will purchase the securities to which the rights relate and distribute those securities or, in the case of shares, new ADSs representing the new shares, to subscribing ADS holders, but only if ADS holders have paid the exercise price to the depositary. U.S. securities laws may restrict the ability of the depositary to distribute rights or ADSs or other securities issued on exercise of rights to all or certain ADS holders, and the securities distributed may be subject to restrictions on transfer.

Other Distributions. The depositary will send to ADS holders anything else we distribute on deposited securities by any means it thinks is legal, fair and practical. If it cannot make the distribution in that way, the depositary has a choice. It may decide to sell what we distributed and distribute the net proceeds, in the same way as it does with cash. Or, it may decide to hold what we distributed, in which case ADSs will also represent the newly distributed property. However, the depositary is not required to distribute any securities (other than ADSs) to ADS holders unless it receives satisfactory evidence from us that it is legal to make that distribution. The depositary may sell a portion of the distributed securities or property sufficient to pay its fees and expenses in connection with that distribution. U.S. securities laws may restrict the ability of the depositary to distribute securities to all or certain ADS holders, and the securities distributed may be subject to restrictions on transfer.

The depositary is not responsible if it decides that it is unlawful or impractical to make a distribution available to any ADS holders. We have no obligation to register ADSs, shares, rights or other securities under the Securities Act. We also have no obligation to take any other action to permit the distribution of ADSs, shares, rights or anything else to ADS holders. *This means that you may not receive the distributions we make on our shares or any value for them if it is illegal or impractical for us to make them available to you.*

Deposit, Withdrawal and Cancelation

How are ADSs issued?

The depositary will deliver ADSs if you or your broker deposits shares or evidence of rights to receive shares with the custodian. Upon payment of its fees and expenses and of any taxes or charges, such as stamp taxes or stock transfer taxes or fees, the depositary will register the appropriate number of ADSs in the names you request and will deliver the ADSs to or upon the order of the person or persons that made the deposit.

How can ADS holders withdraw the deposited securities?

You may surrender your ADSs to the depositary for the purpose of withdrawal. Upon payment of its fees and expenses and of any taxes or charges, such as stamp taxes or stock transfer taxes or fees, the depositary will deliver the shares and any other deposited securities underlying the ADSs to the ADS holder or a person the ADS holder designates at the office of the custodian. Or, at your request, risk and expense, the depositary will deliver the deposited securities at its office, if feasible. However, the depositary is not required to accept surrender of ADSs to the extent it would require delivery of a fraction of a deposited share or other security. The depositary may charge you a fee and its expenses for instructing the custodian regarding delivery of deposited securities.

How do ADS holders interchange between certificated ADSs and uncertificated ADSs?

You may surrender your ADR to the depositary for the purpose of exchanging your ADR for uncertificated ADSs. The depositary will cancel that ADR and will send to the ADS holder a statement confirming that the ADS holder is the registered holder of uncertificated ADSs. Upon receipt by the depositary of a proper instruction from a registered holder of uncertificated ADSs requesting the exchange of uncertificated ADSs for certificated ADSs, the depositary will execute and deliver to the ADS holder an ADR evidencing those ADSs.

Voting Rights

How do you vote?

ADS holders may instruct the depositary how to vote the number of deposited shares their ADSs represent. If we request the depositary to solicit your voting instructions (and we are not required to do so), the depositary will notify you of a shareholders' meeting and send or make voting materials available to you. Those materials will describe the matters to be voted on and explain how ADS holders may instruct the depositary how to vote. For instructions to be valid, they must reach the depositary by a date set by the depositary. The depositary will try, as far as practical, subject to the laws of the Cayman Islands and the provisions of our articles of association or similar documents, to vote or to have its agents vote the shares or other deposited securities as instructed by ADS holders or as described in the following sentence. If we asked the depositary to solicit your instructions at least 45 days before the meeting date but the depositary does not receive voting instructions from you by the specified date and we confirm to the depositary that:

- we wish to receive a proxy to vote uninstructed shares;
- we reasonably do not know of any substantial shareholder opposition to the proxy item(s); and
- the proxy item(s) is not materially adverse to the interests of shareholders,

then the depositary will consider you to have authorized and directed it to give a discretionary proxy to a person designated by us to vote the number of deposited securities represented by your ADSs as to the proxy item(s). If we do not request the depositary to solicit your voting instructions, you can still send voting instructions, and, in that case, the depositary may try to vote as you instruct, but it is not required to do so.

Except by instructing the depositary as described above, you won't be able to exercise voting rights unless you surrender your ADSs and withdraw the shares. However, you may not know about the meeting enough in advance to withdraw the shares. In any event, the depositary will not exercise any discretion in voting deposited securities and it will only vote or attempt to vote as instructed.

We cannot assure you that you will receive the voting materials in time to ensure that you can instruct the depositary to vote your shares. In addition, the depositary and its agents are not responsible for failing to carry out voting instructions or for the manner of carrying out voting instructions. *This means that you may not be able to exercise voting rights and there may be nothing you can do if your shares are not voted as you requested.*

In order to give you a reasonable opportunity to instruct the depositary as to the exercise of voting rights relating to Deposited Securities, if we request the Depositary to act, we agree to give the depositary notice of any such meeting and details concerning the matters to be voted upon at least 45 days in advance of the meeting date.

Fees and Expenses

***Persons depositing or withdrawing shares or ADS holders must pay*:**	***For*:**
$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property
	Cancelation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates

***Persons depositing or withdrawing shares or ADS holders must pay*:**	***For*:**
$.05 (or less) per ADS	Any cash distribution to ADS holders

A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	Distribution of securities distributed to holders of deposited securities (including rights) that are distributed by the depositary to ADS holders
$.05 (or less) per ADS per calendar year	Depositary services
Registration or transfer fees	Transfer and registration of shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	Cable (including SWIFT) and facsimile transmissions (when expressly provided in the deposit agreement)
	Converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian has to pay on any ADSs or shares underlying ADSs, such as stock transfer taxes, stamp duty or withholding taxes	As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	As necessary

The depositary collects its fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deduction from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may collect any of its fees by deduction from any cash distribution payable (or by selling a portion of securities or other property distributable) to ADS holders that are obligated to pay those fees. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

From time to time, the depositary may make payments to us to reimburse us for costs and expenses generally arising out of establishment and maintenance of the ADS program, waive fees and expenses for services provided to us by the depositary or share revenue from the fees collected from ADS holders. In performing its duties under the deposit agreement, the depositary may use brokers, dealers, foreign currency dealers or other service providers that are owned by or affiliated with the depositary and that may earn or share fees, spreads or commissions.

The depositary may convert currency itself or through any of its affiliates and, in those cases, acts as principal for its own account and not as agent, advisor, broker or fiduciary on behalf of any other person and earns revenue, including, without limitation, transaction spreads, that it will retain for its own account. The revenue is based on, among other things, the difference between the exchange rate assigned to the currency conversion made under the deposit agreement and the rate that the depositary or its affiliate receives when buying or selling foreign currency for its own account. The depositary makes no representation that the exchange rate used or obtained in any currency conversion under the deposit agreement will be the most favorable rate that could be obtained at the time or that the method by which that rate will be determined will be the most favorable to ADS holders, subject to the depositary's obligations under the deposit agreement. The methodology used to determine exchange rates used in currency conversions is available upon request.

Payment of Taxes

You will be responsible for any taxes or other governmental charges payable on your ADSs or on the deposited securities represented by any of your ADSs. The depositary may refuse to register any transfer of your ADSs or allow you to withdraw the deposited securities represented by your ADSs until those taxes or other charges are paid. It may apply payments owed to you or sell deposited securities represented by your ADSs to pay any taxes owed and you will remain liable for any deficiency. If the depositary sells deposited securities, it will, if appropriate, reduce the number of ADSs to reflect the sale and pay to ADS holders any proceeds, or send to ADS holders any property, remaining after it has paid the taxes.

Tender and Exchange Offers; Redemption, Replacement or Cancelation of Deposited Securities

The depositary will not tender deposited securities in any voluntary tender or exchange offer unless instructed to do so by an ADS holder surrendering ADSs and subject to any conditions or procedures the depositary may establish.

If deposited securities are redeemed for cash in a transaction that is mandatory for the depositary as a holder of deposited securities, the depositary will call for surrender of a corresponding number of ADSs and distribute the net redemption money to the holders of called ADSs upon surrender of those ADSs.

If there is any change in the deposited securities such as a sub-division, combination or other reclassification, or any merger, consolidation, recapitalization or reorganization affecting the issuer of deposited securities in which the depositary receives new securities in exchange for or in lieu of the old deposited securities, the depositary will hold those replacement securities as deposited securities under the deposit agreement. However, if the depositary decides it would not be lawful and practical to hold the replacement securities because those securities could not be distributed to ADS holders or for any other reason, the depositary may instead sell the replacement securities and distribute the net proceeds upon surrender of the ADSs.

If there is a replacement of the deposited securities and the depositary will continue to hold the replacement securities, the depositary may distribute new ADSs representing the new deposited securities or ask you to surrender your outstanding ADRs in exchange for new ADRs identifying the new deposited securities.

If there are no deposited securities underlying ADSs, including if the deposited securities are canceled, or if the deposited securities underlying ADSs have become apparently worthless, the depositary may call for surrender of those ADSs or cancel those ADSs upon notice to the ADS holders.

Amendment and Termination

How may the deposit agreement be amended?

We may agree with the depositary to amend the deposit agreement and the ADRs without your consent for any reason. If an amendment adds or increases fees or charges, except for taxes and other governmental charges or expenses of the depositary for registration fees, facsimile costs, delivery charges or similar items, or prejudices a substantial right of ADS holders, it will not become effective for outstanding ADSs until 30 days after the depositary notifies ADS holders of the amendment. *At the time an amendment becomes effective, you are considered, by continuing to hold your ADSs, to agree to the amendment and to be bound by the ADRs and the deposit agreement as amended.*

How may the deposit agreement be terminated?

The depositary will initiate termination of the deposit agreement if we instruct it to do so. The depositary may initiate termination of the deposit agreement if

- 60 days have passed since the depositary told us it wants to resign but a successor depositary has not been appointed and accepted its appointment;
- we delist the ADSs from an exchange in the United States on which they were listed and do not list the ADSs on another exchange in the United States or make arrangements for trading of ADSs on the U.S. over-the-counter market;
- we delist our shares from an exchange outside the United States on which they were listed and do not list the shares on another exchange outside the United States;
- the depositary has reason to believe the ADSs have become, or will become, ineligible for registration on Form F-6 under the Securities Act of 1933;
- we appear to be insolvent or enter insolvency proceedings;
- all or substantially all the value of the deposited securities has been distributed either in cash or in the form of securities;
- there are no deposited securities underlying the ADSs or the underlying deposited securities have become apparently worthless; or
- there has been a replacement of deposited securities.

If the deposit agreement will terminate, the depositary will notify ADS holders at least 90 days before the termination date. At any time after the termination date, the depositary may sell the deposited securities. After that, the depositary will hold the money it received on the sale, as well as any other cash it is holding under the deposit agreement, unsegregated and without liability for interest, for the pro rata benefit of the ADS holders that have not surrendered their ADSs. Normally, the depositary will sell as soon as practicable after the termination date.

After the termination date and before the depositary sells, ADS holders can still surrender their ADSs and receive delivery of deposited securities, except that the depositary may refuse to accept a surrender for the purpose of withdrawing deposited securities or reverse previously accepted surrenders of that kind that have not settled if it would interfere with the selling process. The depositary may refuse to accept a surrender for the purpose of withdrawing sale proceeds until all the deposited securities have been sold. The depositary will continue to collect distributions on deposited securities, but, after the termination date, the depositary is not required to register any transfer of ADSs or distribute any dividends or other distributions on deposited securities to the ADSs holder (until they surrender their ADSs) or give any notices or perform any other duties under the deposit agreement except as described in this paragraph.

Limitations on Obligations and Liability

Limits on our Obligations and the Obligations of the Depositary; Limits on Liability to Holders of ADSs

The deposit agreement expressly limits our obligations and the obligations of the depositary. It also limits our liability and the liability of the depositary. We and the depositary:

- are only obligated to take the actions specifically set forth in the deposit agreement without negligence or bad faith, and the depositary will not be a fiduciary or have any fiduciary duty to holders of ADSs;
- are not liable if we are or it is prevented or delayed by law or by events or circumstances beyond our or its control from performing our or its obligations under the deposit agreement;
- are not liable if we or it exercises discretion permitted under the deposit agreement;
- are not liable for the inability of any holder of ADSs to benefit from any distribution on deposited securities that is not made available to holders of ADSs under the terms of the deposit agreement, or for any special, consequential or punitive damages for any breach of the terms of the deposit agreement;
- have no obligation to become involved in a lawsuit or other proceeding related to the ADSs or the deposit agreement on your behalf or on behalf of any other person;
- may rely upon any documents we believe or it believes in good faith to be genuine and to have been signed or presented by the proper person;

- are not liable for the acts or omissions of any securities depository, clearing agency or settlement system; and
- the depositary has no duty to make any determination or provide any information as to our tax status, or any liability for any tax consequences that may be incurred by ADS holders as a result of owning or holding ADSs or be liable for the inability or failure of an ADS holder to obtain the benefit of a foreign tax credit, reduced rate of withholding or refund of amounts withheld in respect of tax or any other tax benefit.

In the deposit agreement, we and the depositary agree to indemnify each other under certain circumstances.

Requirements for Depositary Actions

Before the depositary will deliver or register a transfer of ADSs, make a distribution on ADSs, or permit withdrawal of shares, the depositary may require:

- payment of stock transfer or other taxes or other governmental charges and transfer or registration fees charged by third parties for the transfer of any shares or other deposited securities;
- satisfactory proof of the identity and genuineness of any signature or other information it deems necessary; and
- compliance with regulations it may establish, from time to time, consistent with the deposit agreement, including presentation of transfer documents.

The depositary may refuse to deliver ADSs or register transfers of ADSs when the transfer books of the depositary or our transfer books are closed or at any time if the depositary or we think it advisable to do so.

Your Right to Receive the Shares Underlying your ADSs

ADS holders have the right to cancel their ADSs and withdraw the underlying shares at any time except:

- when temporary delays arise because: (i) the depositary has closed its transfer books or we have closed our transfer books; (ii) the transfer of shares is blocked to permit voting at a shareholders' meeting; or (iii) we are paying a dividend on our shares;
- when you owe money to pay fees, taxes and similar charges; or
- when it is necessary to prohibit withdrawals in order to comply with any laws or governmental regulations that apply to ADSs or to the withdrawal of shares or other deposited securities.

This right of withdrawal may not be limited by any other provision of the deposit agreement.

Direct Registration System

In the deposit agreement, all parties to the deposit agreement acknowledge that the Direct Registration System, also referred to as DRS, and Profile Modification System, also referred to as Profile, will apply to the ADSs. DRS is a system administered by DTC that facilitates interchange between registered holding of uncertificated ADSs and holding of security entitlements in ADSs through DTC and a DTC participant. Profile is a feature of DRS that allows a DTC participant, claiming to act on behalf of a registered holder of uncertificated ADSs, to direct the depositary to register a transfer of those ADSs to DTC or its nominee and to deliver those ADSs to the DTC account of that DTC participant without receipt by the depositary of prior authorization from the ADS holder to register that transfer.

In connection with and in accordance with the arrangements and procedures relating to DRS/Profile, the parties to the deposit agreement understand that the depositary will not determine whether the DTC participant that is claiming to be acting on behalf of an ADS holder in requesting registration of transfer and delivery as described in the paragraph above has the actual authority to act on behalf of the ADS holder (notwithstanding any requirements under the Uniform Commercial Code). In the deposit agreement, the parties agree that the depositary's reliance on and compliance with instructions received by the depositary through the DRS/Profile system and in accordance with the deposit agreement will not constitute negligence or bad faith on the part of the depositary.

Shareholder communications; inspection of register of holders of ADSs

The depositary will make available for your inspection at its office all communications that it receives from us as a holder of deposited securities that we make generally available to holders of deposited securities. The depositary will send you copies of those communications or otherwise make those communications available to you if we ask it to. You have a right to inspect the register of holders of ADSs, but not for the purpose of contacting those holders about a matter unrelated to our business or the ADSs.

Waiver of Jury Trial

The deposit agreement, the ADRs and the ADSs will be interpreted in accordance with the laws of the State of New York. The rights of holders of Class A ordinary shares (including Class A ordinary shares represented by ADSs) are governed by the laws of the Cayman Islands.

The deposit agreement provides that, to the extent permitted by law, ADS holders waive the right to a jury trial of any claim they may have against us or the depositary arising out of or relating to our Class A ordinary shares, the ADSs or the deposit agreement, including any claim under U.S. federal securities laws. If we or the depositary opposed a jury trial demand based on the waiver, the court would determine whether the waiver was enforceable on the facts and circumstances of that case in accordance with applicable case law. However, you will not be deemed, by agreeing to the terms of the deposit agreement, to have waived our or the depositary's compliance with U.S. federal securities laws and the rules and regulations promulgated thereunder.

Shares Eligible for Future Sale

SHARES ELIGIBLE FOR FUTURE SALE Upon the completion of this offering, we will have ADSs outstanding representing approximately % of our ordinary shares (or ADS outstanding representing approximately % of our ordinary shares if the underwriters exercise in full the over-allotment option). In addition, options to purchase an aggregate of Class A ordinary shares will be outstanding upon the completion of this offering.

All of the ADSs sold in this offering and the ordinary shares they represent will be freely transferable by persons other than our "affiliates" without restriction or further registration under the Securities Act. Rule 144 of the Securities Act defines an "affiliate" of a company as a person that, directly or indirectly, through one or more intermediaries, controls or is controlled by, or is under common control with, our company. All outstanding ordinary shares immediately prior to the completion of this offering are "restricted securities" as that term is defined in Rule 144 because they were issued in a transaction or series of transactions not involving a public offering. Restricted securities, in the form of ADSs or otherwise, may be sold only if they are the subject of an effective registration statement under the Securities Act or if they are sold pursuant to an exemption from the registration requirement of the Securities Act such as those provided for in Rules 144 or 701 promulgated under the Securities Act, which rules are summarized below. Restricted ordinary shares may also be sold outside of the United States to non-U.S. persons in accordance with Rule 904 of Regulation S under the Act. This prospectus may not be used in connection with any resale of the ADSs acquired in this offering by our affiliates.

Sales of substantial amounts of the ADSs in the public market could adversely affect prevailing market prices of the ADSs. Prior to this offering, there has been no public market for our ordinary shares or ADSs, and while we will apply for the listing of the ADSs on the Nasdaq Global Market, we cannot assure you that a regular trading market will develop in the ADSs. We do not expect that a trading market will develop for our ordinary shares not represented by ADSs.

Lock-up Agreements

We, our executive officers, directors and certain option holders have agreed, subject to some exceptions, not to offer, pledge, issue, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any of our ordinary shares, in the form of ADSs or otherwise, or any securities convertible into or exchangeable or exercisable for our ordinary shares, in the form of ADSs or otherwise, for a period of 180 days after the date of this prospectus. After the expiration of the 180-day period, the ordinary shares or ADSs held by our directors, executive officers and certain existing shareholders and option holders, if applicable, may be sold subject to the restrictions under Rule 144 under the Securities Act or other exemptions from registration with the SEC or by means of SEC-registered public offerings.

Rule 144

In general, under Rule 144 as currently in effect, a person who has beneficially owned our restricted securities for at least six months is entitled to sell the restricted securities without registration under the Securities Act, subject to certain restrictions. Persons who are our affiliates (including persons beneficially owning 10% or more of our outstanding shares) may sell within any three-month period a number of restricted securities that does not exceed the greater of the following:

- 1% of the number of our ordinary shares then outstanding, in the form of ADSs or otherwise, which will equal approximately ordinary shares immediately after this offering; and
- the average weekly trading volume of the ADSs on the Nasdaq Global Market during the four calendar weeks preceding the date on which notice of the sale is filed with the SEC.

Such sales are also subject to manner-of-sale provisions, notice requirements and the availability of current public information about us.

In general, under Rule 144 as currently in effect, once we have been subject to the public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, persons who are not our affiliates and have beneficially owned our restricted securities for more than six months but not more than one year may sell the restricted securities without registration under the Securities Act subject to the availability of current public information about us. Persons who are not our affiliates and have beneficially owned our restricted securities for more than one year may freely sell the restricted securities without registration under the Securities Act.

Rule 701

Beginning 90 days after the date of this prospectus, persons other than affiliates who purchased ordinary shares under a written compensatory plan or contract may be entitled to sell such shares in the United States in reliance on Rule 701 under the Securities Act, or Rule 701. Rule 701 permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. Rule 701 further provides that non-affiliates may sell these shares in reliance on Rule 144 subject only to its manner-of-sale requirements. However, the Rule 701 shares would remain subject to any applicable lock-up arrangements and would only become eligible for sale when the lock-up period expires.

Taxation

TAXATION

The following is a summary of the material Cayman Islands, People's Republic of China and United States federal income tax consequences relevant to an investment in the ADSs and ordinary shares. The discussion is not intended to be, nor should it be construed as, legal or tax advice to any particular prospective purchaser. The discussion is based on laws and relevant interpretations thereof in effect as of the date of this prospectus, all of which are subject to change or different interpretations, possibly with retroactive effect. The discussion does not address U.S. state or local tax laws, or tax laws of jurisdictions

other than the Cayman Islands, the People's Republic of China and the United States. To the extent that the discussion relates to matters of Cayman Islands tax law, it is the opinion of Maples and Calder (Hong Kong) LLP, our Cayman Islands counsel. To the extent that the discussion relates to matters of People's Republic of China tax law, it is the opinion of Commerce & Finance Law Offices, our People's Republic of China counsel. To the extent that the discussion relates to matters of United States federal income tax law, and subject to the qualifications, assumptions and limitations set forth herein (including with respect to PFIC matters as described below), it is the opinion of Simpson, Thacher & Bartlett LLP, our U.S. counsel. You should consult your own tax advisors with respect to the consequences of acquisition, ownership and disposition of the ADSs and ordinary shares.

Cayman Islands Taxation

The Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciations and there is no taxation in the nature of inheritance tax or estate duty or withholding tax applicable to us or to any holder of the ADSs and ordinary shares. There are no other taxes likely to be material to us levied by the government of the Cayman Islands except for stamp duties which may be applicable on instruments executed in, or after execution brought within the jurisdiction of, the Cayman Islands. Payments of dividends and capital in respect of the ADSs and ordinary shares will not be subject to taxation in the Cayman Islands and no withholding will be required on the payment of a dividend or capital to any holder of the ADSs and ordinary shares, nor will gains derived from the disposal of the ADSs and ordinary shares be subject to Cayman Islands income or corporation tax. There are no exchange control regulations or currency restrictions in the Cayman Islands.

People's Republic of China Taxation

In March 2007, the National People's Congress of China enacted the Enterprise Income Tax Law, which became effective on January 1, 2008 and was revised on December 29, 2018. The Enterprise Income Tax Law provides that enterprises organized under the laws of jurisdictions outside China with their "de facto management bodies" located within China may be considered PRC resident enterprises and therefore subject to PRC enterprise income tax at the rate of 25% on their worldwide income. The Implementing Rules of the Enterprise Income Tax Law further define the term "de facto management body" as the management body that exercises substantial and overall management and control over the business, personnel, accounts and properties of an enterprise. While we do not consider our company or any of our overseas subsidiaries to be a PRC resident enterprise, there is a risk that the PRC tax authorities may deem our company or any of our overseas subsidiaries as a PRC resident enterprise since a substantial majority of the members of our management team as well as the management team of some of our overseas subsidiaries are located in China, in which case we or the overseas subsidiaries, as the case may be, would be subject to the PRC enterprise income tax at the rate of 25% on worldwide income. If the PRC tax authorities determine that our Cayman Islands holding company is a "resident enterprise" for PRC enterprise income tax purposes, a 10% withholding tax would be imposed on dividends we pay to our non-PRC enterprise shareholders and a 10% tax would be imposed with respect to gains derived by our non-PRC enterprise shareholders from transferring our shares or ADSs. Furthermore, dividends paid to individual investors who are non-PRC residents and any gain realized on the transfer of ADSs or ordinary shares by such investors may be subject to PRC tax at a rate of 20% (which in the case of dividends may be withheld at source). Any PRC tax liability may be reduced by an applicable tax treaty. However, it is unclear whether, if we are considered a PRC resident enterprise, holders of our shares or ADSs would be able to claim the benefit of income tax treaties or agreements entered into between China and other countries or areas.

