

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

FORM 20-F

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
 ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2022.
OR
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
 SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the transition period from ___ to ___
Commission file number: 001-39127

Canaan Inc.

(Exact name of Registrant as specified in its charter)

Cayman Islands
(Jurisdiction of incorporation or organization)
28 Ayer Rajah Crescent #06-08, S139959, Singapore
(Address of principal executive offices)
James Jin Cheng, Chief Financial Officer
Telephone: +65 6305 6618
Email: IR@canaan-creative.com
28 Ayer Rajah Crescent #06-08, S139959, Singapore

* (Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
American Depositary Shares, each representing 15 Class A ordinary shares	CAN	NASDAQGlobalMarket.
Class A ordinary share		
Class A ordinary shares, par value US\$0.00000005 per share*		NASDAQGlobalMarket.

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

**Securities registered or to be registered pursuant to Section 12(g) of the Act. None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act. None**

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

2,492,514,048 Class A ordinary shares were outstanding as of December 31, 2022
311,624,444 Class B ordinary shares were outstanding as of December 31, 2022

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

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

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

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

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. Yes No

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). Yes No

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

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

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes No

CANAAN INC.
FORM 20-F ANNUAL REPORT
FISCAL YEAR ENDED DECEMBER 31, 2022

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Conventions that Apply to this Annual Report on Form 20-F

In this annual report, unless otherwise indicated:

- “ADRs” are to American depositary receipts, which, if issued, evidence the ADSs;
- “ADSs” are to the American depositary shares, each of which represents 15 of our Class A ordinary shares;
- “China” and the “PRC” are to the People’s Republic of China, excluding, for the purposes of this annual report only, Taiwan, the Hong Kong Special Administrative Region and the Macao Special Administrative Region;
- “PRC operating subsidiaries” are to, for the purpose of this annual report, Hangzhou Canaan Intelligence Information Technology Co., Ltd., Canaan Creative Co., Ltd., Langfang Creative Technology Co., Ltd., Canaan Convey Co., Ltd., Zhejiang Avalon Technology Co., Ltd., Canaan Bright Sight Co., Ltd., and Canaan Creative (SH) Co., Ltd.
- “PRC subsidiaries” are to, for the purpose of this annual report, PRC operating subsidiaries, Hangzhou Ruihong Technology Co., Ltd., Hangzhou Canaan Chuangxin Technology Co., Ltd., and Hangzhou Canaan Blockchain Technology Co., Ltd.
- “operating subsidiaries” are to, for the purpose of this annual report, Canaan Creative (HK) Holdings Limited, Canaan Creative International PTE. Ltd., Canaan Creative Global Pte. Ltd., Canaan U.S. Inc. and our PRC operating subsidiaries.
- “RMB” or “Renminbi” are to the legal currency of China;
- “US\$,” “U.S. dollars,” or “dollars” are to the legal currency of the United States; and
- “we,” “us,” “our company,” “the Company,” “our” and “Canaan” are to Canaan Inc. and its subsidiaries, as the context requires.

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

Our ADSs are listed on the NASDAQ Global Market under the symbol “CAN.”

Glossary of Technical Terms

This glossary contains explanations of certain terms used in this annual report in connection with our company and our business. In this annual report, unless otherwise indicated:

- “AI” are to artificial intelligence;
- “AICPA” are to American Institute of Certified Public Accountants;
- “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;
- “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; and
- “Thash/s” or “TH/s,” “GH/s” are to the measuring unit of hash rate. 1 TH/s = 1,000 GH/s.

Forward-Looking Information

This annual report contains statements of a forward-looking nature. All statements other than statements of historical facts are forward-looking statements. These forward-looking statements are made under the “safe harbor” provision under Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and as defined in the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. In some cases, these forward-looking statements can be identified by words or phrases such as “may,” “will,” “expect,” “anticipate,” “aim,” “estimate,” “intend,” “plan,” “believe,” “potential,” “continue,” “is/are likely to” or other similar expressions.

These forward-looking statements relate to, among others:

- our goal and strategies;
- our expansion plans;
- our future business development, financial condition and results of operations;
- our expectations regarding demand for, and market acceptance of, our products; and
- general economic and business conditions.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs.