United States Federal Income Tax Considerations

The following discussion describes the material United States federal income tax consequences of the purchase, ownership and disposition of the ADSs and ordinary shares as of the date hereof. This discussion deals only with ADSs and ordinary shares that are held as capital assets by a United States Holder (as defined below).

As used herein, the term "United States Holder" means a beneficial owner of the ADSs or ordinary shares that is, for United States federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This discussion is based upon provisions of the Internal Revenue Code of 1986, as amended, or the Code, and regulations, rulings and judicial decisions thereunder as of the date hereof. Such authorities may be changed, perhaps retroactively, so as to result in United States federal income tax consequences different from those summarized below. In addition, this discussion is based, in part, upon representations made by the depositary to us and assumes that the deposit agreement, and all other related agreements, will be performed in accordance with their terms.

This discussion does not represent a detailed description of the United States federal income tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws, including if you are:

- a dealer in securities or currencies;
- a financial institution;

- a regulated investment company;
- a real estate investment trust;
- an insurance company;
- a tax-exempt organization;
- a person holding the ADSs or ordinary shares as part of a hedging, integrated or conversion transaction, a constructive sale or a straddle;
- a trader in securities that has elected the mark-to-market method of accounting for your securities;
- a person liable for alternative minimum tax;
- a person who owns or is deemed to own 10% or more of our stock by vote or value;
- a partnership or other pass-through entity for United States federal income tax purposes;
- a person required to accelerate the recognition of any item of gross income with respect to the ADSs or ordinary shares as a result of such income being recognized on an applicable financial statement;
- a person holding the ADSs or ordinary shares in connection with a permanent establishment or fixed base outside the United States; or
- a person whose "functional currency" is not the United States dollar.

If a partnership (or other entity treated as a partnership for United States federal income tax purposes) holds the ADSs or ordinary shares, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding the ADSs or ordinary shares, you should consult your tax advisors.

This discussion does not contain a detailed description of all the United States federal income tax consequences to you in light of your particular circumstances and does not address the Medicare tax on net investment income or the effects of any state, local or non-United States tax laws. **If you are considering the purchase of the ADSs or ordinary shares, you should consult your own tax advisors concerning the particular United States federal income tax consequences to you of the purchase, ownership and disposition of the ADSs or ordinary shares, as well as the consequences to you arising under other United States federal tax laws and the laws of any other taxing jurisdiction.**

ADSs

If you hold ADSs, for United States federal income tax purposes, you generally will be treated as the owner of the underlying ordinary shares that are represented by such ADSs. Accordingly, deposits or withdrawals of ordinary shares for ADSs will not be subject to United States federal income tax.

Taxation of Dividends

Subject to the discussion under "—Passive Foreign Investment Company" below, the gross amount of distributions on the ADSs or ordinary shares (including any amounts withheld to reflect PRC withholding taxes, as discussed above under "—People's Republic of China Taxation") will be taxable as dividends to the extent paid out of our current or accumulated earnings and profits, as determined under United States federal income tax principles. To the extent that the amount of any distribution exceeds our current and accumulated earnings and profits for a taxable year, the distribution will first be treated as a tax-free return of capital, causing a reduction in the tax basis of the ADSs or ordinary shares, and to the extent the amount of the distribution exceeds your tax basis, the excess will be taxed as capital gain recognized on a sale or exchange. We do not, however, expect to determine earnings and profits in accordance with United States federal income tax principles. Therefore, you should expect that a distribution will generally be treated as a dividend.

Any dividends that you receive (including any withheld taxes) will be includable in your gross income as ordinary income from foreign sources on the day actually or constructively received by you, in the case of ordinary shares, or by the depositary, in the case of ADSs. Such dividends will not be eligible for the dividends received deduction allowed to corporations under the Code.

With respect to non-corporate United States investors, certain dividends received from a qualified foreign corporation may be subject to reduced rates of taxation. A foreign corporation is treated as a qualified foreign corporation with respect to dividends received from that corporation on shares (or ADSs backed by such shares) that are readily tradable on an established securities market in the United States. United States Treasury Department guidance indicates that the ADSs (which we will apply to list on the Nasdaq Global Market) will be readily tradable on an established securities market in the United States once they are so listed. Thus, we believe that dividends we pay on the ADSs will meet the conditions required for these reduced tax rates. Since we do not expect that our ordinary shares will be listed on an established securities market in the United States, we do not believe that dividends that we pay on our ordinary shares that are not represented by ADSs currently meet the conditions required for these reduced tax rates. There can be no assurance, however, that the ADSs will be considered readily tradable on an established securities market in later years. A qualified foreign corporation also includes a foreign corporation that is eligible for the benefits of certain income tax treaties with the United States. In the event that we are deemed to be a PRC resident enterprise under the Enterprise Income Tax Law, we may be eligible for the benefits of the income tax treaty between the United States and PRC, or the Treaty, and if we are eligible for such benefits, dividends we pay on our ordinary shares, regardless of whether such shares are represented by ADSs,

would be eligible for reduced rates of taxation. See "—People's Republic of China Taxation" for further information on the Enterprise Income Tax Law. Non-corporate holders that do not meet a minimum holding period requirement during which they are not protected from the risk of loss or that elect to treat the dividend income as "investment income" pursuant to Section 163(d)(4) of the Code will not be eligible for the reduced rates of taxation regardless of our status as a qualified foreign corporation. In addition, the rate reduction will not apply to dividends if the recipient of a dividend is obligated to make related payments with respect to positions in substantially similar or related property. This disallowance applies even if the minimum holding period has been met. You should consult your own tax advisors regarding the application of these rules given your particular circumstances.

Non-corporate United States Holders will not be eligible for reduced rates of taxation on any dividends received from us if we are a passive foreign investment company in the taxable year in which such dividends are paid or in the preceding taxable year. See "—Passive Foreign Investment Company" below.

Subject to certain conditions and limitations (including a minimum holding period requirement), any PRC withholding taxes on dividends may be treated as foreign taxes eligible for credit against your United States federal income tax liability. For purposes of calculating the foreign tax credit, dividends paid on the ADSs or ordinary shares will be treated as income from sources outside the United States and will generally constitute passive category income. The rules governing the foreign tax credit are complex. You are urged to consult your tax advisors regarding the availability of the foreign tax credit under your particular circumstances.

Distributions of ADSs, ordinary shares or rights to subscribe for ADSs or ordinary shares that are received as part of a pro rata distribution to all of our shareholders generally will not be subject to United States federal income tax.

Passive Foreign Investment Company

Based on the past and projected composition of our income and assets, and the valuation of our assets, including goodwill (which we have determined based on the expected price of the ADSs in this offering), we do not believe we were a passive foreign investment company, or a PFIC, for our most recent taxable year, and we do not expect to become a PFIC in the current taxable year or in the foreseeable future, although there can be no assurance in this regard.

In general, we will be a PFIC for any taxable year in which:

- at least 75% of our gross income is passive income, or
- at least 50% of the value (determined based on a quarterly average) of our assets is attributable to assets that produce or are held for the production of passive income.

For this purpose, passive income generally includes dividends, interest, income equivalent to interest, royalties and rents (other than royalties and rents derived in the active conduct of a trade or business and not derived from a related person). Cash is treated as an asset that produces or is held for the production of passive income. If we own at least 25% (by value) of the stock of another corporation, for purposes of determining whether we are a PFIC, we will be treated as owning our proportionate share of the other corporation's assets and receiving our proportionate share of the other corporation's income.

The determination of whether we are a PFIC is made annually. Accordingly, we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition. Because we have valued our goodwill based on the expected market value of the ADSs, a decrease in the price of the ADSs may also result in our becoming a PFIC. If we are a PFIC for any taxable year during which you hold the ADSs or ordinary shares, you will be subject to special tax rules discussed below. Our U.S. counsel expresses no opinion with respect to our PFIC status.

If we are a PFIC for any taxable year during which you hold the ADSs or ordinary shares and you do not make a timely mark-to-market election, as described below, you will be subject to special tax rules with respect to any "excess distribution" received and any gain realized from a sale or other disposition, including a pledge, of ADSs or ordinary shares. Distributions received in a taxable year will be treated as excess distributions to the extent that they are greater than 125% of the average annual distributions received during the shorter of the three preceding taxable years or your holding period for the ADSs or ordinary shares. Under these special tax rules:

- the excess distribution or gain will be allocated ratably over your holding period for the ADSs or ordinary shares,
- the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we were a PFIC, will be treated as ordinary income, and
- the amount allocated to each other year will be subject to tax at the highest tax rate in effect for that year and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

Although the determination of whether we are a PFIC is made annually, if we are a PFIC for any taxable year in which you hold the ADSs or ordinary shares, you will generally be subject to the special tax rules described above for that year and for each subsequent year in which you hold the ADSs or ordinary shares (even if we do not qualify as a PFIC in such subsequent years). However, if we cease to be a PFIC, you can avoid the continuing impact of the PFIC rules by making a special election to recognize gain as if your ADSs or ordinary shares had been sold on the last day of the last taxable year during which we were a PFIC. You are urged to consult your own tax advisor about this election.

In lieu of being subject to the special tax rules discussed above, you may make a mark-to-market election with respect to your ADSs or ordinary shares provided such ADSs or ordinary shares are treated as "marketable stock." The ADSs or ordinary shares generally will be treated as marketable stock if the ADSs or ordinary shares are regularly traded on a "qualified exchange or other market" (within the meaning of the applicable Treasury regulations). Under current law, the mark-to-market election may be available to holders of ADSs once the ADSs are listed on the Nasdaq Global Market which constitutes a

qualified exchange, although there can be no assurance that the ADSs will be "regularly traded" for purposes of the mark-to-market election. It is intended that only the ADSs and not the ordinary shares will be listed on the Nasdaq Global Market. Consequently, if you are a holder of ordinary shares that are not represented by ADSs, you generally will not be eligible to make a mark-to-market election.

If you make an effective mark-to-market election, for each taxable year that we are a PFIC you will include as ordinary income the excess of the fair market value of your ADSs at the end of the year over your adjusted tax basis in the ADSs. You will be entitled to deduct as an ordinary loss in each such year the excess of your adjusted tax basis in the ADSs over their fair market value at the end of the year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. Your adjusted tax basis in the ADSs will be increased by the amount of any income inclusion and decreased by the amount of any deductions under the mark-to-market rules. In addition, upon the sale or other disposition of your ADSs in a year that we are a PFIC, any gain will be treated as ordinary income and any loss will be treated as ordinary loss, but only to the extent of the net amount of previously included income as a result of the mark-to-market election.

If you make a mark-to-market election, it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the ADSs are no longer regularly traded on a qualified exchange or other market, or the Internal Revenue Service consents to the revocation of the election. You are urged to consult your tax advisor about the availability of the mark-to-market election, and whether making the election would be advisable in your particular circumstances.

Alternatively, U.S. taxpayers can sometimes avoid the special tax rules described above by electing to treat a PFIC as a "qualified electing fund" under Section 1295 of the Code. However, this option is not available to you because we do not intend to comply with the requirements necessary to permit you to make this election.

If we are a PFIC for any taxable year during which you hold the ADSs or our ordinary shares and any of our non-United States subsidiaries is also a PFIC, you will be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC for purposes of the application of the PFIC rules. You will not be able to make the mark-to-market election described above in respect of any lower-tier PFIC. You are urged to consult your tax advisors about the application of the PFIC rules to any of our subsidiaries.

You will generally be required to file Internal Revenue Service Form 8621 if you hold the ADSs or our ordinary shares in any year in which we are a PFIC. You are urged to consult your tax advisors concerning the United States federal income tax consequences of holding ADSs or ordinary shares if we are a PFIC in any taxable year.

Taxation of Capital Gains

For United States federal income tax purposes, you will recognize taxable gain or loss on any sale or exchange of the ADSs or ordinary shares in an amount equal to the difference between the amount realized for the ADSs or ordinary shares and your tax basis in the ADSs or ordinary shares. Subject to the discussion under "—Passive Foreign Investment Company" above, such gain or loss will generally be capital gain or loss and will generally be long-term capital gain or loss if you have held the ADSs or ordinary shares for more than one year. Long-term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Any gain or loss recognized by you will generally be treated as United States source gain or loss. However, if we are treated as a PRC resident enterprise for PRC tax purposes and PRC tax were imposed on any gain, and if you are eligible for the benefits of the Treaty, you may elect to treat such gain as PRC source gain under the Treaty. If you are not eligible for the benefits of the Treaty or if you fail to make the election to treat any gain as PRC source, then you generally would not be able to use the foreign tax credit arising from any PRC tax imposed on the disposition of ADSs or ordinary shares unless such credit can be applied (subject to applicable limitations) against tax due on other income derived from foreign sources.

Information Reporting and Backup Withholding

In general, information reporting will apply to dividends in respect of the ADSs or our ordinary shares and the proceeds from the sale, exchange or other disposition of the ADSs or our ordinary shares that are paid to you within the United States (and in certain cases, outside the United States), unless you are an exempt recipient. A backup withholding tax may apply to such payments if you fail to provide a taxpayer identification number or certification of exempt status or fail to report in full dividend and interest income.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is timely furnished to the Internal Revenue Service.

Underwriting

UNDERWRITING Under the terms and subject to the conditions contained in the underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Credit Suisse Securities (USA) LLC and Citigroup Global Markets Inc. are acting as representatives, have severally and not jointly agreed to purchase, and we have agreed to sell to them, severally, the number of ADSs indicated below. The address of Credit Suisse Securities (USA) LLC is Eleven Madison Avenue, New York, NY 10010, United States. The address of Citigroup Global Markets Inc. is 388 Greenwich Street, New York, NY 10013, United States. The address of China Renaissance Securities (Hong Kong) Limited is Units 8107-08, Level 81, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong. The address of CMB International Capital Limited is 45F, Champion Tower, 3 Garden Road, Central, Hong Kong. The address of Tiger Brokers (NZ) Limited is Level 4, 142 Broadway, Newmarket, Auckland, New Zealand 1023. The address of Galaxy Digital Advisors LLC is 107 Grand Street, New York, NY 10013, United States. The address of Huatai Financial Holdings (Hong Kong) Limited is 62/F, The Center, 99 Queens Road Central, Hong Kong.

Underwriter	Number of ADSs
Credit Suisse Securities (USA) LLC	
Citigroup Global Markets Inc.	
China Renaissance Securities (Hong Kong) Limited	
CMB International Capital Limited	
Galaxy Digital Advisors LLC	
Huatai Financial Holdings (Hong Kong) Limited	
Tiger Brokers (NZ) Limited	
Total	

The underwriters and the representatives are referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the ADSs subject to their acceptance of the ADSs from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the ADSs offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions, including the absence of any material adverse change in our business and the receipt of certain certificates, opinions and letters from us, our counsel and the independent registered public accounting firm. The underwriters are obligated, severally and not jointly, to take and pay for all of the ADSs offered by this prospectus if any such ADSs are taken. The underwriters are not required, however, to take or pay for the ADSs covered by the underwriters' over-allotment option described below. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may be increased or the offering may be terminated.

Certain of the underwriters are expected to make offers and sales both inside and outside the U.S. through their respective selling agents. Any offers or sales of the ADSs in the U.S. will be conducted by broker-dealers registered with the SEC. China Renaissance Securities (Hong Kong) Limited will offer ADSs in the United States through its SEC-registered broker-dealer affiliate in the United States, China Renaissance Securities (US) Inc. CMB International Capital Limited is not a broker-dealer registered with the SEC and may not make sales in the United States or to U.S. persons. CMB International Capital Limited has agreed that it does not intend to and will not offer or sell any of the ADSs in the United States or to any U.S. persons in connection with this offering. Tiger Brokers (NZ) Limited is not a broker-dealer registered with the SEC and may not make sales in the United States or to U.S. persons. Tiger Brokers (NZ) Limited has agreed that it does not intend to and will not offer or sell any of the ADSs in the United States or to any U.S. persons in connection with this offering. Huatai Financial Holdings (Hong Kong) Limited is not a broker-dealer registered with the SEC and may not make sales in the United States or to U.S. persons. Huatai Financial Holdings (Hong Kong) Limited has agreed that it does not intend to and will not offer or sell any of the ADSs in the United States or to any U.S. persons in connection with this offering.

We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional ADSs from us at the initial public offering price less the underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the ADS offered by this prospectus. Any ADSs issued or sold under the option will be issued and sold on the same terms and conditions as the other ADSs that are the subject of this offering.

ADSs sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any ADSs sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price not to exceed $ per ADS. If all the ADSs are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of ADSs offered by them.

The following table shows the per ADS and total public offering price, the underwriting discounts and commissions, and the proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional ADSs.

		Total	
	Per ADS	No Exercise	Full Exercise
Public offering price	US$	US$	US$
Underwriting discounts and commissions paid by us	US$	US$	US$
Proceeds to us, before expenses	US$	US$	US$

We estimate that our out of pocket expenses for this offering, exclusive of the underwriting discounts and commissions, will be approximately $.

Lock-Up Agreements

We have agreed that we will not offer, sell, contract to sell, pledge, sell any option or contract to purchase, purchase any option, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any ordinary shares or ADSs or any securities convertible into or exercisable or exchangeable for ordinary shares or ADSs; enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the ordinary shares or ADSs; or file with the Securities and Exchange Commission any registration statement under the Securities Act relating to the offering of any ADSs or ordinary shares or securities convertible into or exchangeable or exercisable for any ADSs or

ordinary shares, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, without the prior written consent of the representatives subject to certain exceptions, for a period of 180 days after the date of this prospectus, whether any such transaction described above is to be settled by delivery of ordinary shares, ADSs or such other securities, in cash or otherwise Each of our directors, executive officers, existing shareholders, and option holders have agreed, subject to certain exceptions, that they will not offer, sell, contract to sell, pledge, sell any option or contract to purchase, purchase any option, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any ordinary shares, ADSs or securities convertible into or exchangeable or exercisable for any ordinary shares or ADSs, enter into a transaction that would have the same effect, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position in any ADSs or ordinary shares or securities convertible into or exchangeable or exercisable for any ADSs or ordinary shares, or enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of ADSs or ordinary shares or securities convertible into or exchangeable or exercisable for any ADSs or ordinary shares, whether any of these transactions are to be settled by delivery of ordinary shares, ADSs or other securities, in cash or otherwise, or publicly disclose the intention to make any offer, sale, pledge or disposition, to establish, increase, liquidate or decrease any such position, or to enter into any transaction, swap, hedge or other arrangement, without, in each case, the prior written consent of the representatives for a period of 180 days after the date of this prospectus.

In addition, we have instructed The Bank of New York Mellon, as depositary, not to accept any deposit of any ordinary shares or issue any ADSs for 180 days after the date of this prospectus (other than in connection with this offering) unless we instruct the depositary otherwise. We have also agreed not to provide such consent without the prior written consent of the representatives. The foregoing does not affect the right of ADS holders to cancel their ADSs and withdraw the underlying ordinary shares.

The representatives, in their sole description, may release our ordinary shares and ADSs and other securities subject to the lock-up agreements described above in whole or in part at any time.

Determination of Offering Price

Prior to this offering, there has been no public market for the ordinary shares or ADSs. The initial public offering price was determined by negotiations among us and the representatives and will not necessarily reflect the market price of the ADSs following this offering. The principal factors that were considered in determining the initial public offering price included:

- the information presented in this prospectus and otherwise available to the underwriters;
- the history of, and prospects for, the industry in which we will compete;
- the ability of our management;
- the prospects for our future earnings;
- the present state of our development, results of operations and our current financial condition;
- the general condition of the securities markets at the time of this offering; and
- the recent market prices of, and the demand for, publicly traded ADSs of generally comparable companies.

We cannot assure you that the initial public offering price will correspond to the price at which the ADSs will trade in the public market subsequent to this offering or that an active trading market for the ADSs will develop and continue after this offering, or that the ADSs will trade in the public market at or above the initial public offering price.

Listing

We will apply for listing of the ADSs on the Nasdaq Global Market under the symbol “CAN.”

Stabilization

In connection with the offering the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions, and passive market making in accordance with Regulation M under the Exchange Act.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriters of ADSs in excess of the number of ADSs the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of ADSs over-allotted by the underwriters is not greater than the number of ADSs that they may purchase in the over-allotment option. In a naked short position, the number of ADSs involved is greater than the number of ADSs in the over-allotment option. The underwriters may close out any covered short position by either exercising their over-allotment option and/or purchasing ADSs in the open market.
- Syndicate covering transactions involve purchases of ADSs in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of ADSs to

close out the short position, the underwriters will consider, among other things, the price of ADSs available for purchase in the open market as compared to the price at which they may purchase ADSs through the over-allotment option. If the underwriters sell more ADSs than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying ADSs in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the ADSs in the open market after pricing that could adversely affect investors who purchase in the offering.

- Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the ADSs originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

- In passive market making, market makers in the ADSs who are underwriters or prospective underwriters may, subject to limitations, make bids for or purchases of the ADSs until the time, if any, at which a stabilizing bid is made.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of the ADSs or preventing or retarding a decline in the market price of the ADSs. As a result the price of the ADSs may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the Nasdaq Global Market or otherwise and, if commenced, may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format will be made available on the web sites maintained by one or more of the underwriters, or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of ADSs to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. In addition, ADSs may be sold by the underwriters to securities dealers who resell ADSs to online brokerage account holders. Other than the prospectus in electronic format, the information on any underwriter's or selling group member's website and any information contained in any other website maintained by any underwriter or selling group member is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any underwriter or selling group member in its capacity as underwriter or selling group member and should not be relied upon by investors.

Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

Notice to Prospective Investors in the European Economic Area

In relation to each member state of the European Economic Area that has implemented the Prospectus Directive (each, a relevant member state), with effect from and including the date on which the Prospectus Directive is implemented in that relevant member state (the relevant implementation date), an offer of ADSs described in this prospectus may not be made to the public in that relevant member state other than:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;

- to fewer than 100 or, if the relevant member state has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by us for any such offer; or

- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of ADSs shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For purposes of this provision, the expression an "offer of securities to the public" in any relevant member state means the communication in any form and by any means of sufficient information on the terms of the offer and the ADSs to be offered so as to enable an investor to decide to purchase or subscribe for the ADSs, as the expression may be varied in that member state by any measure implementing the Prospectus Directive in that member state, and the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the relevant member state) and includes any relevant implementing measure in the relevant member state. The expression 2010 PD Amending Directive means Directive 2010/73/EU.

The sellers of the ADSs have not authorized and do not authorize the making of any offer of ADSs through any financial intermediary on their behalf, other than offers made by the underwriters with a view to the final placement of the ADSs as contemplated in this prospectus. Accordingly, no purchaser of the ADSs, other than the underwriters, is authorized to make any further offer of the ADSs on behalf of the sellers or the underwriters.

Notice to Prospective Investors in the United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, or the Order, or (ii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (each such person being referred to as a "relevant person"). This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in France

Neither this prospectus nor any other offering material relating to the ADSs described in this prospectus has been submitted to the clearance procedures of the Autorité des Marchés Financiers or of the competent authority of another member state of the European Economic Area and notified to the Autorité des Marchés Financiers. The ADSs have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France. Neither this prospectus nor any other offering material relating to the ADSs has been or will be:

- released, issued, distributed or caused to be released, issued or distributed to the public in France; or
- used in connection with any offer for subscription or sale of the ADSs to the public in France.
- Such offers, sales and distributions will be made in France only:
- to qualified investors (investisseurs qualifiés) and/or to a restricted circle of investors (cercle restreint d'investisseurs), in each case investing for their own account, all as defined in, and in accordance with articles L.411-2, D.411-1, D.411-2, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code monétaire et financier;
- to investment services providers authorized to engage in portfolio management on behalf of third parties; or
- in a transaction that, in accordance with article L.411-2-II-1°-or-2°-or 3° of the French Code monétaire et financier and article 211-2 of the General Regulations (Règlement Général) of the Autorité des Marchés Financiers, does not constitute a public offer (appel public à l'épargne).

The ADSs may be resold directly or indirectly, only in compliance with articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code monétaire et financier.

Notice to Prospective Investors in Switzerland

This document, as well as any other offering or marketing material relating to the ADSs which are the subject of the offering contemplated by this prospectus, neither constitutes a prospectus pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations nor a simplified prospectus as such term is understood pursuant to article 5 of the Swiss Federal Act on Collective Investment Schemes. Neither the ADSs nor the shares underlying the ADSs will be listed on the SIX Swiss Exchange and, therefore, the documents relating to the ADSs, including, but not limited to, this document, do not claim to comply with the disclosure standards of the listing rules of SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

The ADSs are being offered in Switzerland by way of a private placement, i.e. to a small number of selected investors only, without any public offer and only to investors who do not purchase the ADSs with the intention to distribute them to the public. The investors will be individually approached from time to time. This document, as well as any other offering or marketing material relating to the ADSs, is confidential and it is exclusively for the use of the individually addressed investors in connection with the offer of the ADSs in Switzerland and it does not constitute an offer to any other person. This document may only be used by those investors to whom it has been handed out in connection with the offering described herein and may neither directly nor indirectly be distributed or made available to other persons without our express consent. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in or from Switzerland.

Notice to Prospective Investors in Australia

This prospectus is not a formal disclosure document and has not been, nor will be, lodged with the Australian Securities and Investments Commission. It does not purport to contain all information that an investor or their professional advisers would expect to find in a prospectus or other disclosure document (as defined in the Corporations Act 2001 (Australia)) for the purposes of Part 6D.2 of the Corporations Act 2001 (Australia) or in a product disclosure statement for the purposes of Part 7.9 of the Corporations Act 2001 (Australia), in either case, in relation to the ADSs.

The ADSs are not being offered in Australia to "retail clients" as defined in sections 761G and 761GA of the Corporations Act 2001 (Australia). This offering is being made in Australia solely to "wholesale clients" for the purposes of section 761G of the Corporations Act 2001 (Australia) and, as such, no prospectus, product disclosure statement or other disclosure document in relation to the securities has been, or will be, prepared.

This prospectus does not constitute an offer in Australia other than to wholesale clients. By submitting an application for the ADSs, you represent and warrant to us that you are a wholesale client for the purposes of section 761G of the Corporations Act 2001 (Australia). If any recipient of this prospectus is not a wholesale client, no offer of, or invitation to apply for, the ADSs shall be deemed to be made to such recipient and no applications for the ADSs will be

accepted from such recipient. Any offer to a recipient in Australia, and any agreement arising from acceptance of such offer, is personal and may only be accepted by the recipient. In addition, by applying for the ADSs you undertake to us that, for a period of 12 months from the date of issue of the ADSs, you will not transfer any interest in the ADSs to any person in Australia other than to a wholesale client.

Notice to Prospective Investors in Hong Kong

The ADSs may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the ADSs may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to ADSs which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Japan

The ADSs offered in this prospectus have not been and will not be registered under the Financial Instruments and Exchange Law of Japan. The ADSs have not been offered or sold and will not be offered or sold, directly or indirectly, in Japan or to or for the account of any resident of Japan (including any corporation or other entity organized under the laws of Japan), except (i) pursuant to an exemption from the registration requirements of the Financial Instruments and Exchange Law and (ii) in compliance with any other applicable requirements of Japanese law.

Notice to Prospective Investors in South Korea

The ADSs may not be offered, sold and delivered directly or indirectly, or offered or sold to any person for reoffering or resale, directly or indirectly, in South Korea or to any resident of South Korea except pursuant to the applicable laws and regulations of South Korea, including the South Korea Securities and Exchange Act and the Foreign Exchange Transaction Law and the decrees and regulations thereunder. The ADSs have not been registered with the Financial Services Commission of South Korea for public offering in South Korea.

Furthermore, the ADSs may not be resold to South Korean residents unless the purchaser of the ADSs complies with all applicable regulatory requirements (including but not limited to government approval requirements under the Foreign Exchange Transaction Law and its subordinate decrees and regulations) in connection with the purchase of the ADSs.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the ADSs may not be circulated or distributed, nor may the ADSs be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

Where the ADSs are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the ADSs pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than US$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;
- where no consideration is or will be given for the transfer; or
- where the transfer is by operation of law.

Notice to Prospective Investors in Canada

The ADSs may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the ADSs must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in the Cayman Islands

This prospectus does not constitute a public offer of the ADSs or ordinary shares, whether by way of sale or subscription, in the Cayman Islands. ADSs or ordinary shares have not been offered or sold, and will not be offered or sold, directly or indirectly, in the Cayman Islands.

Notice to Prospective Investors in Bermuda

ADSs may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

Notice to Prospective Investors in the British Virgin Islands

The ADSs are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of our company. The ADSs may be offered to companies incorporated under the British Virgin Islands Business Companies Act, 2004, or BVI Companies, but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

Notice to Prospective Investors in Malaysia

No prospectus or other offering material or document in connection with the offer and sale of the securities has been or will be registered with the Securities Commission of Malaysia, or Commission, for the Commission's approval pursuant to the Capital Markets and Services Act 2007. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the securities may not be circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than (i) a closed end fund approved by the Commission; (ii) a holder of a Capital Markets Services License; (iii) a person who acquires the securities as principal, if the offer is on terms that the securities may only be acquired at a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction; (iv) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies), excluding the value of the primary residence of the individual; (v) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding twelve months; (vi) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding twelve months; (vii) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts; (viii) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies); (ix) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010; (x) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010; and (xi) any other person as may be specified by the Commission; provided that, in the each of the preceding categories (i) to (xi), the distribution of the securities is made by a holder of a Capital Markets Services License who carries on the business of dealing in securities. The distribution in Malaysia of this prospectus is subject to Malaysian laws. This prospectus does not constitute and may not be used for the purpose of public offering or an issue, offer for subscription or purchase, invitation to subscribe for or purchase any securities requiring the registration of a prospectus with the Commission under the Capital Markets and Services Act 2007.

Notice to Prospective Investors in the PRC

This prospectus has not been and will not be circulated or distributed in the PRC, and the ADSs may not be offered or sold, and will not be offered or sold to any person for re-offering or resale, directly or indirectly, to any residents of the PRC except pursuant to applicable laws and regulations of the PRC. For the purposes of this paragraph, the PRC does not include Taiwan, Hong Kong or Macau.

Notice to Prospective Investors in Taiwan

The ADSs have not been and will not be registered or filed with, or approved by, the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be offered or sold in Taiwan through a public offering or in circumstances which constitute an offer within the meaning of the Securities and Exchange Act of Taiwan or relevant laws and regulations that require a registration, filing or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer or sell the ADSs in Taiwan.

Notice to Prospective Investors in Qatar

In the State of Qatar, the offer contained herein is made on an exclusive basis to the specifically intended recipient thereof, upon that person's request and initiative, for personal use only and shall in no way be construed as a general offer for the sale of securities to the public or an attempt to do business as a bank, an investment company or otherwise in the State of Qatar. This prospectus and the underlying securities have not been approved or licensed by the Qatar Central Bank or the Qatar Financial Centre Regulatory Authority or any other regulator in the State of Qatar. The information contained in this prospectus shall only be shared with any third parties in Qatar on a need to know basis for the purpose of evaluating the contained offer. Any distribution of this prospectus by the recipient to third parties in Qatar beyond the terms hereof is not permitted and shall be at the liability of such recipient.

Notice to Prospective Investors in Kuwait

Unless all necessary approvals from the Kuwait Ministry of Commerce and Industry required by Law No. 31/1990 "Regulating the Negotiation of Securities and Establishment of Investment Funds", its Executive Regulations and the various Ministerial Orders issued pursuant thereto or in connection therewith, have been given in relation to the marketing and sale of the ADSs, these may not be marketed, offered for sale, nor sold in the State of Kuwait. Neither this prospectus (including any related document), nor any of the information contained therein is intended to lead to the conclusion of any contract of whatsoever nature within Kuwait. Investors in Kuwait who approach us or any of the underwriters to obtain copies of this prospectus are required by us and the underwriters to keep such prospectus confidential and not to make copies thereof nor distribute the same to any other person in Kuwait and are also required to observe the restrictions provided for in all jurisdictions with respect to offering, marketing and the sale of the ADSs.

Notice to Prospective Investors in the United Arab Emirates

The ADSs have not been offered or sold, and will not be offered or sold, directly or indirectly, in the United Arab Emirates, except: (1) in compliance with all applicable laws and regulations of the United Arab Emirates; and (2) through persons or corporate entities authorized and licensed to provide investment advice and/or engage in brokerage activity and/or trade in respect of foreign securities in the United Arab Emirates. The information contained in this prospectus does not constitute a public offer of securities in the United Arab Emirates in accordance with the Commercial Companies Law (Federal Law No. 8 of 1984 (as amended)) or otherwise and is not intended to be a public offer and is addressed only to persons who are sophisticated investors.

Notice to Investors in the Dubai International Financial Centre

This document relates to an Exempt Offer, as defined in the Offered Securities Rules module of the DFSA Rulebook, or the OSR, in accordance with the Offered Securities Rules of the Dubai Financial Services Authority. This document is intended for distribution only to Persons, as defined in the OSR, of a type specified in those rules. It must not be delivered to, or relied on by, any other Person. The Dubai Financial Services Authority has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The Dubai Financial Services Authority has not approved this document nor taken steps to verify the information set out in it, and has no responsibility for it. The ADSs to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the ADSs offered should conduct their own due diligence on the ADSs. If you do not understand the contents of this document you should consult an authorized financial adviser.

Notice to Prospective Investors in Saudi Arabia

This prospectus may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations issued by the Capital Market Authority. The Capital Market Authority does not make any representation as to the accuracy or completeness of this prospectus, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this prospectus. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this prospectus you should consult an authorized financial adviser.

Notice to Prospective Investors in Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus may be distributed only to, and is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds; provident funds; insurance companies; banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange Ltd., underwriters, each purchasing for their own account; venture capital funds; entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors. Qualified investors shall be required to submit written confirmation that they fall within the scope of the Addendum.

Expenses Related to this Offering

EXPENSES RELATED TO THIS OFFERING Set forth below is an itemization of the total expenses to be borne by us, excluding underwriting discounts and commissions, which are expected to be incurred in connection with the offer and sale of the ADSs by us. With the exception of the SEC registration fee and the Financial Industry Regulatory Authority filing fee, all amounts are estimates.

	US$
SEC registration fee	
Nasdaq Global Market listing fee	
Financial Industry Regulatory Authority filing fee	
Printing and engraving expenses	
Legal fees and expenses	
Accounting fees and expenses	
Miscellaneous	
Total	

Legal Matters

LEGAL MATTERS We are being represented by Simpson Thacher & Bartlett LLP with respect to certain legal matters of United States federal securities and New York state law. The underwriters are being represented by Freshfields Bruckhaus Deringer with respect to certain legal matters of United States federal securities and New York state law. The validity of the ordinary shares represented by the ADSs offered in this offering and legal matters as to Cayman Islands law will be passed upon for us by Maples and Calder (Hong Kong) LLP. Certain legal matters as to PRC law will be passed upon for us by Commerce & Finance Law Offices and for the underwriters by Zhong Lun Law Firm. Simpson Thacher & Bartlett LLP and Maples and Calder (Hong Kong) LLP may rely upon Commerce & Finance Law Offices with respect to matters governed by PRC law. Freshfields Bruckhaus Deringer LLP may rely upon Zhong Lun Law Firm with respect to matters governed by PRC law.

Experts

EXPERTS

The consolidated financial statements as of December 31, 2017 and 2018 and for each of two years in the period ended December 31, 2018 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm given upon the authority of said firm as experts in auditing and accounting.

The offices of PricewaterhouseCoopers Zhong Tian LLP are located at 11/F PricewaterhouseCoopers Center, Link Square 2, 202 Hu Bin Road, Huangpu District, Shanghai, the People's Republic of China.

Where You Can Find More Information

WHERE YOU CAN FIND MORE INFORMATION We have filed with the SEC a registration statement on Form F-1, including relevant exhibits and schedules, with respect to the underlying ordinary shares represented by the ADSs, to be sold in this offering. A related registration statement on F-6 will be filed with the SEC to register the ADSs. This prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement. You should read the registration statement and its exhibits and schedules for further information with respect to us and the ADSs.

Immediately upon the completion of this offering, we will become subject to periodic reporting and other informational requirements of the Exchange Act as applicable to foreign private issuers. Accordingly, we will be required to file reports, including annual reports on Form 20-F, and other information with the SEC. All information filed with the SEC can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents upon payment of a duplicating fee, by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference rooms. Additional information may also be obtained over the Internet at the SEC's website at *www.sec.gov*.

As a foreign private issuer, we are exempt under the Exchange Act from, among other things, the rules prescribing the furnishing and content of proxy statements, and our executive officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we will not be required under the Exchange Act to file periodic reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act. However, we intend to furnish the depositary with our annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP, and all notices of shareholders' meeting and other reports and communications that are made generally available to our shareholders. The depositary will make such notices, reports and communications available to holders of ADSs and will mail to all record holders of ADSs the information contained in any notice of a shareholders' meeting received by the depositary from us.

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Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm To the Board of Directors and Shareholders of Canaan Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Canaan Inc. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of comprehensive income, of changes in shareholders' equity and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers Zhong Tian LLP Shanghai, the People's Republic of China July 23, 2019 We have served as the Company's auditor since 2018.

Consolidated Balance Sheets as of December 31, 2017 and 2018

CANAAN INC.

Consolidated Balance Sheets

As of December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		As of December 31,		
	Note	2017	2018	
		RMB	RMB	US$ (Note 2(e))
Assets				
Current assets:				
Cash and cash equivalents	4	176,500	258,940	37,719
Restricted cash	9	–	286,270	41,700
Short-term investments	2(i)	90,000	–	–
Accounts receivable	5	1,307	23,687	3,450
Inventories	6	259,847	585,672	85,313
Prepayments and other current assets	7	636,394	186,737	27,201
Income tax receivable		–	27,054	3,941
Amounts due from related parties	15	15,515	68	10
Total current assets		1,179,563	1,368,428	199,334
Non-current assets:				

Property, equipment and software	8	18,404	27,926	4,068
Deferred income tax assets	14	1,062	–	–
Other non-current assets	7	4,196	6,340	924
Total non-current assets		23,662	34,266	4,992
Total assets		1,203,225	1,402,694	204,326

Liabilities, and Shareholders' Equity

Current liabilities				
Short-term debts	9	–	1,049,011	152,806
Accounts payable		50,438	47,240	6,881
Contract liabilities	2(n)	202,477	6,904	1,006
Income tax payable		23,864	609	89
Accrued liabilities and other current liabilities	10	69,205	57,952	8,442
Total current liabilities		345,984	1,161,716	169,224
Total liabilities		345,984	1,161,716	169,224
Commitments and contingencies (Notes 17)				

CANAAN INC.

Consolidated Balance Sheets (Continued)

As of December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		As of December 31,		
	Note	2017	2018	
		RMB	RMB	US$ (Note 2(e))
Shareholders' equity:				
Ordinary shares (US$0.00000005 par value; 1,000,000,000,000 shares authorized, 2,000,000,000 shares issued, 2,000,000,000 and 1,948,376,000 outstanding as of December 31, 2017 and 2018, respectively)	11	1	1	–
Subscriptions receivable from shareholders	11	(1)	(1)	–
Treasury stocks (US$0.00000005 par value; 51,624,000 shares as of December 31, 2018)	11	–	–	–
Additional paid-in capital	1(b)	423,642	154,970	22,574
Statutory reserves	2(aa)	28,806	97,307	14,174
Accumulated other comprehensive loss		–	(65,230)	(9,502)
Retained earnings		404,793	53,931	7,856
Total shareholders' equity		857,241	240,978	35,102
Total liabilities and shareholders' equity		1,203,225	1,402,694	204,326

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income for the years ended December 31, 2017 and 2018

CANAAN INC.

Consolidated Statements of Comprehensive Income

For the Years Ended December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		For the years ended December 31,		
	Note	2017	2018	
		RMB	RMB	US$ (Note 2(e))
Net revenues				
Products revenue		1,303,093	2,698,594	393,094
Service revenue		4,681	5,956	868
Other revenues		309	741	108
Total net revenues		1,308,083	2,705,291	394,070
Cost of revenues		(703,699)	(2,197,172)	(320,054)
Gross profit		604,384	508,119	74,016
Operating expenses:				
Research and development expenses		(99,769)	(189,680)	(27,630)
Sales and marketing expenses		(20,724)	(38,731)	(5,642)
General and administrative expenses		(125,263)	(146,684)	(21,367)
Total operating expenses		(245,756)	(375,095)	(54,639)
Income from operations				
Interest income		243	4,234	617
Investment income		5,598	3,162	461
Interest expense and guarantee fee		—	(53,069)	(7,730)
Foreign exchange losses, net		(1,187)	(1,178)	(172)
Value added tax refunds	2(v)	38,811	110,231	16,057
Other (loss) income, net	13	(1,124)	3,838	559
Income before income tax expenses		400,969	200,242	29,169
Income tax expense	14	(25,153)	(77,810)	(11,335)
Net income		375,816	122,432	17,834
Foreign currency translation adjustment, net of nil tax		—	(65,230)	(9,502)
Total comprehensive income		375,816	57,202	8,332
Weighted average number of shares used in per share calculation:				
— Basic	16	1,971,589,429	1,964,499,660	1,964,499,660
— Diluted	16	1,971,589,429	1,978,161,073	1,978,161,073

Net earnings per share (cent per share)				
– Basic	16	19.06	6.23	0.91
– Diluted	16	19.06	6.19	0.90
Share-based compensation expenses were included in:				
Research and development expenses		25,086	9,611	1,400
Sales and marketing expenses		123	1,088	158
General and administrative expenses		70,316	7,887	1,149

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2017 and 2018

CANAAN INC.

Consolidated Statements of Changes in Shareholders' Equity

For the Years Ended December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		Ordinary shares			Treasury stocks						
	Note	Number of Shares	Amount	Subscription receivablesfromshareholders	Number of Shares	Amount	Additional paid-in capital	Statutory reserves	Accumulated other comprehensive loss	Retained earnings	To sh
Balance as of January 1, 2017		1,906,577,853	1	(1)	–	–	178,117	6,074	–	51,709	
Share-based compensation	12	–	–	–	–	–	95,525	–	–	–	
Capital contribution from a shareholder		93,422,147	–	–	–	–	150,000	–	–	–	
Net income		–	–	–	–	–	–	–	–	375,816	
Profit appropriations to statutory reserves	2(aa)	–	–	–	–	–	–	22,732	–	(22,732)	
Balance as of December 31, 2017		2,000,000,000	1	(1)	–	–	423,642	28,806	–	404,793	
Ordinary shares contributed by shareholders for the equity incentive plan	11	(51,624,000)	–	–	51,624,000	–	–	–	–	–	
Share-based compensation expense	12	–	–	–	–	–	18,586	–	–	–	
Foreign currency translation		–	–	–	–	–	–	–	(65,230)	–	
Deemed distribution	1(b)	–	–	–	–	–	(287,258)	–	–	(404,793)	
Net income		–	–	–	–	–	–	–	–	122,432	
Profit appropriations to statutory reserves	2(aa)	–	–	–	–	–	–	68,501	–	(68,501)	
Balance as of December 31, 2018		1,948,376,000	1	(1)	51,624,000	–	154,970	97,307	(65,230)	53,931	

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows for the years ended December 31, 2017 and 2018

CANAAN INC.

Consolidated Statements of Cash Flows

For the Years Ended December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

	For the Years Ended December 31,		
	2017	2018	
	RMB	RMB	US$ (Note 2(e))
Cash flows from operating activities			
Net income	375,816	122,432	17,834
Adjustments for:			
Depreciation and amortization of property, equipment and software	9,083	13,145	1,915
Foreign exchange gain	1,296	2,224	324
Reversal of allowance for doubtful receivables	(543)	(2,152)	(313)
Loss on disposal of property, equipment and software	1,620	2,033	296
Loss on disposal of subsidiaries	579	–	–
Share-based compensation expense	95,525	18,586	2,707
Deferred income tax (benefit) expenses	(10)	1,062	155
Investment income	(5,598)	(3,162)	(461)
Changes in assets and liabilities:			
Accounts receivable	11,479	(20,228)	(2,947)
Inventories	(123,927)	(325,825)	(47,462)
Prepayments and other current assets	(587,056)	449,657	65,500
Income tax receivable	–	(27,054)	(3,941)
Amount due from a related party	–	(68)	(10)
Other non-current assets	(3,382)	(2,144)	(312)
Prepaid interest expense and guarantee fee	–	(7,970)	(1,161)
Accounts payable	27,589	(3,198)	(466)
Contract liabilities	201,026	(195,573)	(28,488)
Income tax payable	23,832	(23,255)	(3,387)
Accrued liabilities and other current liabilities	63,870	(11,253)	(1,639)
Net cash provided by (used in) operating activities	91,199	(12,743)	(1,856)
Cash flows from investing activities:			
Payment for short-term investments	(941,360)	(1,405,520)	(204,737)
Proceeds from disposal of short-term investments	859,848	1,498,682	218,308
Purchase of property, equipment and software	(12,656)	(24,910)	(3,629)
Proceeds from disposal of property, equipment and software	13,802	211	31
Net cash (outflow) inflow arising from disposal of subsidiaries (Note 13)	(6,409)	15,515	2,260
Net cash (used in) provided by investing activities	(86,775)	83,978	12,233
Cash flows from financing activities:			
Proceeds from capital contribution of a shareholder	150,000	–	–
Proceeds from borrowings	–	1,952,198	284,370

Repayment of borrowings	–	(964,947)	(140,560)
Payment for deemed distribution (Note 1(b))	–	(692,051)	(100,809)
Net cash provided by financing activities	150,000	295,200	43,001

CANAAN INC.

Consolidated Statements of Cash Flows (Continued)

For the Years Ended December 31, 2017 and 2018

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

	For the Years Ended December 31,		
	2017	2018	
	RMB	RMB	US$ (Note 2(e))
Net increase in cash and cash equivalents, restricted cash	154,424	366,435	53,378
Effect of exchange rate changes on cash and cash equivalents, restricted cash	(1,296)	2,275	331
Cash and cash equivalents, restricted cash at the beginning of year	23,372	176,500	25,710
Cash and cash equivalents, restricted cash at the end of year	176,500	545,210	79,419
Supplemental disclosure of cash flow information:			
Cash paid for interest	–	35,773	5,211
Cash paid for guarantee fee	–	19,146	2,789
Cash paid for income taxes	1,442	127,155	18,522
Supplemental disclosure of non-cash investing activity:			
Disposal of subsidiaries included in receivables (Note 13)	15,515	–	–

The accompanying notes are an integral part of these consolidated financial statements.

Notes to the Consolidated Financial Statements

CANAAN INC.