You should read these statements in conjunction with the risks disclosed in “Item 3. Key Information—D. Risk Factors” of this annual report and other risks outlined in our other filings with the Securities and Exchange Commission, or the SEC. Moreover, we operate in an emerging and evolving environment. New risks may emerge from time to time, and it is not possible for our management to predict all risks, nor can we assess the impact of such risks on our business or the extent to which any risk, or combination of risks, may cause actual results to differ materially from those contained in any forward-looking statements. The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report and the documents that we have referred to in this annual report, completely and with the understanding that our actual future results may be materially different from what we expect.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not required.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not required.

ITEM 3. KEY INFORMATION

We are a Cayman Islands holding company and conduct all of our operations through our operating subsidiaries. Investors in the ADSs are not purchasing equity securities of our operating subsidiaries but instead are purchasing equity securities of a Cayman Islands holding company. We face various legal and operational risks and uncertainties associated with being based in or having a portion of our operations in China and the complex and evolving PRC laws and regulations. For example, we face risks associated with regulatory approvals on offerings conducted overseas and foreign investment in China-based issuers, anti-monopoly regulatory actions, regulatory actions for virtual currency-related business activities and mining activities and oversight on cybersecurity and data privacy, which may negatively impact our ability to conduct certain businesses, access foreign investments, or list on foreign stock exchange. These risks could result in a material adverse change in our operations and the value of our ADSs, limit or hinder our ability to offer or continue to offer securities to investors, or cause the value of such securities to significantly decline or become worthless. For a detailed description of risks relating to doing business in China, see “—D. Risk Factors—Risks Relating to Doing Business in the PRC.”

Our auditors, KPMG Huazhen LLP and PricewaterhouseCoopers Zhong Tian LLP are independent registered public accounting firms that issue the audit reports included elsewhere in this annual report. Our securities will be prohibited from trading on a national securities exchange or in the over-the-counter trading market in the United States under the Holding Foreign Companies Accountable Act, or the HFCAA, if the Securities and Exchange Commission determines that Canaan has have filed audit reports issued by a registered public accounting firm that has not been subject to inspections by the PCAOB for two consecutive years. On December 16, 2021, the PCAOB issued a report to notify the SEC of its determination that the PCAOB was unable to inspect or investigate completely registered public accounting firms headquartered in mainland China and Hong Kong and our auditors were subject to this determination. Consequently, we were conclusively identified as a “Commission-Identified Issuer” on May 4, 2022. On December 15, 2022, the PCAOB announced that it was able to secure complete access to inspect and investigate PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong in 2022. Each year, the PCAOB will determine whether it can inspect and investigate completely audit firms in mainland China and Hong Kong, among other jurisdictions. If the PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong and we use an accounting firm headquartered in one of these jurisdictions to issue an audit report on its financial statements filed with the SEC, we would be identified as a Commission-Identified Issuer following the filing of the annual report on Form20-F for the relevant fiscal year. In accordance with the HFCAA, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the United States if it is identified as a Commission- Identified Issuer for two consecutive years in the future. If our securities are prohibited from trading in the United States, there is no certainty that we will be able to list on a non-U.S. exchange or that a market for our securities will develop outside of the United States. In the event of such prohibition, the Nasdaq may determine to delist our securities. The delisting of our securities, or the threat of their being delisted, may materially and adversely affect the value of your investment. See “-D. Risk Factors-Risks Relating to Doing Business in the PRC-Our ADSs may be delisted under the Holding Foreign Companies Accountable Act if the PCAOB is unable to inspect auditors who are located in China. The delisting of our ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.”

Permissions Required from the PRC Authorities for Our Operations

We conduct our business primarily through our PRC operating subsidiaries in China. Our operations in China are governed by PRC laws and regulations. As of the date of this annual report, our PRC operating subsidiaries have obtained all requisite permissions for our operations in all material aspects from relevant Chinese authorities, and none of the requisite permissions for our operations in all material aspects have been denied by the Chinese authorities.

Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practice by relevant government authorities, we may be required to obtain additional licenses, permits, filings or approvals for our business operations in the future. If our PRC operating subsidiaries (i) do not receive or maintain required permissions or approvals, (ii) inadvertently conclude that such permissions or approvals are not required, or (iii) applicable laws, regulations, or interpretations change and our PRC operating subsidiaries are required to obtain such permissions or approvals in the future, our PRC operating subsidiaries could be subject to fines, legal sanctions or an order to suspend the our PRC operating subsidiaries' business, which may materially and adversely affect the business, financial condition and results of operations of us.