Notes to the Consolidated Financial Statements

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

1. Organization and principal activities

(a) Principal activities

Canaan Inc. (the "Company"), an exempted company with limited liability incorporated in the Cayman Islands and its subsidiaries are collectively referred to as the "Group". The Group are principally engaged in integrated circuit (the "IC") design and sale of final system products by integrating its IC products for Bitcoin mining and related components in the People's Republic of China (the "PRC") and other countries and regions. The Group utilizes industry-leading third-party suppliers to fabricate, package and test the IC products.

As of December 31, 2018, the Company's subsidiaries are as follows:

Name of subsidiaries	Date of incorporation	Place ofincorporation	Equity interestheld	Principalactivities
Canaan Creative (HK) Holdings Limited	February 22, 2018	Hong Kong	100 %	Research and development of ICs

Hangzhou Canaan Creative Information Technology Co., Ltd.	April 9, 2013	Hangzhou, China	100 %	Research and development of ICs
Canaan Creative Co., Ltd.	April 1, 2013	Beijing, China	100%	Research and development of ICs
Langfang Creative Technology Co., Ltd.	May 15, 2014	Langfang, China	100 %	Assembly of system products
Hangzhou Ruihong Technology Co., Ltd.	June 30, 2015	Hangzhou, China	%	Supply chain and distribution of system products
Hangzhou Lifeng Intelligence Agriculture Co., Ltd.	November 13, 2015	Hangzhou, China	100 %	Distribution of system products
Hangzhou Canaan Blockchain Technology Co., Ltd.	November 11, 2016	Hangzhou, China	100 %	Research and development of ICs
Canaan Convey Co., Ltd.	November 2, 2017	Beijing, China	100%	International distribution of system products
Zhejiang Avalon Technology Co., Ltd.	December 5, 2017	Hangzhou, China	100 %	Distribution of system products

(b) **Reorganization**

Prior to the incorporation of the Company, the Group's business was carried out by Hangzhou Canaan Creative Information Technology Co., Ltd. ("Hangzhou Canaan") and its subsidiaries. Hangzhou Canaan was established by co-founders Mr. Zhang Nangeng ("Mr. Zhang"), Mr. Li Jiaxuan ("Mr. Li") and Mr. Liu Xiangfu ("Mr. Liu") (collectively, "Co-Founders"). To facilitate offshore financing, an offshore corporate structure was formed in March 2018 (the "Reorganization"), which was carried out as follows:

1) On February 6, 2018, the Company was incorporated in the Cayman Islands by the Co-Founders.

2) On February 22, 2018, Canaan Creative (HK) Holdings Limited ("Canaan HK") was incorporated in Hong Kong with 100% ownership by the Company.

3) On March 12, 2018, Mr. Kong Jianpin ("Mr. Kong") entered into a share transfer agreement with WWXD Limited, a Hong Kong company wholly-owned by an independent third party, whereby WWXD Limited acquired 1% of equity interest in Hangzhou Canaan from Mr. Kong at a consideration of RMB7 million.

4) On March 21, 2018, Canaan HK acquired the 1% equity interest in Hangzhou Canaan from WWXD Limited and the remaining 99% equity interest in Hangzhou Canaan from its other shareholders at an aggregate cash consideration of RMB692,051, which was recorded as deemed distribution to these shareholders. This deemed distribution reduced retained earnings with amount of RMB404,793 and in the absence of retained earnings, reduced additional paid-in capital with amount of RMB287,258. Hangzhou Canaan then became a wholly-owned subsidiary of Canaan HK. The acquisition of equity interest was financed by a borrowing with principal of HK$885,000 withdrawn from a facility provided by CMB International Financial Limited ("CMBI Finance") (Note 9).

As the shareholdings in the Company and Hangzhou Canaan were with a high degree of common ownership immediately before and after the Reorganization, even though no single investor controlled Hangzhou Canaan or Canaan Inc., the transaction of the Reorganization was determined as recapitalization with lack of economic substance, and was accounted for in a manner similar to a common control transaction. Consequently, the financial information of the Group is presented on a carryover basis for all periods presented. The number of outstanding shares in the consolidated balance sheets, the consolidated statements of changes in shareholders' equity, and per share information including the net earnings per share have been presented retrospectively as of the beginning of the earliest period presented on the consolidated financial statements to reflect the final shares issued in the Reorganization.

2. **Principal Accounting Policies**

(a) **Basis of preparation**

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP").

Significant accounting policies followed by the Group in the preparation of the accompanying consolidated financial statements are summarized below.

(b) **Use of estimates**

The preparation of the Group's consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from such estimates.

The Company believes that valuation and recognition of share-based compensation, accounting estimation of variable consideration for revenue recognition, write-down for inventories and prepayments, allowance for doubtful accounts and valuation allowance for deferred tax assets reflect significant judgments and estimates used in the preparation of its consolidated financial statements.

Management bases the estimates on historical experience and on various other assumptions as discussed elsewhere to the consolidated financial statements that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could materially differ from these estimates.

(c) Consolidation

The Group's consolidated financial statements include the financial statements of the Company and its subsidiaries, for which the Company or its subsidiary is the primary beneficiary. All transactions and balances among the Company and its subsidiaries have been eliminated upon consolidation.

Subsidiaries are those entities in which the Company, directly or indirectly, controls more than one half of the voting powers; or has the power to appoint or remove the majority of the members of the board of directors; or to cast a majority of votes at the meeting of directors; or has the power to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

(d) Functional currency and foreign currency translation

The Group uses Renminbi ("RMB") as its reporting currency. The functional currency of the Company and its subsidiaries incorporated outside of PRC is the United States dollar ("US$"), while the functional currency of the PRC entities in the Group is RMB as determined based on the criteria of ASC 830, *Foreign Currency Matters*.

Transactions denominated in other than the functional currencies are re-measured into the functional currency of the entity at the exchange rates prevailing on the transaction dates. Financial assets and liabilities denominated in other than the functional currency are re-measured at the balance sheet date exchange rate. The resulting exchange differences are included in the consolidated statements of comprehensive income as foreign exchange related gains or loss.

The financial statements of the Group are translated from the functional currency to the reporting currency, RMB. Assets and liabilities of the Company and its subsidiaries incorporated outside of PRC are translated into RMB at fiscal year-end exchange rates, Income and expense items are translated at average exchange rates prevailing during the fiscal year, representing the index rates stipulated by the People's Bank of China. Translation adjustments arising from these are reported as foreign currency translation adjustments and are shown as a separate component of shareholders' equity on the consolidated financial statement. The exchange rates used for translation on December 31, 2017 and 2018 were US$1.00=RMB6.5342 and RMB6.8632, respectively, representing the index rates stipulated by the People's Bank of China.

(e) Convenience translation

The unaudited United States dollar ("US$") amounts disclosed in the accompanying financial statements are presented solely for the convenience of the readers. Translations of amounts from RMB into US$ for the convenience of the reader were calculated at the rate of US$1.00=RMB6.8650 on June 28, 2019, representing the noon buying rate in The City of New York for cable transfers of RMB as certified for customs purposes by the Federal Reserve Board. No representation is made that the RMB amounts could have been, or could be, converted into US$ at that rate on June 28, 2019, or at any other rate.

(f) Fair value of financial instruments

Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Group considers the principal or most advantageous market in which it would transact and it considers assumptions that market participants would use when pricing the asset or liability.

The established fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The three levels of inputs that may be used to measure fair value include:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Observable, market-based inputs, other than quoted prices, in active markets for identical assets or liabilities.

Level 3: Unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

Accounting guidance also describes three main approaches to measuring the fair value of assets and liabilities: (1) market approach; (2) income approach and (3) cost approach. The market approach uses prices and other relevant information generated from market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value amount. The measurement is based on the value indicated by current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace an asset.

The Group does not have any non-financial assets or liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis.

The Group's financial instruments consist principally of cash and cash equivalents, short-term investments, accounts receivable, accounts payable and other liabilities.

As of December 31, 2017 and 2018, the carrying values of cash and cash equivalents, accounts receivable, accounts payable and other liabilities approximated to their fair values reported in the consolidated balance sheets due to the short term nature of these instruments.

On a recurring basis, the Group measures its short-term investments at fair value.

The following table sets forth the Group's assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy:

As of December 31, 2017	Level 1	Level 2	Level 3	Balance at fair value
Assets				
Short-term investments — Wealth management products	—	90,000	—	90,000

As of December 31, 2018	Level 1	Level 2	Level 3	Balance at fair value
Assets				
Short-term investments	—	—	—	—

The Group values its investments in wealth management products based on quoted prices of similar products provided by banks at the end of each period, and accordingly, the Group classifies the valuation techniques that use these inputs as Level 2.

(g) Cash and cash equivalents

Cash and cash equivalents include cash in bank and time deposits placed with banks or other financial institutions, which have original maturities of three months or less at the time of purchase and are readily convertible to known amounts of cash.

(h) Restricted cash

Restricted cash includes cash and cash equivalents that are not readily available for the Company's normal disbursements. Restricted cash are primarily related to cash deposits with banks and financial institutions required as part of collaterals for the Company's short-term debt arrangements (Note 9).

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230) ("ASU 2016-18"). This ASU affects all entities that have restricted cash or restricted cash equivalents and are required to present a statement of cash flows under Topic 230. ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. This update was required to be adopted for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019, and early adoption is permitted in any interim or annual period. The Group elected to early adopt this ASU and applied this guidance retrospectively to all periods presented.

(i) Short-term investments

Short-term investments include investments in wealth management products issued by certain banks which are redeemable by the Company at any time. The wealth management products are unsecured with variable interest rates. The Company measures the short-term investments at fair value and fair value is estimated based on quoted prices of similar products provided by banks at the end of each period. The change in fair value is recorded as investment income amounted to RMB5,598 and RMB3,162 in the consolidated statements of comprehensive income for the years ended 2017 and 2018, respectively.

(j) Accounts receivable

Accounts receivable are presented net of allowance for doubtful accounts. The Group uses specific identification in providing for bad debts when facts and circumstances indicate that collection is doubtful and based on factors listed in the following paragraph. If the financial conditions of its customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowance may be required.

The Company maintains an allowance for doubtful accounts which reflects its best estimate of amounts that potentially will not be collected. The Company determines the allowance for doubtful accounts on general basis taking into consideration various factors including but not limited to historical collection experience and credit-worthiness of the customers as well as the age of the individual receivables balance. Additionally, the Company makes specific bad debt provisions based on any specific knowledge the Company has acquired that might indicate that an account is uncollectible. The facts and circumstances of each account may require the Company to use substantial judgment in assessing its collectability.

(k) **Inventories**

Inventories, consisting of finished goods, work in process, raw materials and goods in transit, which are purchased from contract manufacturers and component suppliers. Inventories are stated at the lower of cost and net realizable value. Cost of inventory is determined using the weighted average cost method. Adjustments are recorded to write down the cost of inventory to the estimated net realizable value due to slow-moving and obsolete inventory, which is dependent upon factors such as historical and forecasted consumer demand, and promotional environment. The Group takes ownership, risks and rewards of the products purchased.

In accordance with ASC 855-10-55-1(b), the Group considers all data available, including future demand and subsequent changes in product prices that may provide additional information about the valuation of inventories at the balance sheet date.

(l) **Property, equipment and software**

Property, equipment and software are stated at historical cost less accumulated depreciation, amortization and impairment loss, if any. Depreciation and amortization is calculated using the straight-line method over the shorter of their estimated useful lives of these assets or the term of the related leases. The estimated useful lives are as follows:

Leasehold improvements	the shorter of their useful lives and the lease terms
Computers and electronic equipment	3 to 5 years
Mechanical equipment	5 years
Motor vehicles	5 years
Software	3 years

Expenditures for maintenance and repairs are expensed as incurred. The gain or loss on the disposal of property, equipment and software is the difference between the net sales proceeds and the carrying amount of the relevant assets and is recognized in the consolidated statements of comprehensive income.

Construction in progress represents assets under construction. Construction in progress is transferred to property, equipment and software and depreciation or amortization commences when an asset is ready for its intended use.

(m) **Impairment of long-lived assets**

For other long-lived assets including property, equipment and software and other non-current assets, the Group evaluates for impairment whenever events or changes (triggering events) indicate that the carrying amount of an asset may no longer be recoverable. The Group assesses the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the estimated undiscounted future cash flows expected to receive from use of the assets and their eventual disposition. Such assets are considered to be impaired if the sum of the expected undiscounted cash flows is less than the carrying amount of the assets. The impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets.

(n) **Contract liabilities**

Cash proceeds received from customers before product delivery is recognized as contract liabilities and is recognized as revenues when revenue recognition criteria are met.

The prepayments received from customers as of December 31, 2017 and 2018 was RMB202,477 and RMB6,904, respectively. The revenue recognized during the years ended December 31, 2017 and 2018 for such contract liability was RMB1,451 and RMB202,477, respectively.

(o) **Revenue recognition**

The Group has adopted the new revenue standard, ASC 606, *Revenue from Contracts with Customers* (Topic 606) for all periods presented. Consistent with the criteria of Topic 606, the Group recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to receive in exchange for those goods or services.

Products revenue

The Group generates revenue primarily from the sale of Bitcoin mining machines directly to a customer, such as a business or individual engaged in Bitcoin mining activities. As the Bitcoin price fluctuates, the Group may adjust selling price of Bitcoin mining machines on a weekly basis because customers are only willing to pay for machines based on their ability to recover their investment through mining Bitcoin over a relatively short period of time. The Group's sales arrangements usually require a full prepayment before the delivery of products. However, as the Bitcoin price experienced a significant downtrend during 2018, the Group started to offer credit sales to certain significant, long-standing customers in China. The payment terms under credit sales generally consist of 50% down payment and 50% subsequent payments over a period of 90 to 180 days. With the adoption of a more dynamic pricing strategy, the Group expects to accept a lower amount of consideration (as compared to fixed and promised consideration that is set out in the sales contracts) from its credit sales customers if the Bitcoin prices continue to decrease in the post-sale period; hence providing implicit price concession to these customers and the ultimate amount of price concessions to be provided to these credit sales customers is highly dependent on the changes of Bitcoin prices.

Revenues from product sales are recorded at the net sales price (transaction price), which includes an estimation of variable consideration which primarily results from implicit price concessions on credit sales. The amount of variable consideration is included in the transaction price to the extent it is not constrained and that it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period. Actual amounts of consideration ultimately received may differ from the estimates. If actual results in the future vary from estimates, the Group will adjust these estimates, which would affect revenue and earnings in the period such changes are known. With respect to the determination of variable consideration resulting from the amount of implicit price concession, since the Bitcoin market price is volatile and unpredictable and changes of Bitcoin price will greatly affect the implicit price concessions to be provided by the Group to its credit sales customers the Group historically has not been able to overcome the constraint on variable consideration at the time of product sale or at subsequent period-end dates until the Group has knowledge about the resolution of the uncertainty through payment by the customer. The Group uses all the subsequent information to the date of issuance of the consolidated financial statements to adjust the estimated variable consideration for the periods presented, representing updated information on the best estimate of the amount of transaction price that is probable of being received and therefore not constrained as of period end. The Group will continue to monitor and evaluate historical data and other factors in determining the total transaction price (including implicit price concessions) that can be recognized for product sales on credit. During the years ended December 31, 2017 and 2018, the Group recognized price concessions provided to its customers in the amounts of nil and RMB152,755, respectively.

The Group recognizes products revenue at a point in time based on management's evaluation of when the control of the products have been passed to customers. The transfer of control is considered complete when products have been picked up by or shipped to the Group's customers.

The Group offers a standard product warranty of not longer than six months that the product will operate under normal use. At the time revenue is recognized, an estimate of future warranty costs is recorded as a component of cost of revenues. The reserves established are regularly monitored based upon historical experience and any actual claims charged against the reserve. The amount of total warranty costs incurred was immaterial for the years ended December 31, 2017 and 2018, respectively.

Services revenue

The Company also generates a small portion of revenue from its maintenance services under separate contracts. Revenue from the maintenance service to the customer is recognized when the related services have been rendered to the customers.

(p) Value-added-tax ("VAT") recoverable and surcharges

Value added tax recoverable represent amounts paid by the Group for purchases. The surcharges (i.e., Urban construction and maintenance tax, educational surtax, local educational surtax), vary from 10% to 12% of the value-added-tax depending on the tax payer's location.

(q) Cost of revenues

Amounts recorded as cost of revenue relate to direct expenses incurred in order to generate revenue. Such costs are recorded as incurred. Cost of revenues consists of product costs, including costs of raw material, contract manufacturers for production, shipping and handling costs, manufacturing and tooling equipment depreciation, warehousing costs and slow-moving, obsolete inventories write-downs, prepayments write-down and tax surcharges.

(r) Research and development expenses

Research and development expenses consist primarily of salary and welfare for research and development personnel, consulting and contractor expenses, testing and tooling materials and other expenses in associated with research and development personnel. The Group recognizes research and development expenses as expense when incurred.

(s) Sales and marketing expenses

Sales and marketing expenses consist primarily of salary and welfare for sales and marketing personnel, promotion and marketing expenses and other expenses in associated with sales and marketing personnel.

Advertising expense are expensed as incurred and included in selling and marketing expenses. The advertising expenses were RMB535 and RMB2,124 for the years ended December 31, 2017 and 2018, respectively.

(t) General and administrative expenses

General and administrative expenses consist primarily of salary and welfare for general and administrative personnel, rental expenses and depreciation in associated with general and administrative personnel, allowance for doubtful receivables, entertainment expense, general office expense and professional service fees.

(u) **Government grants**

Government grants represent cash subsidies received from PRC government. Cash subsidies which have no defined rules and regulations to govern the criteria necessary for companies to enjoy the benefits are recognized as "Other (loss) income, net" when received. Total government grants received were RMB1,042 and RMB8,058 for the years ended December 31, 2017 and 2018, respectively.

(v) **VAT refunds**

In accordance with Caishui (2011) No. 100 issued by State Tax Bureau, Hangzhou Canaan is qualified as enterprise of selling self-developed software products and enjoying an tax refund for the excess of 3% of its actual tax burden after the VAT is levied at the 17% or 16% tax rate since April 2016. Tax refund is recognized as when received. Total VAT refunds received were RMB38,811 and RMB110,231 for the years ended December 31, 2017 and 2018, respectively.

(w) **Operating leases**

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Payments made under operating leases are charged to the consolidated statements of comprehensive income on a straight-line basis over the term of the lease. The Group had no capital leases for the years ended December 31, 2017 and 2018.

(x) **Employee social security and welfare benefits**

Employees of the Group in the PRC are entitled to staff welfare benefits including pension, work-related injury benefits, maternity insurance, medical insurance, unemployment benefit and housing fund plans through a PRC government-mandated multi-employer defined contribution plan. The Group is required to contribute to the plan based on certain percentages of the employees' salaries, up to a maximum amount specified by the local government.

The PRC government is responsible for the medical benefits and the pension liability to be paid to these employees and the Group's obligations are limited to the amounts contributed and no legal obligation beyond the contributions made. Employee social security and welfare benefits included as expenses in the consolidated statements of comprehensive income amounted to RMB8,874 and RMB20,618 for the years ended December 31, 2017 and 2018, respectively.

(y) **Income taxes**

The Group accounts for income taxes under the liability method. Under the liability method, deferred income tax assets and liabilities are determined based on the differences between the financial reporting and income tax bases of assets and liabilities and are measured using the tax income rates that will be in effect when the differences are expected to reverse. A valuation allowance is recorded if it is more likely than not that some portion or all of a deferred income tax assets will not be realized in the foreseeable future.

The Group evaluates its uncertain tax positions using the provisions of ASC 740-10, *Income Taxes*, which prescribes a recognition threshold that a tax position is required to meet before being recognized in the financial statements. The Group recognizes in the financial statements the benefit of a tax position which is "more likely than not" to be sustained under examination based solely on the technical merits of the position assuming a review by tax authorities having all relevant information. Tax positions that meet the recognition threshold are measured using a cumulative probability approach, at the largest amount of tax benefit that has a greater than fifty percent likelihood of being realized upon settlement. It is the Group's policy to recognize interest and penalties related to unrecognized tax benefits, if any, as a component of income tax expense.

(z) **Share-based compensation**

The Company grants restricted shares and share options to eligible employees and accounts for share-based compensation in accordance with ASC 718, *Compensation — Stock Compensation*.

Employees' share-based compensation awards are measured at the grant date fair value of the awards and recognized as expenses a) immediately at the grant date if no vesting conditions are required; or b) for share-based awards granted with only service conditions, using the graded vesting method, net of estimated forfeitures, over the vesting period; or c) for share-based awards granted with service conditions and the occurrence of an initial public offering ("IPO") as performance condition, cumulative share-based compensation expenses for the options that have satisfied the service condition should be recorded upon the completion of the IPO, using the graded vesting method; or d) for share-based awards with service conditions and other performance condition, using the graded vesting method, net of estimated pre-vesting forfeitures, over the vesting period.

A change in any of the terms or conditions of share-based awards is accounted for as a modification of the awards. The Group calculates incremental compensation expense of a modification as the excess of the fair value of the modified awards over the fair value of the original awards immediately before its terms are modified at the modification date. For vested awards, the Group recognizes incremental compensation cost in the period when the modification occurs. For awards not being fully vested, the Group recognizes the sum of the incremental compensation expense and the remaining unrecognized compensation expense for the original awards over the remaining requisite service period after modification.

Share-based compensation in relation to the restricted shares is measured based on the fair market value of the Group's ordinary shares at the grant date of the award. Prior to the listing, estimation of the fair value of the Group's ordinary shares involves significant assumptions that might not be observable in the market, and a number of complex and subjective variables, including discount rate, and subjective judgments regarding the Group's projected financial and operating results, its unique business risks, the liquidity of its ordinary shares and its operating history and prospects at the time the grants are made. Share-based compensation in relation to the share options is estimated using the Binomial Option Pricing Model. The determination of the fair value of share options is affected by the share price of the Group's ordinary shares as well as the assumptions regarding a number of complex and subjective variables, including the expected share price volatility, risk-free interest rate, exercise multiple and expected dividend yield. The fair value of these awards was determined with the assistance from an independent valuation firm.

In May 2017, the FASB issued ASU No. 2017-09 Compensation – Stock Compensation (Topic 718). The Board is issuing this Update to provide clarity and reduce both (1) diversity in practice and (2) cost and complexity when applying the guidance in Topic 718, Compensation – Stock Compensation, to a change to the terms or conditions of a share-based payment award. The amendments in this Update provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The amendments in this Update are effective for all entities for annual periods, and interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period, for (1) public business entities for reporting periods for which financial statements have not yet been issued and (2) all other entities for reporting periods for which financial statements have not yet been made available for issuance. The Company elected to early adopt this ASU for all the periods presented. The impact of this ASU to the consolidated financial statements is immaterial.

(aa) **Statutory reserves**

The Group's subsidiaries incorporated in the PRC are required on an annual basis to make appropriations of retained earnings set at certain percentage of after-tax profit determined in accordance with PRC accounting standards and regulations ("PRC GAAP").

Appropriation to the statutory general reserve should be at least 10% of the after tax net income determined in accordance with the legal requirements in the PRC until the reserve is equal to 50% of the entities' registered capital. The Group is not required to make appropriation to other reserve funds and the Group does not have any intentions to make appropriations to any other reserve funds.

The general reserve fund can only be used for specific purposes, such as offsetting the accumulated losses, enterprise expansion or increasing the registered capital. Appropriations to the general reserve funds are classified in the consolidated balance sheets as statutory reserves.

There are no legal requirements in the PRC to fund these reserves by transfer of cash to restricted accounts, and the Group has not done so.

Relevant laws and regulations permit payments of dividends by the PRC subsidiaries and affiliated companies only out of their retained earnings, if any, as determined in accordance with respective accounting standards and regulations. Accordingly, the above balances are not allowed to be transferred to the Company in terms of cash dividends, loans or advances.

The Group has made RMB22,732 and RMB68,501 appropriations to statutory reserve mainly for Hangzhou Canaan for the years ended December 31, 2017 and 2018, respectively.

(ab) **Earnings per share**

Basic earnings per share is computed by dividing net income attributable to holders of ordinary shares by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share is calculated by dividing net income attributable to ordinary shareholders as adjusted for the effect of dilutive ordinary equivalent shares, if any, by the weighted average number of ordinary and dilutive ordinary equivalents shares outstanding during the year. Dilutive equivalent shares are excluded from the computation of diluted earnings per share if their effects would be anti-dilutive. Ordinary share equivalents consist of the ordinary shares issuable in connection with the Group's ordinary shares issuable upon the conversion of the share-based awards, using the treasury stock method.

(ac) **Comprehensive income**

Comprehensive income is defined as the change in shareholders' equity of the Company during a period arising from transactions and other events and circumstances excluding transactions resulting from investments by shareholders and distributions to shareholders.

Comprehensive income is reported in the consolidated statements of comprehensive income. Accumulated other comprehensive loss of the Group include the foreign currency translation adjustments.

(ad) **Segment reporting**

Operating segments are defined as components of an enterprise engaging in businesses activities for which separate financial information is available that is regularly evaluated by the Group's chief operating decision makers in deciding how to allocate resources and assess performance. The Group's chief operating decision maker has been identified as the Chief Executive Officer, who reviews consolidated results including revenue, gross profit and operating

profit at a consolidated level only. The Group does not distinguish between markets for the purpose of making decisions about resources allocation and performance assessment. Hence, the Group has only one operating segment and one reportable segment.

The Group's long-lived assets are substantially located in the PRC.

The Group's revenue segregated by geographic region is as follows:

Geographic region	For the years ended December 31,	
	2017	2018
PRC	1,197,378	2,057,632
United States of America	46,355	284,965
Hong Kong	12,264	91,028
Other foreign countries	52,086	271,666
Total	1,308,083	2,705,291

(ae) Recently issued accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) ("ASU 2016-02"). Under this guidance, an entity is required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. This guidance offers specific accounting guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expenses for such lease generally on a straight-line basis over the lease term. The Group decides to make this election. The new leases standard also provides lessees with a practical expedient, by class of underlying asset, to not separate non-lease components from the associated lease component. If a lessee makes that accounting policy election, it is required to account for the non-lease components together with the associated lease component as a single lease component and to provide certain disclosures. The Group elects not to adopt this practical expedient. The ASU initially required a modified retrospective transition approach for existing leases, whereby the new leases standard will be applied to the earliest year presented. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842): Targeted Improvements ("ASU 2018-11"), which provides entities the option to initially apply ASU 2016-02 at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. ASU 2016-02 and ASU 2018-11 are effective for the annual reporting period beginning after December 15, 2018, including interim periods within that reporting period. The Group will adopt this guidance as of January 1, 2019 and utilize the alternative transition method through a cumulative-effect adjustment at the beginning of the first quarter of 2019. The Company estimates that approximately RMB48.9 million, and RMB48.0 million would be recognized as total right-of-use assets and total lease liabilities on the consolidated balance sheet as of January 1, 2019, respectively. Other than as disclosed above, the management does not expect the new standard to have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). This guidance requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. The measurement of expected credit losses is based on historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability. In November 2018, the FASB issued ASU 2018-19, Codification Improvements to Topic 326, Financial Instruments-Credit Losses ("ASU 2018-19"), which clarifies certain topics included within ASU 2016-13. ASU 2016-13 and ASU 2018-19 are effective for the annual reporting period beginning after December 15, 2019, including interim periods within that reporting period. The Group is currently evaluating the impact on our consolidated financial statements upon the adoption of this guidance.

In October 2018, the FASB issued ASU 2018-17, "Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities," which amends the guidance for determining whether a decision-making fee is a variable interest and requires organizations to consider indirect interests held through related parties under common control on a proportional basis rather than as the equivalent of a direct interest in its entirety. The standard is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the impact of this accounting standard update on its consolidated financial statements.

3. Risks and concentration

(a) Concentration of credit risk

Financial instruments that potentially expose the Group to concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments and accounts receivable. The Group places its cash and cash equivalents with financial institutions with high credit ratings and quality.

The Group conducts credit evaluations of customers, and generally does not require collateral or other security from its customers. The Group establishes an allowance for doubtful accounts primarily based upon the age of the receivables and factors surrounding the credit risk of specific customers.

Accounts receivable are unsecured and are derived from revenue earned through customers. The risk with respect to accounts receivable is mitigated by credit evaluations performed on them.

Accounts receivable concentration of credit risk is as below:

	As of December 31,	
	2017	2018
Customer A	*	29%
Customer B	*	16%
Customer C (Note a)	98%	16%
Customer D	*	11%

* Less than 10%

Note a: As of December 31, 2017, the balance of accounts receivable due from Customer C was amounting to RMB1,283.

Customers which contributed more than 10% of total revenue are as below:

	For the years ended December 31,	
	2017	2018
Customer E	*	14%
Customer F	11%	*

* Less than 10%

(b) **Supplier concentration**

The Group currently purchases all of its integrated circuits, an important component of its products, from Taiwan Semiconductor Manufacturing Company Limited and its subsidiaries ("TSMC"). Although only a limited number of manufacturers for such integrated circuits are available, management believes that other suppliers could provide similar integrated circuits on comparable terms. A change in suppliers, however, could cause a delay in manufacturing and a possible loss of sales, which would affect operating results adversely.

4. Cash and cash equivalents

Cash and cash equivalents represent cash on hand and demand deposits placed with banks or other financial institutions, which are unrestricted as to withdrawal or use. The following table sets forth a breakdown of cash and cash equivalents by currency denomination and jurisdiction as of December 31, 2017 and 2018:

	RMB	RMB equivalent (US$)		RMB equivalent (HK$)	Total in RMB
	China	Hong Kong	China	Hong Kong	
December 31, 2017	172,634	—	3,866	—	176,500
December 31, 2018	169,484	16,129	63,254	10,073	258,940

5. Accounts receivable

	As of December 31,	
	2017	2018
Accounts receivable, gross	7,239	27,467
Less: allowance for doubtful accounts	(5,932)	(3,780)
Accounts receivable	1,307	23,687

The following table presents movement of the allowance for doubtful accounts:

	For the years ended December 31,	
	2017	2018
Balance at the beginning of the year	(6,474)	(5,932)
Provisions for doubtful receivables	(102)	—
Collection of amounts previously in dispute	644	2,152
Balance at the end of the year	(5,932)	(3,780)

6. Inventories

Inventories consist of the following:

	As of December 31,	
	2017	2018
Finished goods	46,674	240,774
Work in process	165,998	193,012
Raw materials	47,175	150,617
Goods in transit	–	1,269
Total	259,847	585,672

During the years ended December 31, 2017 and 2018, the Group recorded write-down of nil and RMB427,163 for the obsolete inventories in cost of revenues, respectively.

7. Prepayments and other assets

The current and non-current portions of prepayments and other assets consist of the following:

	As of December 31,	
	2017	2018
Prepayments and other current assets		
VAT recoverable	4,139	101,778
Prepayments to vendors (Note a)	617,678	74,277
Interest receivable	–	3,068
VAT refund for export sales (Note b)	11,608	2,274
Rental and other deposits	1,083	1,010
Staff advances	705	525
Others	1,181	3,805
	636,394	186,737
Non-current assets		
Rental and other deposits	4,196	6,340

Note a: Prepayments to vendors mainly represent prepayments made to a third-party supplier TSMC for foundry service. The Group also records a write-down for the prepayment to TSMC when the Group believes that the net realizable value (being the estimated selling price of final products, less the costs of completion and selling expenses) is less than carrying amount. During the years ended December 31, 2017 and 2018, the Group recorded write-down of nil and RMB358,842 for the prepayment to TSMC in cost of revenues, respectively.

Note b: Hangzhou Ruihong Technology Co., Ltd. and Canaan Convey Co., Ltd. are entitled to VAT refund for their export sales.

8. Property, equipment and software

Property, equipment and software consist of the following:

	As of December 31,	
	2017	2018
Cost:		
Leasehold improvements	10,238	24,324
Computers and electronic equipment	13,917	15,696
Motor vehicles	1,739	1,739
Mechanical equipment	454	1,164
Construction in progress	–	369
Software	306	306

Total cost	26,654	43,598
Less: Accumulated depreciation and amortization	(8,250)	(15,672)
Property, equipment and software, net	18,404	27,926

Depreciation and amortization expenses recognized for the years ended December 31, 2017 and 2018 are summarized as follows:

	For the years ended December 31,	
	2017	2018
Cost of revenues	64	1,260
Research and development expenses	3,774	5,197
Sales and marketing expenses	121	21
General and administrative expenses	5,124	6,667
Total	9,083	13,145

9. Short-term debts

	As of December 31,	
	2017	2018
Short-term bank loans (Note a)	–	246,368
Bridge loans in connection with Reorganization (Note b)	–	802,643
	–	1,049,011

Note a: During the year ended December 31, 2018, the Group entered into certain short-term loan agreements with various banks with aggregated principal amount of RMB500,000 and the interest rates range from 4.35% to 6.09% per annum. As of December 31, 2018, the aggregated outstanding principal amounts under these agreements were RMB250,000 bearing interest rates ranging from 4.35% to 5.22% per annum.

Note b: As disclosed in Note 1(b) and in connection with the Group's Reorganization, on March 24, 2018, Canaan HK entered into a facility agreement with CMBI Finance amounting to HK$890,000. Canaan HK drew down HK$885,000 under this facility on March 28, 2018. The borrowing maturity period was 12 months and the interest rate was calculated and payable on monthly basis, ranging from 0.5% to 1.25% per month. The equity interest of Hangzhou Canaan held by Canaan HK was pledged to CMBI Finance as collateral for the borrowing. The borrowing was also guaranteed jointly by Co-Founders and their spouses. Hangzhou Canaan also placed a deposit of RMB300 million to CMB International Financial Limited (Shenzhen) as a collateral of the borrowing. In April 2018, Canaan HK early repaid the outstanding borrowing in advance through another facility loan with China Merchants Bank Co., Ltd., Hong Kong Branch ("CMB HK"), and above mentioned collateral and guarantee were released accordingly.

On April 25, 2018, Canaan HK entered into another facility agreement with CMB HK as facility agent and CMBI Finance as security agent, amounting to HK$930,000. Canaan HK drew down HK$921,000 under this facility. CMB HK repaid the borrowing of HK$885,000 to CMBI Finance on behalf of Canaan HK and Canaan HK received the additional borrowing amounting of approximately HK$29,083 from CMB HK. The borrowing has maturity period of earlier of 12 months period and the completion of IPO of the Company. The interest rate is Hongkong InterBank Offered Rate plus 1.3% per annum. The equity interest of Hangzhou Canaan held by Canaan HK was pledged to CMB HK as collateral for the borrowing. The borrowing is also secured by deposits in China Merchants Bank amounting to RMB286,270 placed by Hangzhou Canaan which was recorded as restricted cash as of December 31, 2018 and RMB271,940 and RMB418,790 placed by the Company's shareholders, Hangzhou Shuxin Investment LLP and Hangzhou Canaan Chaoxin Investment Management LLP ("Canaan Chaoxin"), respectively. The pledges and deposits will be released when the borrowing is fully repaid. In addition, Hangzhou Canaan and Canaan HK paid a guarantee fee of 1% per annum and 0.75% per quarter to secure the borrowing, respectively. Canaan HK repaid the outstanding loans in March 2019, and above mentioned collateral and guarantee were released accordingly.

The weighted average interest rate for the borrowings was approximately 7.14% per annum for the year ended December 31, 2018.

10. Accrued liabilities and other current liabilities

	As of December 31,	
	2017	2018
Professional service fee accrual	–	23,360
Salary and welfare payable	13,533	19,852
Guarantee fee payable	–	6,120
VAT received from customers related to contract liabilities	36,832	3,890
Other tax payables	17,459	1,403
Interest payable	–	206
Others	1,381	3,121

Total	69,205	57,952

11. Ordinary share

On March 23, 2018, Canaan Inc. was incorporated as an exempted company with limited liability company with authorized share capital of US$50,000 divided into 500,000,000 shares with par value US$0.0001 each. In June 2018, the authorized share capital of US$50,000, which represented 500,000,000 issued shares, was subdivided into 1,000,000,000,000 shares of a par value of US$0.00000005 each. As of December 31, 2018, the authorized ordinary shares are 1,000,000,000,000 shares, of which 2,000,000,000 shares were issued and 1,948,376,000 shares were outstanding. In addition, the number of ordinary shares outstanding have been adjusted retroactively for the 1-for-2,000 shares subdivision for all periods presented.

In April 2018, the Company established a trust to hold 51,624,000 of the Company's issued ordinary shares. These ordinary shares were contributed by the Co-Founders and employees and held in a trust (the "Trust") for the benefit of the employees who are under the 2018 Equity Incentive Plan (Note 12). The ordinary shares held by the Trust are accounted for as treasury stocks of the Company. The trust does not hold any other assets or liabilities as of December 31, 2018, nor earn any income nor incur any expenses for the year ended December 31, 2018.

The proceeds of the subscription capital from shareholders were remained outstanding and such amount was presented as subscriptions receivable, a contra-equity balance on the consolidated balance sheets as of December 31, 2017 and 2018.

12. Share-based compensation

On October 8, 2016, Canaan Chaoxin, which was a holding company controlled by the controlling shareholders, established 2016 Equity Incentive Plan (the "2016 Plan") with the purpose of which is to provide share options for employees contributing to the Company. On October 8, 2016, Canaan Chaoxin granted 39,600,000 share options to the Company's employees at an exercise price of RMB0.023 per share under the 2016 Plan. The vesting period was from October 2016 to May 2017 and the exercise period was from June 2017 to July 2017.

On November 22, 2017, Canaan Chaoxin approved the establishment of 2017 Equity Incentive Plan (the "2017 Plan") with the purpose of which is to provide restricted share units ("RSUs") to its employees. In November 2017, Canaan Chaoxin granted 71,200,000 RSUs to the Company's employees at an exercise price of RMB0.015 per share under the 2017 Plan, among which, 39,170,000 RSUs are vested immediately on the grant day, 30,030,000 RSUs contain two or four service years of the employees and the remaining 2,000,000 RSUs shall be vested upon IPO.

As part of the Reorganization in 2018, the Board of Directors of the Company approved the 2018 Equity Incentive Plan (the "2018 Plan") on April 25, 2018, which assumed Canaan Chaoxin's obligations and duties under the share awards granted by Canaan Chaoxin. As a result, the unvested RSUs granted by Canaan Chaoxin under the 2017 Plan were replaced with RSUs of the Company. Such new RSUs replaced the RSUs granted under Canaan Chaoxin's existing RSUs in its entirety by exchanging of the RSU granted by Canaan Chaoxin for the RSU of the Company while maintaining their respective terms and vesting schedules unchanged except for the addition of performance condition of IPO. This resulted in a probable to improbable (Type II) modification, and no incremental fair value would be recognized unless and until vesting of the award under the modified conditions becomes probable. Since this modification was not beneficial to its employees, no incremental value was resulting from the modification. The Group recognized compensation cost equal to the award's original grant-date fair value when the original vesting conditions are satisfied, regardless of whether the modified IPO condition is satisfied.

On the same day, some employees who are under the 2016 Plan entered into share award replacement agreement (the "Replacement Agreement") with the Company under which a total of 19,594,000 ordinary shares of the Company held by the employees became restricted and will be vested upon IPO of the Company. In the event that the employees voluntarily and unilaterally terminates his employment/service contract with any group entities or his employment, the unvested restricted shares shall automatically lapse. Deferred share-based compensation was measured for the restricted shares using the estimated fair value of the Company's ordinary shares at the date of imposition of the restriction in April 2018, and the compensation cost for the restricted shares will be recognized upon occurrence of IPO.

Share-based compensation expense related to the share awards granted to the employees amounted to approximately RMB95,525 and RMB18,586 for the years ended December 31, 2017 and 2018, respectively.

(a) Stock options

The following table summarizes the share option activity for the years ended December 31, 2017 and 2018:

	Number of options	Weighted averageexerciseprice	Weighted averageremainingcontractuallife	Aggregate intrinsicvalue	Weighted averagegrant datefair value
		RMB	In Months	RMB	RMB
Outstanding at January 1, 2017	39,600,000	0.023	7 months	51,527	1.30
Exercised	(39,600,000)	0.023	–	–	–
Outstanding at December 31, 2017 and 2018	–	–	–	–	–

As of December 31, 2018, there was no unrecognized share-based compensation expenses related to share options granted to the employees.

(b) Restricted share units

The following table summarizes the RSUs activity for the years ended December 31, 2017 and 2018:

	Number of shares	Weighted average grant date fair value
		RMB
Outstanding at January 1, 2017	—	—
Granted	71,200,000	1.56
Vested	(39,170,000)	1.57
Outstanding at December 31, 2017 and 2018	32,030,000	1.55

Based on fair value of the underlying ordinary share, the Group has used income approach involving applying appropriate discount rate to the estimated cash flows that are based on earning forecast and discount for lack of marketability to determine the fair value of the RSUs as of the grant date with assistance from an independent valuation firm.

As of December 31, 2018, there was RMB24,966 unrecognized compensation expense related to RSUs, which is expected to be recognized over a weighted-average period of 2.75 years. And as of December 31, 2018, there was RMB3,873 unrecognized compensation expense related to RSUs, which is expected to be recognized upon occurrence of IPO.

(c) *Restricted ordinary shares*

The following table summarizes the restricted ordinary shares activity under Replacement Agreement for the year ended December 31, 2018:

	Number of shares	Weighted average grant date fair value
		RMB
Outstanding at January 1, 2018	—	—
Granted	19,594,000	2.56
Forfeited	(2,000,000)	2.56
Outstanding at December 31, 2018	17,594,000	2.56

The Group used income approach involving applying appropriate discount rate to the estimated cash flows that are based on earnings forecast and discount for lack of marketability to determine the fair value of the restricted ordinary share at the date of imposition in April 2018 with assistance from an independent valuation firm.

Upon occurrence of IPO, the entire share based compensation expenses out of RMB45.1 million as of December 31, 2018 will be expensed immediately when such IPO happens.

13. Other (loss) income, net

	For the Years Ended December 31,	
	2017	**2018**
Government grants	1,042	8,058
Loss on disposal of property, equipment and software	(1,620)	(2,033)
Loss on disposal of subsidiaries (Note a)	(579)	—
Others	33	(2,187)
Total	(1,124)	3,838

Note a: In October 2017, Hangzhou Canaan entered into a share transfer agreement to dispose of its 100% equity interest in its wholly owned subsidiaries Canaan Creative Hong Kong Co., Ltd. and Canaan Creative AB to BUMHUS OÜ, a company controlled by Mr. Liu, a principal shareholder of the Group, at the cash consideration of US$760 (equivalent to approximately RMB4,966). A disposal loss of approximately RMB579 was recognized for the year ended December 31, 2017.

The following table summarizes the consideration received from such disposals, and the carrying value of assets and liabilities of these subsidiaries at the disposal date.

Consideration – cash consideration	4,966
Recognized amounts of identifiable assets liabilities:	
Cash and cash equivalents	6,409
Accounts receivable	7
Inventories	8,544
Prepayments and other current assets	2,554

Property, equipment and software	1,770
Accounts payable	(10,549)
Accrued liabilities and other current liabilities	(3,190)
Total net assets	5,545
Loss on disposal of subsidiaries	(579)

The Group received the cash consideration of RMB4,966 and accounts receivable of RMB10,549 in the year ended December 31, 2018.

14. Income Taxes

(a) Cayman Islands

Under the current tax laws of Cayman Islands, the Company is not subject to income, corporation or capital gains tax, and no withholding tax is imposed upon the payment of dividends.

(b) Hong Kong Profits Tax

One of the Company's subsidiary incorporated in Hong Kong is subject to Hong Kong profits tax rate of 16.5% on its estimated assessable profit for the years ended December 31, 2017 and 2018. Dividends income received from subsidiaries in China are not subject to Hong Kong profits tax.

(c) PRC Enterprise Income Tax ("EIT")

On March 16, 2007, the National People's Congress of the PRC enacted an Enterprise Income Tax Law ("EIT Law"), under which Foreign Investment Enterprises ("FIEs") and domestic companies would be subject to EIT at a uniform rate of 25%. The EIT law became effective on January 1, 2008.

Canaan Creative obtained its High and New Technology Enterprises ("HNTE") certificate with a valid period of three years in 2016. Therefore, Canaan Creative is eligible to enjoy a preferential tax rate of 15% from 2017 to 2018 to the extent it has taxable income under the EIT Law, as long as it maintains the HNTE qualification and duly conducts relevant EIT filing procedures with the relevant tax authority.

In accordance with Caishui (2012) No. 27 issued by the State Tax Bureau on April 20, 2012, Hangzhou Canaan is qualified as an integrated circuit enterprise and enjoying a 5-year tax holiday (two year full exemption followed by three year half reduction) beginning from 2016 after utilizing all prior years' tax losses. Therefore, Hangzhou Canaan is eligible to enjoy a preferential tax rate of 0% from 2016 to 2017 and 12.5% from 2018 to 2020.

In addition, in accordance with Caishui (2012) No. 27 issued by the State Tax Bureau on April 20, 2012, Hangzhou Canaan is qualified as a key software production enterprise and can enjoy a preferential tax of 10% for the year that the company does not enjoy a full tax exemption. Therefore, Hangzhou Canaan enjoyed a preferential tax rate of 10% for the year ended December 31, 2018.

The Group's other PRC subsidiaries are subject to the statutory income tax rate of 25%.

(d) PRC Withholding Income Tax on Dividends

The EIT Law also provides that an enterprise established under the laws of a foreign country or region but whose "de facto management body" is located in the PRC be treated as a resident enterprise for PRC tax purposes and consequently be subject to the PRC income tax at the rate of 25% for its global income. The implementing Rules of the EIT Law merely define the location of the "de facto management body" as "the place where the exercising, in substance, of the overall management and control of the production and business operation, personnel, accounting, properties, etc., of a non-PRC company is located."

The EIT Law also imposes a withholding income tax of 10% on dividends distributed by a FIE to its immediate holding company outside of China, if such immediate holding company is considered as a non-resident enterprise without any establishment or place within China or if the received dividends have no connection with the establishment or place of such immediate holding company within China, unless such immediate holding company's jurisdiction of incorporation has a tax treaty with China that provides for a different withholding arrangement. The Cayman Islands, where the Company incorporated, does not have such tax treaty with China. According to the arrangement between Mainland China and Hong Kong Special Administrative Region on the Avoidance of Double Taxation and Prevention of Fiscal Evasion in August 2006, dividends paid by a FIE in China to its immediate holding company in Hong Kong will be subject to withholding tax at a rate of no more than 5% if the immediate holding company in Hong Kong owns directly at least 25% of the shares of the FIE and could be recognized as a Beneficial Owner of the dividend from PRC tax perspective.

As of December 31, 2017 and 2018, the Company did not record any withholding tax on the retained earnings of its subsidiaries in the PRC as the Group does not have any plan to require its PRC subsidiaries to distribute their retained earnings and intends to retain them to operate and expand its business in the PRC.