Offering of Securities outside of PRC

The China Securities Regulatory Commission, or the CSRC, promulgated Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic Companies (the "Overseas Listing Trial Measures") and five relevant guidelines on February 17, 2023, which became effective on March 31, 2023. The Overseas Listing Trial Measures regulate both direct and indirect overseas offering and listing by PRC domestic companies by adopting a filing-based regulatory regime.

The Overseas Listing Trial Measures provide that if the issuer both meets the following criteria, the overseas securities offering and listing conducted by such issuer will be deemed as indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) 50% or more of the issuer's operating revenue, total profit, total assets or net assets as documented in its audited consolidated financial statements for the most recent fiscal year is accounted for by the issuer's domestic companies; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The determination as to whether or not an overseas offering and listing by domestic companies is indirect, shall be made on a substance over form basis.

On the same day, the CSRC also held a press conference for the release of the Trial Measures and issued the Notice on Administration for the Filing of Overseas Offering and Listing by Domestic Companies, which, among others, clarifies that on or prior to the effective date of the Overseas Listing Trial Measures, domestic companies that have been completed their overseas offering and listing, which are called as "the stock enterprises (存量企业)". As a stock enterprise (存量企业), we shall file with the CSRC within 3 working days after the subsequent securities offering is completed. The CSRC shall order rectification, issue warnings and impose fines to the company fails to fulfill filing procedure as stipulated in Overseas Listing Trial Measures.

In addition, the CSRC published the Provisions on Strengthening Confidentiality and Archives Administration in Respect of Overseas Issuance and Listing of Securities by Domestic Enterprises (《关于加强境内企业境外发行证券和上市相关保密和档案管理工作的规定》) on February 24, 2023, which became effective on March 31, 2023. The CSRC stipulates domestic enterprises, securities companies and securities service agencies which provide the corresponding services in the course of overseas issuance and listing of domestic enterprises, shall strengthen legal awareness of confidentiality of State secrets and archives administration, establish a sound system for confidentiality and archives work, adopt the requisite measures to perform the responsibilities of confidentiality and archives administration.

As there are still uncertainties regarding the interpretation and implementation of such regulatory guidance, we cannot assure you that we will always be able to comply with new regulatory requirements relating to our future overseas capital-raising activities. We may become subject to more stringent requirements with respect to matters including cross-border investigation and enforcement of legal claims.

Proposed Regulation by the Cyberspace Administration of China

On July 10, 2021, the Cyberspace Administration of China, or the CAC, the National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of State Security, Ministry of Finance, Ministry of Commerce, People's Bank of China, State Administration for Market Regulation, National Radio and Television Administration, China Securities Regulatory Commission, National Administration of State Secrets Protection and State Cipher Code Administration jointly issued the revised Measures for Cybersecurity Review (《网络安全审查办法(2021)》) (the "Revised Review Measures"), which became effective on February 15, 2022. Pursuant to the Revised Review Measures, critical information infrastructure operators that procure internet products and services and network platform operators engaging in data processing activities that affect or may affect national security must be subject to the cybersecurity review. The Revised Review Measures further stipulate that if a network platform operator has personal information of over one million users and intends to be listed in a foreign country, it must be subject to the cybersecurity review. On November 14, 2021, the CAC published the Administrative Regulations on Internet Data Security (Draft for Comment) (《网络数据安全条例(征求意见稿)》, "Draft Regulations"), which stipulate the scope for data processors to declare network security review. The draft regulations may apply to the use of networks to carry out data processing activities and the supervision and administration of network data security in China and apply to activities outside China to process data of individuals and organizations in China under any of the following circumstances: (1) for the purpose of providing products or services to China; (2) analyze and evaluate the behavior of domestic individuals and organizations; (3) involving domestic important data processing; (4) other circumstances stipulated by laws and administrative regulations. The Draft Regulations further stipulate that if a data processor that processes the personal information of more than one million users intends to be listed in a foreign country, it shall declare the network security review. On July 7, 2022, CAC promulgated Measures for the Security Assessment of Outbound Data Transfers, (《数据出境安全评估办法》, the "Data Cross Border Measures"), which became effective on September 1, 2022 and provide that a data processor is required to apply for security assessment for cross-border data transfer in any of the following circumstances: (i) where a data processor provides critical data to offshore entities and individuals; (ii) where a CIIO or a data processor which processes personal information of more than one million individuals provides personal information to offshore entities and individuals; (iii) where a data processor has provided personal information in the aggregate of more than 100,000 individuals or sensitive personal information of more than 10,000 individuals in total to offshore entities and individuals since January 1 of the previous year; or (iv) other circumstances prescribed by the CAC for which declaration for security assessment for cross-board transfer of data is required. Furthermore, on August 31, 2022, the CAC promulgated the Guidelines for filing the Outbound Data Transfer Security Assessment (Version 1)(《数据出境安全评估申报指南(第一版)》), which provides that acts of outbound data transfer include (i) overseas transmission and storage by data processors of data generated during mainland China domestic operations; (ii) the access to, use, download or export of the data collected and generated by data processors and stored in mainland China by overseas institutions, organizations or individuals; and (iii) other acts as specified by the CAC. Our principal business activities do not involve large numbers of registered users or deal with vast amount of user data. While we operate a small-scale online discussion forum for developers and therefore transmit and store limited amount of confidential and private information of our customers and others, such as personal information, including user accounts, phone numbers, and E-mail accounts, our online discussion forum is far less than one million of registered users. The Revised Review Measures and the Draft Regulations remain unclear on whether the relevant requirements will be applicable to companies, which have been listed in the United States, such as us. They also remain uncertain whether the future regulatory changes would impose additional restrictions on companies like us. We cannot predict the impact of the Revised Review Measures and the Draft Regulations, if any, at this stage, and we will closely monitor and assess any development in the rule-making process.