A reconciliation between the effective income tax rate and the PRC statutory income tax rate is as follows:

	For the Years Ended December 31,	
	2017	2018
PRC statutory income tax rates	25.0%	25.0%
Permanent book – tax difference	5.0%	(5.8)%

Different tax rates in other jurisdictions	—	1.7%
Effect of tax holiday	(23.7)%	(41.5)%
Change in valuation allowance	0.0%	59.5%
Total	6.3%	38.9%
Effects of tax holidays entitled by the PRC subsidiaries on basic earnings per share (RMB cent per share)	4.82	4.23

Composition of income tax expense The current and deferred portions of income tax expense included in the consolidated statements of comprehensive income are as follows:

	For the Years Ended December 31,	
	2017	**2018**
Current income tax expense	25,163	76,748
Deferred tax (benefit) expense	(10)	1,062
Income tax expense	25,153	77,810

Deferred tax assets and liabilities Deferred taxes were measured using the enacted tax rates for the periods in which they are expected to be reversed. The tax effects of temporary differences that give rise to the deferred tax asset balances as of December 31, 2017 and 2018 are as follows:

	As of December 31,	
	2017	**2018**
Deferred tax assets		
Tax losses carried forward	4	46,807
Allowance for doubtful accounts	1,059	567
Inventories and prepayments write-down	—	107,239
Unrealized loss from intragroup sale	—	(35,548)
Subtotal	1,063	119,065
Less: Valuation allowance	(1)	(119,065)
Total of deferred tax assets	1,062	—

As of December 31, 2017 and 2018, the Company had tax loss carry forwards of approximately RMB18 and RMB201,001, which mainly arose from its PRC subsidiaries and to a less extent from its HK subsidiary. The carryforwards period for net operating losses under the EIT Law is five years. The net operating loss carryforwards will expire in varying amounts between 2022 and 2023. Other than the expiration, there are no other limitations or restrictions upon the Group's ability to use these operating loss carryforwards.

Valuation allowance is provided against deferred tax assets when the Group determines that it is more likely than not that the deferred tax assets will not be utilized in the future. In making such determination, the Group considered factors including future taxable income exclusive of reversing temporary differences and tax loss carry forwards. Valuation allowance was provided for tax loss carry forward because it was more likely than not that such deferred tax assets will not be realized due to lack of profitable history to support the Group's estimate of its future taxable income. If events occur in the future that allow the Group to realize part or all of its deferred income tax, an adjustment to the valuation allowances will result in a decrease in tax expense when those events occur.

As of December 31, 2017 and 2018, valuation allowances of RMB1 and RMB119,065 were provided because it was more likely than not that the Group will not be able to utilize certain tax losses carry forwards and other deferred tax assets generated by its subsidiaries. If events occur in the future that allow the Group to realize more of its deferred tax assets than the presently recorded amount, an adjustment to the valuation allowances will increase income when those events occur.

Movement of valuation allowance is as follows:

	For the Years Ended December 31,	
	2017	**2018**
Beginning balance	—	1
Additions	1	119,064
Ending balance	1	119,065

The Group evaluates each uncertain tax position (including the potential application of interest and penalties) based on the technical merits, and measure the unrecognized benefits associated with the tax positions. As of December 31, 2017 and 2018, the Group did not have any significant unrecognized uncertain tax positions.

15. Related party transactions

For the years ended December 31, 2017 and 2018, the related party transactions are as follows:

	For the Years Ended December 31,	
	2017	2018
Transaction amount with related parties		
Service fee charged by a related party	110	–
Disposal of subsidiaries (Note 13)	15,515	–
Key management's advance	–	68

As of December 31, 2017 and 2018, the related party balances are as follows:

	As of December 31,	
	2017	2018
Balance amount with related parties		
Amounts due from related parties	15,515	68

16. Basic and diluted net earnings per share

Basic and diluted earnings per share have been calculated in accordance with ASC 260 on computation of earnings per share for the years ended December 31, 2017 and 2018 as follows:

	For the Years Ended December 31,	
	2017	2018
Basic net earnings per share calculation		
Numerator:		
Net income	375,816	122,432
Denominator:		
Weighted-average ordinary shares outstanding	1,971,589,429	1,964,499,660
Basic net earnings per share (RMB cent per share)	19.06	6.23

	For the Years Ended December 31,	
	2017	2018
Diluted net earnings per share calculation		
Numerator:		
Net income	375,816	122,432
Denominator:		
Weighted-average ordinary shares outstanding	1,971,589,429	1,964,499,660
Dilutive effects of RSUs	–	13,661,413
Weighted-average number of shares used in calculating diluted net earnings per share	1,971,589,429	1,978,161,073
Diluted net earnings per share (RMB cent per share)	19.06	6.19

For the year ended December 31, 2018, the Company has the dilutive potential ordinary shares of RSUs and restricted ordinary shares. RSUs and restricted ordinary shares which cannot be exercised until the Company completes its IPO are not included in the computation of diluted earnings per shares as such contingent event had not taken place.

17. Commitments and contingencies

(a) Operating lease commitments

The Group leases facilities under non-cancellable operating leases expiring on different dates. The terms of substantially all of these leases are four years or less. Payments under operating leases are expensed on a straight-line basis over the periods of the respective leases.

Total office rental expenses under all operating leases was RMB8,167 and RMB18,340 for the years ended December 31, 2017 and 2018, respectively.

As of December 31, 2018, future minimum payments under non-cancellable operating leases for office rental consist of the following:

	RMB	US$ (Note 2(e))
Years Ending December 31,		
2019	16,861	2,456
2020	17,208	2,507
2021	17,182	2,503
2022	4,309	628
Total	55,560	8,094

(b) Capital Commitments

As of December 31, 2018, the Company has capital commitment of RMB665 related to purchase of software.

(c) Litigation

In the ordinary course of the business, the Group is subject to periodic legal or administrative proceedings. As of December 31, 2018, the Group is not a party to any legal or administrative proceedings which will have a material adverse effect on the Group's financial position, results of operations and cash flows.

The Company is and, from time to time, may in the future become, involved in other legal proceedings in the ordinary course of business. The Company currently believes that the outcome of any of these existing legal proceedings, including the aforementioned cases, either individually or in the aggregate, will not have a material impact on the operating results, financial condition or cash flows of the Company. With respect to existing legal proceedings, the Company has either determined that the existence of a material loss is not reasonably possible or that it is unable to estimate a reasonably possible loss or range of loss. The Company may incur substantial legal fees, which are expensed as incurred, in defending against these legal proceedings.

18. Subsequent events

The Group evaluated subsequent events through July 23, 2019.

In February and June 2019, the Company issued 222,222,222 ordinary shares in aggregate to existing shareholders at a price of US$0.45 per share for a total cash consideration of US$100 million. The Company received substantially all the considerations in February 2019.

Subsequent to December 31, 2018 and through the date of these consolidated financial statements, the Co-Founders and certain other shareholders transferred 233,217,776 ordinary shares in aggregate to certain other shareholders of the Company (some also being the employees of the Company) and also two new investors.

Dual-class structure of ordinary shares (Unaudited)

On October 4, 2019, the Company's board of directors and shareholders have approved that, immediately prior to the completion of the IPO, the Company's outstanding share capital will be re-designated into Class A ordinary shares and Class B ordinary shares. Holders of Class A ordinary shares and Class B ordinary shares have the same rights except for voting and conversion rights. Each Class A ordinary share is entitled to one vote and each Class B ordinary share is entitled to 15 votes and is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances. Nangeng Zhang, the Company's Chairman and Chief Executive Officer, will hold 100% of the Company's then issued 356,624,444 Class B ordinary shares.

19. Restricted net assets

Relevant PRC laws and regulations permit payments of dividends by the Group's subsidiary incorporated in the PRC only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. In addition, the Group's subsidiary in the PRC are required to annually appropriate 10% of their net after-tax income to the statutory general reserve fund prior to payment of any dividends, unless such reserve funds have reached 50% of their respective registered capital. As a result of these and other restrictions under PRC laws and regulations, the Group's subsidiary incorporated in the PRC are restricted in their ability to transfer a portion of their net assets to the Company either in the form of dividends, loans or advances. There are no significant differences between US GAAP and PRC accounting standards in connection with the reported net assets of the legally owned subsidiary in the PRC. Even though the Company currently does not require any such dividends, loans or advances from the PRC entities for working capital and other funding purposes, the Company may in the future require additional cash resources from them due to changes in business conditions, to fund future acquisitions and development, or merely to declare and pay dividends or distributions to our shareholders. Except for the above, there is no other restriction on use of proceeds generated by the Group's subsidiary to satisfy any obligations of the Company.

As of December 31, 2018, the total restricted net assets of the Company's subsidiaries incorporated in PRC and subjected to restriction amounted to approximately RMB486,438. Even though the Company currently does not require any such dividends, loans or advances from the PRC entities for working capital and other funding purposes, the Company may in the future require additional cash resources from them due to changes in business conditions, to fund future acquisitions and development, or merely to declare and pay dividends or distributions to its shareholders. There is no other restriction on the use of proceeds generated by the Company's subsidiaries to satisfy any obligations of the Company.

20. Condensed financial information of the parent company

Rules 12-04(a) and 4-08(e)(3) of Regulation S-X require condensed financial information as to the financial position, cash flows and results of operations of a parent company as of and for the same periods for which the audited consolidated financial statements have been presented when the restricted net assets of the consolidated and unconsolidated subsidiaries together exceed 25% of consolidated net assets as of the end of the most recently completed fiscal year.

The following condensed financial statements of the Parent Company have been prepared using the same accounting policies as set out in the Company's consolidated financial statements except that the Parent Company used the equity method to account for its investment in its subsidiaries. Such investment is presented on the separate condensed balance sheets of the Parent Company as "Receivables from subsidiaries". The Parent Company, its subsidiaries were included in the consolidated financial statements whereby the inter-company balances and transactions were eliminated upon consolidation. The Parent Company's share of loss from its subsidiaries is reported as "share of loss from subsidiaries" in the condensed financial statements.

The Parent Company is a Cayman Islands company and, therefore, is not subjected to income taxes for all years presented. The footnote disclosures contain supplemental information relating to the operations of the Company and, as such, these statements should be read in conjunction with the notes to the consolidated financial statements of the Company. Certain information and footnote disclosures normally included in financial statements prepared in accordance with US GAAP have been condensed or omitted.

As of December 31, 2018, there were no material commitments or contingencies, significant provisions for long-term obligations or guarantees of the Company, except for those which have been separately disclosed in the consolidated financial statements, if any.

As the Group's business was operated through Hangzhou Canaan prior to the Parent Company being incorporated in 2018, no Parent Company financial information of 2017 is presented. The consolidated financial statements have been prepared as if the equity structure of the Parent Company had been in existence throughout the periods, but 100% of consolidated net assets and all of results of operations for the year ended December 31, 2017 were restricted.

Condensed Financial Information of the Parent Company

Condensed Balance Sheet

	As of December 31,	
	2018	
	RMB	US$ (Note2(e))
Assets		
Current assets:		
Receivables from subsidiaries	240,978	35,102

Total current assets	240,978	35,102
Total assets	240,978	35,102

Liabilities and Shareholders' Equity

Total liabilities	–	–
Shareholders' equity:		
Ordinary shares (US$0.00000005 par value; 1,000,000,000,000 shares authorized, 2,000,000,000 shares issued and 1,948,376,000 shares outstanding as of December 31, 2018)	1	–
Subscriptions receivable from shareholders	(1)	–
Treasury stocks (US$0.00000005 par value; 51,624,000 shares as of December 31, 2018)	–	–
Additional paid-in capital	154,970	22,574
Statutory reserves	97,307	14,174
Accumulated other comprehensive loss	(65,230)	(9,502)
Retained earnings	53,931	7,856
Total shareholders' equity	240,978	35,102
Total liabilities and shareholders' equity	240,978	35,102

Condensed Statement of Comprehensive Loss

	For the period from the inception to December 31, 2018	
	RMB	**US$ (Note 2(e))**
Operating expenses:		
Research and development expenses	(7,208)	(1,050)
Sales and marketing expenses	(797)	(116)
General and administrative expenses	(5,850)	(852)
Loss from operations	(13,855)	(2,018)
Share of loss from subsidiaries	(526,370)	(76,674)
Net loss	(540,225)	(78,692)
Foreign currency translation adjustment, net of nil tax	(65,230)	(9,502)
Total comprehensive loss	(605,455)	(88,194)

Condensed Statement of Cash Flows

	For the period from the inception to December 31, 2018	
	RMB	**US$ (Note2(e))**
Cash flows from operating activities	–	–

Cash flows from investing activities	–	–	
Cash flows from financing activities	–	–	
Effect of exchange rate changes on cash	–	–	
Net increase in cash and cash equivalents	–	–	
Cash and cash equivalents, beginning of year	–	–	
Cash and cash equivalents, end of year	–	–	

Unaudited Interim Condensed Consolidated Balance Sheets as of December 31, 2018 and June 30, 2019

CANAAN INC.

Unaudited Interim Condensed Consolidated Balance Sheets

As of December 31, 2018 and June 30, 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		As of		
	Note	December 31, 2018	June 30, 2019	
		RMB	RMB	US$ (Note 2(e))
Assets				
Current assets:				
Cash and cash equivalents	4	258,940	270,439	39,394
Restricted cash		286,270	–	–
Short-term investments		–	110,541	16,102
Accounts receivable	5	23,687	20,012	2,915
Inventories	6	585,672	419,797	61,150
Prepayments and other current assets	7	186,737	532,879	77,623
Income tax receivable		27,054	29,955	4,363
Amounts due from a related party	15	68	–	–
Receivable for issuance of ordinary shares	12	–	1,526	222
Total current assets		1,368,428	1,385,149	201,769
Non-current assets:				
Property, equipment and software	8	27,926	23,866	3,476
Other non-current assets	7	6,340	6,645	968
Right-of-use assets, net	9	–	28,594	4,165
Total non-current assets		34,266	59,105	8,609
Total assets		1,402,694	1,444,254	210,378
Liabilities, and Shareholders' Equity				
Current liabilities:				
Short-term debts	10	1,049,011	197,231	28,730

Accounts payable		47,240	62,495	9,103
Contract liabilities	2(i)	6,904	280,309	40,832
Income tax payable		609	–	–
Accrued liabilities and other current liabilities	11	57,952	58,730	8,555
Lease liabilities, current	9	–	9,767	1,423
Total current liabilities		1,161,716	608,532	88,643
Non-current liabilities:				
Lease liabilities, non-current	9	–	18,657	2,718
Total liabilities		1,161,716	627,189	91,361
Commitments and contingencies (Notes 17)				

UNAUDITED INTERIM CONDENSED CONSOLIDATED BALANCE SHEETS (Continued)

As of December 31, 2018 and June 30, 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		As of		
	Note	December 31, 2018	June 30, 2019	
		RMB	RMB	US$ (Note 2(e))
Shareholders' equity:				
Ordinary shares (US$0.00000005 par value; 1,000,000,000,000 shares authorized, 2,000,000,000 and 2,222,222,222 shares issued, 1,948,376,000 and 2,170,195,065 shares outstanding as of December 31, 2018 and June 30 2019, respectively)	12	1	1	–
Subscriptions receivable from shareholders	12	(1)	(1)	–
Treasury stocks (US$0.00000005 par value; 51,624,000 and 52,027,157 shares as of December 31, 2018 and June 30, 2019, respectively)	12	–	–	–
Additional paid-in capital		154,970	1,045,535	152,299
Statutory reserves		97,307	97,307	14,174
Accumulated other comprehensive loss		(65,230)	(48,784)	(7,106)
Retained earnings/(accumulated deficit)		53,931	(276,993)	(40,350)
Total shareholders' equity		240,978	817,065	119,017
Total liabilities and shareholders' equity		1,402,694	1,444,254	210,378

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

Unaudited Interim Condensed Consolidated Statements of Comprehensive Income (Loss)

For the Six Months Ended June 30, 2018 and 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

		Six Months Ended June 30,	
	Note	2018	2019

		RMB	RMB	US$ (Note 2(e))
Net revenues				
Products revenue		1,941,661	287,640	41,899
Service revenue		5,265	390	57
Other revenues		166	734	107
Total net revenues		1,947,092	288,764	42,063
Cost of revenues		(1,499,396)	(277,548)	(40,429)
Gross profit		447,696	11,216	1,634
Operating expenses:				
Research and development expenses		(70,836)	(67,227)	(9,793)
Sales and marketing expenses		(27,229)	(7,948)	(1,158)
General and administrative expenses		(73,679)	(262,955)	(38,304)
Total operating expenses		(171,744)	(338,130)	(49,255)
Income (loss) from operations				
Interest income		568	863	126
Investment income		1,561	1,135	165
Interest expense and guarantee fee		(17,429)	(16,384)	(2,387)
Foreign exchange (loss) gain, net		(245)	3,661	533
Value added tax refunds	2(k)	92,984	348	51
Other income, net		3,038	6,367	927
Income (loss) before income tax expenses		356,429	(330,924)	(48,206)
Income tax expense	14	(139,657)	–	–
Net income (loss)		216,772	(330,924)	(48,206)
Foreign currency translation adjustment, net of nil tax		(37,917)	16,446	2,396
Total comprehensive income (loss)		178,855	(314,478)	(45,810)
Weighted average number of shares used in per share calculation:				
– Basic	16	1,980,890,564	2,100,081,511	2,100,081,511
– Diluted	16	1,991,508,440	2,100,081,511	2,100,081,511
Net earnings (loss) per share (cent per share)				
– Basic	16	10.94	(15.76)	(2.30)
– Diluted	16	10.88	(15.76)	(2.30)
Share-based compensation expenses were included in:				
Research and development expenses		4,806	4,806	700
Sales and marketing expenses		582	221	32
General and administrative expenses		4,073	215,979	31,461

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

Unaudited Interim Condensed Consolidated Statements of Changes in Shareholders' Equity

For the Six Months Ended June 30, 2018 and 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

	Note	Ordinary shares			Treasury stocks		Additional paid-in capital	Statutory reserves	Accumulated other comprehensive loss	Retained earnings/(accumulate
		Number of Shares	Amount	Subscription receivablesfromshareholders	Number of Shares	Amount				
Balance as of December 31, 2017		2,000,000,000	1	(1)	–	–	423,642	28,806	–	404,793
Ordinary shares contributed by shareholders for the equity incentive plan	12	(51,624,000)	–	–	51,624,000	–	–	–	–	–
Share-based compensation expense	13	–	–	–	–	–	9,461	–	–	–
Foreign currency translation		–	–	–	–	–	–	–	(37,917)	–
Deemed distribution		–	–	–	–	–	(287,258)	–	–	(404,793)
Net income		–	–	–	–	–	–	–	–	216,772
Balance as of June 30, 2018		1,948,376,000	1	(1)	51,624,000	–	145,845	28,806	(37,917)	216,772
Balance as of December 31, 2018		1,948,376,000	1	(1)	51,624,000	–	154,970	97,307	(65,230)	53,931
Issuance of ordinary shares	12	222,222,222	–	–	–	–	669,559	–	–	–
Ordinary shares contributed by shareholders for the equity incentive plan	12	(403,157)	–	–	403,157	–	–	–	–	–
Share-based compensation expense	13	–	–	–	–	–	221,006	–	–	–
Foreign currency translation		–	–	–	–	–	–	–	16,446	–
Net loss		–	–	–	–	–	–	–	–	(330,924)
Balance as of June 30, 2019		2,170,195,065	1	(1)	52,027,157	–	1,045,535	97,307	(48,784)	(276,993)

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

Unaudited Interim Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2018 and 2019

CANAAN INC.

Unaudited Interim Condensed Consolidated Statements of Cash Flows

For the Six Months Ended June 30, 2018 and 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

	Six Months Ended June 30,		
	2018	2019	
	RMB	RMB	US$ (Note 2(e))
Cash flows from operating activities			
Net income (loss)	216,772	(330,924)	(48,206)
Adjustments for:			
Depreciation and amortization of property, equipment and software	4,206	6,835	996
Foreign exchange loss (gain)	1,061	(4,929)	(717)
Reversal of allowance for doubtful receivables	(2,152)	–	–
Gain on disposal of property, equipment and software	(11)	–	–
Share-based compensation expense	9,461	221,006	32,193
Deferred income tax expenses	1,062	–	–
Investment income on wealth management products	(1,561)	(1,135)	(165)
Amortization of right-of-use asset	–	5,792	844
Interest of lease liabilities	–	1,017	148
Changes in assets and liabilities:			
Accounts receivable	(138,875)	3,675	535
Inventories	(501,215)	165,875	24,162
Prepayments and other current assets	224,053	(347,115)	(50,563)
Income tax receivable	(212)	(2,901)	(423)
Amount due from a related party	–	68	10
Other non-current assets	(3,614)	1,110	162
Prepaid interest expense and guarantee fee	(14,078)	5,201	758
Accounts payable	58,293	15,255	2,222
Contract liabilities	(127,072)	273,405	39,826
Income tax payable	112,171	(609)	(89)
Accrued liabilities and other current liabilities	(8,996)	778	113
Lease liabilities	–	(6,006)	(875)
Net cash (used in) provided by operating activities	(170,707)	6,398	931
Cash flows from investing activities:			
Payment for short-term investments	(879,520)	(314,700)	(45,841)
Proceeds from disposal of short-term investments	971,081	205,294	29,904
Purchase of property, equipment and software	(9,483)	(2,775)	(404)
Proceeds from disposal of property, equipment and software	14	–	–
Net cash inflow arising from disposal of subsidiaries	15,515	–	–
Net cash provided by (used in) investing activities	97,607	(112,181)	(16,341)
Cash flows from financing activities:			
Proceeds from issuance of ordinary shares	–	668,033	97,310
Proceeds from borrowings	1,602,198	100,000	14,567
Repayment of borrowings	(764,947)	(935,729)	(136,304)

Payment for deemed distribution	(692,051)	–	–
Payment for initial public offering related cost	–	(1,415)	(206)
Net cash provided by (used in) financing activities	145,200	(169,111)	(24,633)

CANAAN INC.

UNAUDITED INTERIM CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)

For the Six Months Ended June 30, 2018 and 2019

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

	Six Months Ended June 30,		
	2018	2019	
	RMB	RMB	US$ (Note 2(e))
Net increase (decrease) in cash and cash equivalents, restricted cash	72,100	(274,894)	(40,043)
Effect of exchange rate changes on cash and cash equivalents, restricted cash	266	123	18
Cash and cash equivalents, restricted cash at the beginning of period	176,500	545,210	79,419
Cash and cash equivalents, restricted cash at the end of period	248,866	270,439	39,394
Supplemental disclosure of cash flow information:			
Cash paid for interest	(12,361)	(10,158)	(1,480)
Cash paid for guarantee fee	(19,146)	(7,145)	(1,041)
Cash paid for income taxes	(26,635)	(3,510)	(511)
Supplemental disclosure of non-cash financing activities:			
Receivable for issuance of ordinary shares	–	1,526	222

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

Notes to the Unaudited Interim Condensed Consolidated Financial Statements

CANAAN INC.

Notes to the Unaudited Interim Condensed Consolidated Financial Statements

(all amounts in thousands of RMB, except share and per share data, or as otherwise noted)

1. Organization and principal activities

(a) Principal activities

Canaan Inc. (the "Company"), an exempted company with limited liability incorporated in the Cayman Islands and its subsidiaries are collectively referred to as the "Group". The Group are principally engaged in integrated circuit (the "IC") design and sale of final system products by integrating its IC products for Bitcoin mining and related components in the People's Republic of China (the "PRC") and other countries and regions. The Group utilizes third-party suppliers to fabricate, package and test the IC products.

As of June 30, 2019, the Company's subsidiaries are as follows:

Name of subsidiaries	Date of incorporation	Place ofincorporation	Equity interestheld	Principalactivities
Canaan Creative (HK) Holdings Limited	February 22, 2018	Hong Kong	100%	Research and development of ICs
Hangzhou Canaan Creative Information Technology Co., Ltd.	April 9, 2013	Hangzhou, China	100%	Research and development of ICs

Canaan Creative Co., Ltd.	April 1, 2013	Beijing, China	100%	Research and development of ICs
Langfang Creative Technology Co., Ltd.	May 15, 2014	Langfang, China	100%	Assembly of system products
Hangzhou Ruihong Technology Co., Ltd.	June 30, 2015	Hangzhou, China	%	Supply chain and distribution of system products
Hangzhou Lifeng Intelligence Agriculture Co., Ltd.	November 13, 2015	Hangzhou, China	100%	Distribution of system products
Hangzhou Canaan Blockchain Technology Co., Ltd.	November 11, 2016	Hangzhou, China	100%	Research and development of ICs
Canaan Convey Co., Ltd.	November 2, 2017	Beijing, China	100%	International distribution of system products
Zhejiang Avalon Technology Co., Ltd.	December 5, 2017	Hangzhou, China	100%	Distribution of system products
Canaan Mingxin (Beijing) Technology Co., Ltd.	December 24, 2018	Beijing, China	%	International distribution of system products
Hangzhou Canaan Chuangxin Technology Co., Ltd.	December 26, 2018	Hangzhou, China	100%	Research and development of ICs

2. Principal Accounting Policies

(a) Basis of preparation

The accompanying unaudited interim condensed consolidated financial statements of the Group have been prepared in accordance with the accounting principles generally accepted in the United States of America (“U.S. GAAP”) for interim financial information. Accordingly, they do not include all of the information and footnotes normally included in the annual financial statements prepared in accordance with U.S. GAAP. Certain information and footnote disclosures normally included in the annual financial statements prepared in accordance with U.S. GAAP have been condensed or omitted consistent with Article 10 of Regulation S-X. In the opinion of management, the Group’s unaudited interim condensed consolidated financial statements and accompanying notes include all adjustments (consisting of normal recurring adjustments) considered necessary for the fair statement of the Group’s financial position as of June 30, 2019, and results of operations and cash flows for the six months ended June 30, 2018 and 2019. Interim results of operations are not necessarily indicative of the results for the full year or for any future period. These unaudited interim condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2018, and related notes included in the Group’s audited consolidated financial statements. The financial information as of December 31, 2018 presented in the unaudited interim condensed consolidated financial statements is derived from the audited consolidated financial statements as of December 31, 2018. Significant accounting policies followed by the Group in the preparation of the accompanying unaudited interim condensed consolidated financial statements are summarized below.

(b) Use of estimates

The preparation of the Group’s consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from such estimates.

The Company believes that valuation and recognition of share-based compensation, accounting estimation of variable consideration for revenue recognition, write-down for inventories and prepayments, allowance for doubtful accounts and valuation allowance for deferred tax assets reflect significant judgments and estimates used in the preparation of its consolidated financial statements.

Management bases the estimates on historical experience and on various other assumptions as discussed elsewhere to the consolidated financial statements that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could materially differ from these estimates.

(c) Consolidation

The Group’s consolidated financial statements include the financial statements of the Company and its subsidiaries, for which the Company or its subsidiary is the primary beneficiary. All transactions and balances among the Company and its subsidiaries have been eliminated upon consolidation.

Subsidiaries are those entities in which the Company, directly or indirectly, controls more than one half of the voting powers; or has the power to appoint or remove the majority of the members of the board of directors; or to cast a majority of votes at the meeting of directors; or has the power to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

(d) Functional currency and foreign currency translation

The Group uses Renminbi (“RMB”) as its reporting currency. The functional currency of the Company and its subsidiaries incorporated outside of PRC is the United States dollar (“US$”), while the functional currency of the PRC entities in the Group is RMB as determined based on the criteria of ASC 830, *Foreign Currency Matters*.

Transactions denominated in other than the functional currencies are re-measured into the functional currency of the entity at the exchange rates prevailing on the transaction dates. Financial assets and liabilities denominated in other than the functional currency are re-measured at the balance sheet date exchange rate. The resulting exchange differences are included in the consolidated statements of comprehensive income as foreign exchange related gains or loss.

The financial statements of the Group are translated from the functional currency to the reporting currency, RMB. Assets and liabilities of the Company and its subsidiaries incorporated outside of PRC are translated into RMB at fiscal year-end exchange rates, Income and expense items are translated at average exchange rates prevailing during the fiscal year, representing the index rates stipulated by the People's Bank of China. Translation adjustments arising from these are reported as foreign currency translation adjustments and are shown as a separate component of shareholders' equity on the consolidated financial statement. The exchange rates used for translation on December 31, 2018 and June 30, 2019 were US$1.00= RMB6.8632 and RMB6.8747, respectively, representing the index rates stipulated by the People's Bank of China.

(e) **Convenience translation**

The unaudited United States dollar ("US$") amounts disclosed in the accompanying financial statements are presented solely for the convenience of the readers. Translations of amounts from RMB into US$ for the convenience of the reader were calculated at the rate of US$1.00=RMB6.8650 on June 28, 2019, representing the noon buying rate in The City of New York for cable transfers of RMB as certified for customs purposes by the Federal Reserve Board. No representation is made that the RMB amounts could have been, or could be, converted into US$ at that rate on June 28, 2019, or at any other rate.

(f) **Fair value of financial instruments**

The following table sets forth the Group's assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy:

As of June 30, 2019	Level 1	Level 2	Level 3	Balance at fair value
Assets				
Short-term investments	–	110,541	–	110,541

As of December 31, 2018, there was no financial asset that was measured at fair value on a recurring basis.

The Group values its investments in wealth management products based on quoted prices of similar products provided by banks at the end of each period, and accordingly, the Group classifies the valuation techniques that use these inputs as Level 2.

(g) **Accounts receivable**

Accounts receivable are presented net of allowance for doubtful accounts. The Group uses specific identification in providing for bad debts when facts and circumstances indicate that collection is doubtful and based on factors listed in the following paragraph. If the financial conditions of its customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowance may be required.

The Company maintains an allowance for doubtful accounts which reflects its best estimate of amounts that potentially will not be collected. The Company determines the allowance for doubtful accounts on general basis taking into consideration various factors including but not limited to historical collection experience and credit-worthiness of the customers as well as the age of the individual receivables balance. Additionally, the Company makes specific bad debt provisions based on any specific knowledge the Company has acquired that might indicate that an account is uncollectible. The facts and circumstances of each account may require the Company to use substantial judgment in assessing its collectability.

(h) **Inventories**

Inventories, consisting of finished goods, work in process, raw materials and goods in transit, which are purchased from contract manufacturers and component suppliers. Inventories are stated at the lower of cost and net realizable value. Cost of inventory is determined using the weighted average cost method. Adjustments are recorded to write down the cost of inventory to the estimated net realizable value due to slow-moving and obsolete inventory, which is dependent upon factors such as historical and forecasted consumer demand, and promotional environment. The Group takes ownership, risks and rewards of the products purchased.

In accordance with ASC 855-10-55-1(b), the Group considers all data available, including future demand and subsequent changes in product prices that may provide additional information about the valuation of inventories at the balance sheet date.

(i) **Contract liabilities**

Cash proceeds received from customers before product delivery is recognized as contract liabilities and is recognized as revenues when revenue recognition criteria are met, normally within 6 months.

The prepayments received from customers as of December 31, 2018 and June 30, 2019 was RMB6,904 and RMB280,309, respectively. The revenue recognized during the six months ended June 30, 2018 and 2019 for such contract liability was RMB199,582 and RMB6,904, respectively.

(j) Revenue recognition

The Group has adopted the new revenue standard, ASC 606, *Revenue from Contracts with Customers* (Topic 606) for all periods presented. Consistent with the criteria of Topic 606, the Group recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to receive in exchange for those goods or services.

Products revenue

The Group generates revenue primarily from the sale of Bitcoin mining machines directly to a customer, such as a business or individual engaged in Bitcoin mining activities. As the Bitcoin price fluctuates, the Group may adjusts the selling price of Bitcoin mining machines on a weekly basis, as customers are only willing to pay for machines based on their ability to recover their investment through mining Bitcoin over a relatively short period of time. The Group's sales arrangements usually require a full prepayment before the delivery of products. However, as the Bitcoin price experienced a significant downtrend during 2018, the Group started to offer credit sales to certain significant, long-standing customers in China. The payment terms under credit sales generally consist of 50% down payment and 50% subsequent payments over a period of 90 to 180 days. With the adoption of a more dynamic pricing strategy, the Group expects to accept a lower amount of consideration (as compared to fixed and promised consideration that is set out in the sales contracts) from its credit sales customers if the Bitcoin prices continue to decrease in the post-sale period; hence providing implicit price concession to these customers and the ultimate amount of price concessions to be provided to these credit sales customers is highly dependent on the changes of Bitcoin prices.

Revenues from product sales are recorded at the net sales price (transaction price), which includes an estimation of variable consideration which primarily results from implicit price concessions on credit sales. The amount of variable consideration is included in the transaction price to the extent it is not constrained and that it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period. Actual amounts of consideration ultimately received may differ from the estimates. If actual results in the future vary from estimates, the Group will adjust these estimates, which would affect revenue and earnings in the period such changes are known. With respect to the determination of variable consideration resulting from the amount of implicit price concession, since the Bitcoin market price is volatile and unpredictable and changes of Bitcoin price will greatly affect the implicit price concessions to be provided by the Group to its credit sales customers the Group historically has not been able to overcome the constraint on variable consideration at the time of product sale or at subsequent period-end dates until the Group has knowledge about the resolution of the uncertainty through payment by the customer. The Group uses all the subsequent information to the date of issuance of our financial statements to adjust the estimated variable consideration for the periods presented, representing updated information on the best estimate of the amount of transaction price that is probable of being received and therefore not constrained as of period-end. The Group will continue to monitor and evaluate historical data and other factors in determining the total transaction price (including implicit price concessions) that can be recognized for product sales on credit. During the six months ended June 30, 2018 and 2019, the Group recognized price concessions provided to its customers in the amounts of RMB69,740 and RMB9,557, respectively. During the six months ended June 30, 2019, the adjustment to the previously estimated variable considerations was amounting to RMB10,300 (six months ended June 30, 2018: nil), which was recorded as revenue of this period.

The Group recognizes products revenue at a point in time based on management's evaluation of when the control of the products have been passed to customers. The transfer of control is considered complete when products have been picked up by or shipped to the Group's customers.

The Group offers a standard product warranty of not longer than 6 months that the product will operate under normal use. At the time revenue is recognized, an estimate of future warranty costs is recorded as a component of cost of revenues. The reserves established are regularly monitored based upon historical experience and any actual claims charged against the reserve. The amount of total warranty costs incurred was immaterial for the six months ended June 30, 2018 and 2019, respectively.

Services revenue

The Company also generates a small portion of revenue from its maintenance services under separate contracts. Revenue from the maintenance service to the customer is recognized when the related services have been rendered to the customers.

(k) VAT refunds

In accordance with Caishui (2011) No. 100 issued by State Tax Bureau, Hangzhou Canaan is qualified as enterprise of selling self-developed software products and enjoying an tax refund for the excess of 3% of its actual tax burden after the VAT is levied at the 16% or 13% tax rate since April 2019. Tax refund is recognized when received. Total VAT refunds received were RMB92,984 and RMB348 for the six months ended June 30, 2018 and 2019, respectively.

(l) Lease

Prior to the adoption of ASC 842 on January 1, 2019:

Leases, mainly leases of offices, where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Payments made under operating leases are recognized as an expense on a straight-line basis over the lease term. The Group had no capital leases for any of the years stated herein.

Upon and hereafter the adoption of ASC 842 on January 1, 2019:

The Company determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets, operating lease liability, and operating lease liability, non-current in the Company's consolidated balance sheets. Please refer to Note 2(p) for the disclosures regarding the Company's method of adoption of ASC 842 and the impacts of adoption on its financial position, results of operations and cash flows.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that it will exercise that option, if any. As the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate, which it calculates based on the credit quality of the Company and by comparing interest rates available in the market for similar borrowings, and adjusting this amount based on the impact of collateral over the term of each lease.

The Company has elected to adopt the following lease policies in conjunction with the adoption of ASU 2016-02: (i) elect for each lease not to separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component; (ii) for leases that have lease terms of 12 months or less and does not include a purchase option that is reasonably certain to exercise, the Company elected not to apply ASC 842 recognition requirements; and (iii) the Company elected to apply the package of practical expedients for existing arrangements entered into prior to January 1, 2019 to not reassess (a) whether an arrangement is or contains a lease, (b) the lease classification applied to existing leases, and(c) initial direct costs.

(m) Income taxes

The Group accounts for income taxes under the liability method. Under the liability method, deferred income tax assets and liabilities are determined based on the differences between the financial reporting and income tax bases of assets and liabilities and are measured using the tax income rates that will be in effect when the differences are expected to reverse. A valuation allowance is recorded if it is more likely than not that some portion or all of a deferred income tax assets will not be realized in the foreseeable future.

The Group evaluates its uncertain tax positions using the provisions of ASC 740-10, *Income Taxes*, which prescribes a recognition threshold that a tax position is required to meet before being recognized in the financial statements. The Group recognizes in the financial statements the benefit of a tax position which is "more likely than not" to be sustained under examination based solely on the technical merits of the position assuming a review by tax authorities having all relevant information. Tax positions that meet the recognition threshold are measured using a cumulative probability approach, at the largest amount of tax benefit that has a greater than fifty percent likelihood of being realized upon settlement. It is the Group's policy to recognize interest and penalties related to unrecognized tax benefits, if any, as a component of income tax expense.

(n) Share-based compensation

The Company grants restricted shares and share options to eligible employees and accounts for share-based compensation in accordance with ASC 718, *Compensation – Stock Compensation*.

Employees' share-based compensation awards are measured at the grant date fair value of the awards and recognized as expenses a) immediately at the grant date if no vesting conditions are required; or b) for share-based awards granted with only service conditions, using the graded vesting method, net of estimated forfeitures, over the vesting period; or c) for share-based awards granted with service conditions and the occurrence of an initial public offering ("IPO") as performance condition, cumulative share-based compensation expenses for the options that have satisfied the service condition should be recorded upon the completion of the IPO, using the graded vesting method; or d) for share-based awards with service conditions and other performance condition, using the graded vesting method, net of estimated pre-vesting forfeitures, over the vesting period.

A change in any of the terms or conditions of share-based awards is accounted for as a modification of the awards. The Group calculates incremental compensation expense of a modification as the excess of the fair value of the modified awards over the fair value of the original awards immediately before its terms are modified at the modification date. For vested awards, the Group recognizes incremental compensation cost in the period when the modification occurs. For awards not being fully vested, the Group recognizes the sum of the incremental compensation expense and the remaining unrecognized compensation expense for the original awards over the remaining requisite service period after modification.

Share-based compensation in relation to the restricted shares is measured based on the fair market value of the Group's ordinary shares at the grant date of the award. Prior to the listing, estimation of the fair value of the Group's ordinary shares involves significant assumptions that might not be observable in the market, and a number of complex and subjective variables, including discount rate, and subjective judgments regarding the Group's projected financial and operating results, its unique business risks, the liquidity of its ordinary shares and its operating history and prospects at the time the grants are made. Share-based compensation in relation to the share options is estimated using the Binomial Option Pricing Model. The determination of the fair value of share options is affected by the share price of the Group's ordinary shares as well as the assumptions regarding a number of complex and subjective variables, including the expected share price volatility, risk-free interest rate, exercise multiple and expected dividend yield. The fair value of these awards was determined with the assistance from an independent valuation firm.

(o) **Segment reporting**

The Group's chief operating decision maker has been identified as the Chief Executive Officer, who reviews consolidated results including revenue, gross profit and operating profit at a consolidated level only. The Group does not distinguish between markets for the purpose of making decisions about resources allocation and performance assessment. Hence, the Group has only one operating segment and one reportable segment.

The Group's long-lived assets are substantially located in the PRC. The Group's revenue segregated by geographic region is as follows:

Geographic region	Six months ended June 30,	
	2018	2019
PRC	1,462,903	253,690
United States of America	187,416	16,309
Hong Kong	58,543	2,178
Other foreign countries	238,230	16,587
Total	1,947,092	288,764

(p) **Recently issued accounting pronouncements**

i. New and amended standards adopted by the Group:

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU 2016-02"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to classify leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification determines whether lease expense is recognized over the lease term based on an effective interest method for financing leases or on a straight-line basis for operating leases. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. If a lessee makes this election, it should recognize lease expenses for such lease generally on a straight-line basis over the lease term. For public entities, the guidance was effective for annual reporting periods beginning after December 15, 2018 and for interim periods within those fiscal years.

In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842), which provided an optional transition method under which financial statements may be prepared under the revised guidance for the year of adoption, but not for prior years. Under the latter method, entities will recognize a cumulative catch-up adjustment to the opening balance of retained earnings in the period of adoption.

The Company adopted ASC 842 using the alternative transition method with an effective date of January 1, 2019 for leases that existed on that date. Prior period results continue to be presented under ASC 840 based on the accounting standards originally in effect for such periods. This standard provides a number of optional practical expedients in transition. The Company applied certain practical expedients to leases that commenced prior to the effective date as follows: (i) elect for each lease not to separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component; (ii) for leases that have lease terms of 12 months or less and does not include a purchase option that is reasonably certain to exercise, the Company elected not to apply ASC 842 recognition requirements; and (iii) the Company elected to apply the package of practical expedients for existing arrangements entered into prior to January 1, 2019 to not reassess (a) whether an arrangement is or contains a lease, (b) the lease classification applied to existing leases, and(c) initial direct costs.

In connection with the adoption of ASC 842, on January 1, 2019, the Company recorded an impact of RMB48,940 on its assets and RMB47,967 on its liabilities for the recognition of operating lease right-of-use-assets and operating lease liabilities, respectively, which are primarily related to the lease of the Group's offices and warehouses. The adoption of ASC 842 did not have a material impact on the Company's results of operations or cash flows.

ii. New and amended standards not yet adopted by the Group:

In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). This guidance requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. The measurement of expected credit losses is based on historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability. In November 2018, the FASB issued ASU 2018-19, Codification Improvements to Topic 326, Financial Instruments-Credit Losses ("ASU 2018-19"), which clarifies certain topics included within ASU 2016-13. ASU 2016-13 and ASU 2018-19 are effective for the annual reporting period beginning after December 15, 2019, including interim periods within that reporting period. The Group is currently evaluating the impact on our consolidated financial statements upon the adoption of this guidance.

In October 2018, the FASB issued ASU 2018-17, "Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities," which amends the guidance for determining whether a decision-making fee is a variable interest and requires organizations to consider indirect interests held through related parties under common control on a proportional basis rather than as the equivalent of a direct interest in its entirety. The standard is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the impact of this accounting standard update on its consolidated financial statements.

3. Risks and concentration

(a) Concentration of credit risk

Financial instruments that potentially expose the Group to concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments and accounts receivable. The Group places its cash and cash equivalents with financial institutions with high credit ratings and quality.

The Group conducts credit evaluations of customers, and generally does not require collateral or other security from its customers. The Group establishes an allowance for doubtful accounts primarily based upon the age of the receivables and factors surrounding the credit risk of specific customers.

Accounts receivable are unsecured and are derived from revenue earned through customers. The risk with respect to accounts receivable is mitigated by credit evaluations performed on them.

Accounts receivable concentration of credit risk is as below:

	As of December 31, 2018	As of June 30, 2019
Customer A	29%	*
Customer B	16%	24%
Customer C	16%	*
Customer D	11%	*
Customer E	*	37%
Customer F	*	15%

* Less than 10%

There was no customer which contributed more than 10% of total revenue for the six months ended June 30, 2018 and 2019.

(b) Supplier concentration

The Group currently purchases all of its integrated circuits, an important component of its products, from Taiwan Semiconductor Manufacturing Company Limited and its subsidiaries ("TSMC"). Although only a limited number of manufacturers for such integrated circuits are available, management believes that other suppliers could provide similar integrated circuits on comparable terms. A change in suppliers, however, could cause a delay in manufacturing and a possible loss of sales, which would affect operating results adversely.

4. Cash and cash equivalents

Cash and cash equivalents represent cash on hand and demand deposits placed with banks or other financial institutions, which are unrestricted as to withdrawal or use. The following table sets forth a breakdown of cash and cash equivalents by currency denomination and jurisdiction as of December 31, 2018 and June 30 2019:

	RMB	RMB equivalent (US$)		RMB equivalent (HK$)	Total in RMB
	China	Hong Kong	China	Hong Kong	
December 31, 2018	169,484	16,129	63,254	10,073	258,940
June 30, 2019	206,432	4,184	49,897	9,926	270,439

5. Accounts receivable

	As of December 31, 2018	As of June 30, 2019
Accounts receivable, gross	27,467	20,012
Less: allowance for doubtful accounts	(3,780)	–
Accounts receivable	23,687	20,012

The following table presents movement of the allowance for doubtful accounts:

	Six months ended June 30

	2018	2019
Balance at the beginning of the period	(5,932)	(3,780)
Collection of amounts previously in dispute	2,152	—
Write-off provision for doubtful receivables	—	3,780
Balance at the end of the period	(3,780)	—

6. Inventories

Inventories consist of the following:

	As of December 31, 2018	As of June 30, 2019
Finished goods	240,774	192,460
Work in process	193,012	174,501
Raw materials	150,617	50,160
Goods in transit	1,269	2,676
Total	585,672	419,797

During the six months ended June 30, 2018 and 2019, the Group recorded write-down of RMB427,163 and nil for the obsolete inventories in cost of revenues, respectively.

7. Prepayments and other assets

The current and non-current portions of prepayments and other assets consist of the following:

	As of December 31, 2018	As of June 30, 2019
Prepayments and other current assets		
VAT recoverable	101,778	115,376
Prepayments to vendors (Note a)	74,277	409,911
Interest receivable	3,068	—
Deposits	1,010	681
VAT refund for export sales (Note b)	2,274	2,371
Staff advances	525	907
Others	3,805	3,633
	186,737	532,879
Non-current assets		
Deposits	6,340	5,230
Deferred initial public offering related cost	—	1,415
	6,340	6,645

Note a: Prepayments to vendors mainly represent prepayments made to a third-party supplier TSMC for foundry service. For the six months ended June 30, 2018 and 2019, the Group recorded write-down of RMB358,842 and RMB828 for the prepayment to vendors in cost of revenues, respectively.

Note b: Hangzhou Ruihong Technology Co., Ltd. and Canaan Convey Co., Ltd. are entitled to VAT refund for their export sales.

8. Property, equipment and software

Property, equipment and software consist of the following:

	As of December 31, 2018	As of June 30, 2019
Cost:		
Leasehold improvements	24,324	26,792
Computers and electronic equipment	15,696	16,116

Motor vehicles	1,739	1,739
Mechanical equipment	1,164	1,164
Construction in progress	369	256
Software	306	306
Total cost	43,598	46,373
Less: Accumulated depreciation and amortization	(15,672)	(22,507)
Property, equipment and software, net	27,926	23,866

Depreciation and amortization expenses recognized for the six months ended June 30, 2018 and 2019 are summarized as follows:

	Six months ended June 30,	
	2018	**2019**
Cost of revenues	46	738
Research and development expenses	1,412	1,735
Sales and marketing expenses	7	40
General and administrative expenses	2,741	4,322
Total	4,206	6,835

9. Leases

The Company leases facilities under non-cancellable operating leases expiring on different dates. The terms of substantially all of these leases are two years or less. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that it will exercise that option, if any. All of the Company's leases qualify as operating leases. With the adoption of the new leasing standard, the Company has recorded a right-of-use asset and corresponding lease liability, by calculating the present value of future lease payments, discounted at 7.14%, the Company's incremental borrowing rate, over the expected term. Variable lease cost and short-term leases (lease terms less than 12 months) are recognized as incurred.

(a) The components of lease expenses were as follows:

	Six months ended June 30, 2019
Lease cost:	
Amortization of right-of-use assets	5,792
Interest of lease liabilities	1,017
Expenses for short-term lease within 12 months	450
Total lease cost	7,259

(b) Supplemental cash flow information related to leases was as follows:

	Six months ended June 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	6,006
Right-of-use assets obtained in exchange for lease obligations:	
Operating lease liabilities	—

(c) Supplemental balance sheet information related to leases was as follows:

	As of June 30, 2019
Weighted-average remaining lease term	
Operating leases	1.9 years
Weighted-average discount rate	
Operating lease	7.14% per annum

(d) Maturities of lease liabilities were as follows:

	As of June 30, 2019
Years Ending December 31,	
Remainder of 2019	5,249
2020	12,000
2021	11,492
2022	2,626
Total undiscounted lease payments	31,367
Less: imputed interest	(2,943)
Total lease liabilities	28,424

(e) Future minimum lease payments for the Company's operating leases as of December 31, 2018 under ASC 840 were as follows:

	As of December 31, 2018
Years Ending December 31,	
2019	16,861
2020	17,208
2021	17,182
2022	4,309
Total	55,560

(f) Future minimum lease payments for the Company's operating leases as of June 30, 2019 under ASC 842 were as follows:

	As of June 30, 2019
Years Ending December 31,	
Remainder of 2019	5,425
2020	12,000
2021	11,492
2022	2,626
Total	31,543

10. Short-term debts

	As of December 31, 2018	As of June 30, 2019
Short-term bank loans (Note a)	246,368	197,231
Bridge loans in connection with Reorganization (Note b)	802,643	–
	1,049,011	197,231

Note a: As of June 30, 2019, the aggregated outstanding principal amounts under unsecured short-term bank borrowings were RMB200,000 bearing interest rates ranging from 4.35% to 4.79% per annum.

Note b: Canaan HK repaid the Bridge loan in connection with the Reorganization in March 2019 and the collateral and guarantee were released accordingly.

The weighted average interest rate for the borrowings was approximately 7.78% and 6.45% per annum for the six months ended June 30, 2018 and 2019, respectively.

11. Accrued liabilities and other current liabilities

	As of December 31, 2018	As of June 30, 2019
Professional service fee accrual	23,360	19,081
Salary and welfare payable	19,852	13,293
Guarantee fee payable	6,120	–
VAT received from customers related to contract liabilities	3,890	25,955

Other tax payables	1,403	65
Interest payable	206	—
Others	3,121	336
Total	57,952	58,730

12. Ordinary share

On March 23, 2018, Canaan Inc. was incorporated as an exempted company with limited liability company with authorized share capital of US$50,000 divided into 500,000,000 shares with par value US$0.0001 each. In June 2018, the authorized share capital of US$50,000, which represented 500,000,000 issued shares, was subdivided into 1,000,000,000,000 shares of a par value of US$0.00000005 each.

In April 2018, the Company established a trust to hold 51,624,000 of the Company's issued ordinary shares. These ordinary shares were contributed by the Co-Founders and employees and held in a trust (the Trust) for the benefit of the employees who are under the 2018 Equity Incentive Plan (Note 13).

In February and June 2019, the Company issued 222,222,222 ordinary shares in aggregate to existing shareholders at a price of US$0.45 per share for a total cash consideration of US$100 million. Out of the 222,222,222 ordinary shares issued, 403,157 shares were contributed by the then existing shareholders to the Trust for future share awards.

As of June 30, 2019, 52,027,157 ordinary shares in total were contributed to the Trust for share awards and were accounted for as treasury stocks of the Company (being issued but not outstanding shares).

As of December 31, 2018, the authorized ordinary shares are 1,000,000,000,000, of which 2,000,000,000 shares were issued and 1,948,376,000 shares were outstanding.

As of June 30, 2019, the authorized ordinary shares are 1,000,000,000,000 shares, of which 2,222,222,222 shares were issued and 2,170,195,065 shares were outstanding.

13. Share-based compensation

On October 8, 2016, Canaan Chaoxin, which was a holding company controlled by the controlling shareholders, established 2016 Equity Incentive Plan (the "2016 Plan") with the purpose of which is to provide share options for employees contributing to the Company. On October 8, 2016, Canaan Chaoxin granted 39,600,000 share options to the Company's employees at an exercise price of RMB0.023 per share under the 2016 Plan. The vesting period was from October 2016 to May 2017 and the exercise period was from June 2017 to July 2017.

On November 22, 2017, Canaan Chaoxin approved the establishment of 2017 Equity Incentive Plan (the "2017 Plan") with the purpose of which is to provide restricted share units ("RSUs") to its employees. In November 2017, Canaan Chaoxin granted 71,200,000 RSUs to the Company's employees at an exercise price of RMB0.015 per share under the 2017 Plan, among which, 39,170,000 RSUs are vested immediately on the grant day, 30,030,000 RSUs contain two or four service years of the employees and the remaining 2,000,000 RSUs shall be vested upon IPO.

As part of the Reorganization in 2018, the Board of Directors of the Company approved the 2018 Equity Incentive Plan (the "2018 Plan") on April 25, 2018, which assumed Canaan Chaoxin's obligations and duties under the share awards granted by Canaan Chaoxin. As a result, the unvested RSUs granted by Canaan Chaoxin under the 2017 Plan were replaced with RSUs of the Company. Such new RSUs replaced the RSUs granted under Canaan Chaoxin's existing RSUs in its entirety by exchanging of the RSU granted by Canaan Chaoxin for the RSU of the Company while maintaining their respective terms and vesting schedules unchanged except for the addition of performance condition of IPO. This resulted in a probable to improbable (Type II) modification, and no incremental fair value would be recognized unless and until vesting of the award under the modified conditions becomes probable. Since this modification was not beneficial to its employees, no incremental value was resulting from the modification. The Group recognized compensation cost equal to the award's original grant-date fair value when the original vesting conditions are satisfied, regardless of whether the modified IPO condition is satisfied.

On the same day, some employees who are under the 2016 Plan entered into share award replacement agreement (the "Replacement Agreement") with the Company under which a total of 19,594,000 ordinary shares of the Company held by the employees became restricted and will be vested upon IPO of the Company. In the event that the employees voluntarily and unilaterally terminates his employment/service contract with any group entities or his employment, the unvested restricted shares shall automatically lapse. Deferred share-based compensation was measured for the restricted shares using the estimated fair value of the Company's ordinary shares at the date of imposition of the restriction in April 2018, and the compensation cost for the restricted shares will be recognized upon occurrence of IPO.

Share-based compensation expense related to the share awards granted to the employees amounted to approximately RMB9,461 and RMB221,006 for the six months ended June 30, 2018 and 2019, respectively.

(a) Restricted share units

The following table summarizes the RSU activity for the six months ended June 30, 2018 and 2019:

	Number of shares	Weighted average grant date fair value
		RMB
Outstanding at January 1, 2018	32,030,000	1.55

Granted	–	–
Vested	–	–
Outstanding at June 30, 2018	32,030,000	1.55
Outstanding at January 1, 2019	32,030,000	1.55
Granted	–	–
Forfeited	(30,000)	1.51
Outstanding at June 30, 2019	32,000,000	1.55

As of June 30, 2019, there was RMB17,095 unrecognized compensation expense related to RSUs, which is expected to be recognized over a weighted-average period of 2.25 years. And as of June 30, 2019, there was RMB3,873 unrecognized compensation expense related to RSUs, which is expected to be recognized upon occurrence of IPO.

(b) *Restricted ordinary shares*

The following table summarizes the restricted ordinary shares activity under Replacement Agreement for the six months ended June 30, 2018 and 2019:

	Number of shares	Weighted average grant date fair value
		RMB
Outstanding at January 1, 2018	–	–
Granted	19,594,000	2.56
Outstanding at June 30, 2018	19,594,000	2.56
Outstanding at January 1, 2019	17,594,000	2.56
Forfeited	(1,594,000)	2.56
Outstanding at June 30, 2019	16,000,000	2.56

Upon occurrence of IPO, the entire share-based compensation expenses out of RMB41.0 million as of June 30, 2019 will be expensed immediately when such IPO happens.

(c) *Other share-based compensation*

In May 2019, certain shareholders of the Company sold 233,217,776 ordinary shares in aggregate to certain existing shareholders and certain third party investors. Out of the total 233,217,776 shares transferred, 111,217,778 shares were purchased by existing shareholders who are also the employees of the Company. The net excess of appraised fair value of the ordinary shares (acquired by employee shareholders) over the considerations were amounting to RMB213,135, which was charged to general and administrative expenses as compensation costs for the six months ended June 30, 2019.

14. Income Taxes

Reconciliation of the differences between statutory audit rate and the effective tax rate A reconciliation between the effective income tax rate and the PRC statutory income tax rate is as follows:

	Six Months Ended June 30,	
	2018	2019
	%	%
PRC statutory income tax rates	25.0%	25.0%
Permanent book – tax difference	(1.6)%	(14.0)%
Different tax rates in other jurisdictions	0.4%	(0.3)%
Effect of tax holiday	(23.5)%	(3.9)%
Change in valuation allowance	38.9%	(6.8)%
Total	39.2%	0.0%
Effects of tax holidays entitled by the PRC subsidiaries on basic earnings (loss) per share (RMB cent per share)	4.22	(0.61)

Composition of income tax expense The current and deferred portions of income tax expense included in the consolidated statements of comprehensive income are as follows:

	Six Months Ended June 30,	
	2018	2019

Current income tax expense	138,595	–
Deferred tax expense	1,062	–
Income tax expense	139,657	–

Deferred tax assets and liabilities Deferred taxes were measured using the enacted tax rates for the periods in which they are expected to be reversed. The tax effects of temporary differences that give rise to the deferred tax asset balances as of December 31, 2018 and June 30 2019 are as follows:

	As of December 31, 2018	As of June 30, 2019
Deferred tax assets		
Tax losses carried forward	46,807	111,379
Allowance for doubtful accounts	567	567
Provision for inventory	107,239	40,871
Unrealized loss from intragroup sale	(35,548)	(11,301)
Subtotal	119,065	141,516
Less: Valuation allowance	(119,065)	(141,516)
Total of deferred tax assets	–	–

As of December 31, 2018 and June 30 2019, valuation allowances of RMB119,065 and RMB141,516 were provided because it was more likely than not that the Group will not be able to utilize certain tax losses carry forwards and other deferred tax assets generated by its subsidiaries. If events occur in the future that allow the Group to realize more of its deferred tax assets than the presently recorded amount, an adjustment to the valuation allowances will increase income when those events occur.

Movement of valuation allowance is as follows:

	Six Months Ended June 30,	
	2018	2019
Beginning balance	1	119,065
Addition	138,594	22,451
Ending balance	138,595	141,516

15. Related party transactions

For the six months ended June 30, 2018 and 2019, the related party transaction is as follows:

	Six Months Ended June 30,	
	2018	2019
Transaction amount with a related party		
Key management's advance	68	–

As of December 31, 2018 and June 30, 2019, the related party balances are as follows:

	As of December 31, 2018	As of June 30, 2019
Balance amount with a related party		
Amounts due from a related party	68	–

16. Basic and diluted net earnings (loss) per share

Basic and diluted earnings (loss) per share have been calculated in accordance with ASC 260 on computation of earnings (loss) per share for the six months ended June 30, 2018 and 2019 as follows:

	Six Months Ended June 30,	
	2018	2019

Basic net earnings (loss) per share calculation		
Numerator:		
Net income (loss)	216,772	(330,924)
Denominator:		
Weighted-average ordinary shares outstanding	1,980,890,564	2,100,081,511
Basic net earnings (loss) per share (RMB cent per share)	10.94	(15.76)

	Six Months Ended June 30,	
	2018	**2019**
Diluted net earnings (loss) per share calculation		
Numerator:		
Net income (loss)	216,772	(330,924)
Denominator:		
Weighted-average ordinary shares outstanding	1,980,890,564	2,100,081,511
Add: weighted-average RSUs	10,617,876	—
Weighted-average number of shares used in calculating diluted net earnings (loss) per share	1,991,508,440	2,100,081,511
Diluted net earnings (loss) per share (RMB cent per share)	10.88	(15.76)

For the six months ended June 30, 2019, the effects of all outstanding RSUs have been excluded from the computation of diluted loss per share due to its anti-dilutive effect.

	Six Months Ended June 30, 2019
Weighted-average RSUs	14,667,962

17. **Contingencies**

In the ordinary course of the business, the Group is subject to periodic legal or administrative proceedings. As of June 30, 2019, the Group is not a party to any legal or administrative proceedings which will have a material adverse effect on the Group's financial position, results of operations and cash flows.

18. **Subsequent events**

The Group evaluated subsequent event through October 28, 2019.

On October 4, 2019, the Company's board of directors and shareholders have approved that, immediately prior to the completion of the IPO, the Company's outstanding share capital will be re-designated into Class A ordinary shares and Class B ordinary shares. Holders of Class A ordinary shares and Class B ordinary shares have the same rights except for voting and conversion rights. Each Class A ordinary share is entitled to one vote and each Class B ordinary share is entitled to 15 votes and is convertible into one Class A ordinary share at any time by the holder thereof. Class A ordinary shares are not convertible into Class B ordinary shares under any circumstances. Nangeng Zhang, the Company's Chairman and Chief Executive Officer, will hold 100% of the Company's then issued 356,624,444 Class B ordinary shares.

Part Ii

Information Not Required in Prospectus

Item 6. Indemnification of Directors and Officers

The Cayman Islands law does not limit the extent to which a company's articles of association may provide indemnification of officers and directors, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to the public interest, such as providing indemnification against dishonesty, willful default or fraud. The registrant's articles of association provide that each officer or director of the registrant shall be indemnified against all actions, proceedings, costs, charges, expenses, losses, damages or liabilities incurred or sustained by such directors or officer, other than by reason of such person's dishonesty, willful default or fraud, in or about the conduct of our company's business or affairs (including as a result of any mistake of judgment) or in the execution or discharge of his duties, powers, authorities or discretions, including without prejudice to the generality of the foregoing, any costs, expenses, losses or liabilities incurred by such director or officer in defending (whether successfully or otherwise) any civil proceedings concerning the registrant or its affairs in any court whether in the Cayman Islands or elsewhere.

Under the form of indemnification agreements filed as Exhibit 10.2 to this registration statement, we will agree to indemnify our directors and executive officers against certain liabilities and expenses incurred by such persons in connection with claims made by reason of their being such a director or executive officer.

The form of underwriting agreement to be filed as Exhibit 1.1 to this registration statement will also provide for indemnification of us and our officers and directors.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us under the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 7. Recent Sales of Unregistered Securities

During the past three years, we have issued and sold the securities described below without registering the securities under the Securities Act. None of these transactions involved any underwriters' underwriting discounts or commissions, or any public offering. We believe that each of the following issuances was exempt from registration under the Securities Act in reliance on Regulation S, Regulation D or Rule 701 under the Securities Act or pursuant to Section 4(a)(2) of the Securities Act regarding transactions not involving a public offering.

Purchaser	Date ofIssuance	Number of Securities	Consideration in U.S. Dollars
Sertus Nominees (Cayman) Limited	Fed 2018	1 ordinary share	US$ 0.0001
Urknall Ltd.	Fed 2018	999 ordinary shares	US$ 0.0999
Flueqel Ltd.	Fed 2018	1,000 ordinary shares	US$ 0.1000
JPKONG LTD.	Fed 2018	1,000 ordinary shares	US$ 0.1000
Ouroboros Ltd.	Fed 2018	1,000 ordinary shares	US$ 0.1000
Urknall Ltd.	Mar 2018	175,102 ordinary shares	US$ 17.5102
Flueqel Ltd.	Mar 2018	200,821 ordinary shares	US$ 20.0821
Ouroboros Ltd.	Mar 2018	171,006 ordinary shares	US$ 17.1006
Space Exploration JP Ltd.	Mar 2018	29,000 ordinary shares	US$ 2.9000
Universe Exploration JP Ltd.	Mar 2018	10,000 ordinary shares	US$ 1.0000
Small Art Ltd.	Mar 2018	38,513 ordinary shares	US$ 3.8513
Sun Qifeng Ltd.	Mar 2018	30,000 ordinary shares	US$ 3.0000
Qifeng Sun Ltd.	Mar 2018	20,454 ordinary shares	US$ 2.0454
LXHMM Ltd.	Mar 2018	226 ordinary shares	US$ 0.0226

Purchaser	Date ofIssuance	Number of Securities	Consideration in U.S. Dollars
SMEH Technology Ltd.	Mar 2018	1,887 ordinary shares	US$ 0.1887
SMHH TECHNOLOGY LTD.	Mar 2018	10,000 ordinary shares	US$ 1.0000
SMSH TECHNOLOGY LTD.	Mar 2018	3,774 ordinary shares	US$ 0.3774
SMZH TECHNOLOGY LTD.	Mar 2018	34,339 ordinary shares	US$ 3.4339
HK jiaji science and technology LIMITED	Mar 2018	87,766 ordinary shares	US$ 8.7766
PUJIA LIMITED	Mar 2018	46,711 ordinary shares	US$ 4.6711
Bei Zhi Ltd.	Mar 2018	28,852 ordinary shares	US$ 2.8852
Root Grace Ltd.	Mar 2018	52,014 ordinary shares	US$ 5.2014
Wisdom Limited	Mar 2018	2,000 ordinary shares	US$ 0.2000
Rabbit E Ltd.	Mar 2018	28,717 ordinary shares	US$ 2.8717
Create Pennant Holdings Limited	Mar 2018	17,508 ordinary shares	US$ 1.7508
RONGKONG INTERNATIONAL LIMITED	Mar 2018	7,310 ordinary shares	US$ 0.7310
Todamoon Ltd	Apr 2018	25,812 ordinary shares	US$ 2.5812
Wlyl Ltd	Apr 2018	20,000 ordinary shares	US$ 2.0000
Tothemoon Ltd	Apr 2018	15,000 ordinary shares	US$ 1.5000
Urknall Ltd.	Jun 2018	352,204,000 ordinary shares	US$ 17.6102
Flueqel Ltd.	Jun 2018	352,018,000 ordinary shares	US$ 17.6009

Ouroboros Ltd.	Jun 2018	344,012,000 ordinary shares	US$	17.2006
Space Exploration JP Ltd.	Jun 2018	20,000,000 ordinary shares	US$	1.0000
Universe Exploration JP Ltd.	Jun 2018	20,000,000 ordinary shares	US$	1.0000
Small Art Ltd.	Jun 2018	27,026,000 ordinary shares	US$	1.3613
Sun Qifeng Ltd.	Jun 2018	30,000,000 ordinary shares	US$	1.5000
Qifeng Sun Ltd.	Jun 2018	40,908,000 ordinary shares	US$	2.0454
LXHMM Ltd.	Jun 2018	452,000 ordinary shares	US$	0.0226
SMEH Technology Ltd.	Jun 2018	3,774,000 ordinary shares	US$	0.1887
SMHH TECHNOLOGY LTD.	Jun 2018	20,000,000 ordinary shares	US$	1.0000
SMSH TECHNOLOGY LTD.	Jun 2018	7,548,000 ordinary shares	US$	0.3774
SMZH TECHNOLOGY LTD.	Jun 2018	68,678,000 ordinary shares	US$	3.4339
HK jiaji science and technology LIMITED	Jun 2018	175,532,000 ordinary shares	US$	8.7766
PUJIA LIMITED	Jun 2018	93,422,000 ordinary shares	US$	4.6711
Bei Zhi Ltd.	Jun 2018	57,704,000 ordinary shares	US$	2.8852
Root Grace Ltd.	Jun 2018	104,028,000 ordinary shares	US$	5.2014
Wisdom Limited	Jun 2018	4,000,000 ordinary shares	US$	0.2000
Rabbit E Ltd.	Jun 2018	57,434,000 ordinary shares	US$	2.8717
Create Pennant Holdings Limited	Jun 2018	35,016,000 ordinary shares	US$	1.7508
RONGKONG INTERNATIONAL LIMITED	Jun 2018	14,620,000 ordinary shares	US$	0.7310
Todamoon Ltd	Jun 2018	51,624,000 ordinary shares	US$	2.5812
Wlyl Ltd	Jun 2018	90,000,000 ordinary shares	US$	4.5000
SuperchipAi Limited	Jun 2019	134,772,966 ordinary shares	US$	6.7386
Supermath Limited	Jun 2019	87,449,256 ordinary shares	US$	4.3725

Item 8. Exhibits and Financial Statement Schedules

(a)	**Exhibits**

See Exhibit Index beginning on page II-4 of this Registration Statement.

(b)	**Financial Statement Schedules.**

All supplemental schedules are omitted because of the absence of conditions under which they are required or because the information is shown in the financial statements or notes thereto.

Item 9.	**Undertakings**

(a) The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant under the provisions described in Item 6, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(c) The undersigned registrant hereby undertakes that:

(1)	For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant under Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2)	For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit Index

Exhibit No.	Description of Exhibit
1.1*	Form of Underwriting Agreement
3.1	Memorandum and Articles of Association of the Registrant, as adopted by special resolutions on February 6, 2018
3.2	Form of the Amended and Restated Memorandum and Articles of Association of the Registrant
4.1	Specimen of Ordinary Share Certificate
4.2**	Form of Deposit Agreement between the Registrant and The Bank of New York Mellon, as depositary
4.3**	Form of American Depositary Receipt evidencing American Depositary Shares (included in Exhibit 4.2)
5.1	Form of Opinion of Maples and Calder (Hong Kong) LLP regarding the validity of the ordinary shares being registered
8.1	Form of Opinion of Simpson Thacher & Bartlett LLP regarding United States federal tax matters
8.2	Form of Opinion of Maples and Calder (Hong Kong) LLP regarding Cayman Islands tax matters (included in Exhibit 5.1)
8.3	Form of Opinion of Commerce & Finance Law Offices regarding PRC tax matters (included in Exhibit 99.2)
10.1	Amended and Restated 2018 Share Incentive Plan
10.2	Form of Indemnification Agreement between the Registrant and its directors and executive officers
10.3	Form of Executive Employment Agreement between the Registrant and its executive officers
21.1	Subsidiaries of Registrant
23.1	Consent of PricewaterhouseCoopers as to the financial information of Canaan Inc.
23.2	Consent of Maples and Calder (Hong Kong) LLP (included in Exhibit 5.1)
23.4	Consent of Commerce & Finance Law Offices (included in Exhibit 99.2)
23.5	Consent of Frost & Sullivan
23.6	Consent of Hong Zhang
23.7	Consent of Xiaohu Yang
23.8	Consent of Mei Luo
99.1	Code of Business Conduct and Ethics
99.2	Form of Opinion of Commerce & Finance Law Offices regarding certain PRC law matters

*	To be filed by amendment.
**	Incorporated by reference to the Registration Statement on Form F-6 to be filed with the Securities and Exchange Commission with respect to American depositary shares representing our ordinary shares.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Hangzhou, China on October 28, 2019.

Canaan Inc.	
By:	/s/ Nangeng Zhang
	Name: Nangeng Zhang
	Title: Chairman and Chief Executive Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below does hereby constitute and appoint Nangeng Zhang and Jianping Kong, and each of them singly, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and all post-effective amendments thereto and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form F-1 has been signed by the following persons in the following capacities on October 28, 2019.

Signature	Title
/s/ Nangeng Zhang	
Name: Nangeng Zhang	Chairman and Chief Executive Officer (principal executive officer)
/s/ Jiaxuan Li	
Name: Jiaxuan Li	Director
/s/ Jianping Kong	
Name: Jianping Kong	Director
/s/ Qifeng Sun	
Name: Qifeng Sun	Director
/s/ Quanfu Hong	
Name: Quanfu Hong	Vice President of Finance (principal financial and accounting officer)

Signature of Authorized Representative in the United States

Pursuant to the Securities Act of 1933, as amended, the undersigned, the duly authorized representative in the United States of Canaan Inc. has signed this registration statement or amendment thereto in Los Angeles, California on October 28, 2019.

Cogency Global Inc.	
By:	/s/ Richard Arthur
	Name: Richard Arthur
	Title: Assistant Secretary