Cash Flows through our Company

Canaan Inc. is a Cayman Islands holding company with no operations of its own. We conduct our operations primarily through our PRC operating subsidiaries. As a result, although other means are available for us to obtain financing at the holding company level, the ability of Canaan Inc. to pay dividends to the shareholders and to service any debt it may incur may depend upon dividends primarily paid by our PRC subsidiaries. If any of our PRC subsidiaries incurs debt on its own behalf, the instruments governing such debt may restrict its ability to pay dividends to Canaan Inc. In addition, our PRC subsidiaries are permitted to pay dividends to Canaan Inc. only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Further, our PRC subsidiaries are required to make appropriations to certain statutory reserve funds or may make appropriations to certain discretionary funds, which are not distributable as cash dividends except in the event of a solvent liquidation of the companies. For more details, see "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Holding Company Structure."

Under PRC laws and regulations, our PRC subsidiaries are subject to certain restrictions with respect to paying dividends or otherwise transferring any of their net assets to us. Remittance of dividends by a wholly foreign-owned enterprise out of China is also subject to examination by the banks designated by State Administration of Foreign Exchange, or SAFE. These restrictions are benchmarked against the paid-up capital and the statutory reserve funds of our PRC subsidiaries. For risks relating to the fund flows of our operations in China, see “—D. 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.” For the years ended December 31, 2020, 2021 and 2022, no dividends or distributions were made to Canaan Inc. by our PRC subsidiaries.

Under PRC law, Canaan Inc. may provide funding to our PRC subsidiaries only through capital contributions or loans, subject to satisfaction of applicable government registration and approval requirements. For the years ended December 31, 2020, 2021 and 2022, Canaan Inc. provided loans with principal amount of RMB111.6 million, RMB294.4 million and nil, respectively, to our PRC subsidiaries through our Hong Kong subsidiary. For the years ended December 31, 2020, 2021 and 2022, no cash generated from one of our subsidiaries were used to fund another subsidiary’s operations. And we do not have any policy in place that dictate such funding. As of date of this annual report, we have never faced difficulties or limitations on our ability to transfer cash between our subsidiaries.

Taxation on Dividends or Distributions

Canaan Inc. has not declared or paid any dividends on our ordinary shares since our inception, nor has any present plan to pay any dividends on our ordinary shares or ADSs in the foreseeable future. We currently intend to retain most, if not all, of our available funds and any future earnings to operate and expand our business. See “Item 8. Financial Information —A. Consolidated Statements and Other Financial Information—Dividend Policy and Distributions.” For PRC and United States federal income tax considerations of an investment in our ADSs, see “Item 10. Additional Information—

E. Taxation.” Under the current laws of the Cayman Islands, Canaan Inc. is not subject to tax on income or capital gains. Upon payments of dividends to our shareholders, no Cayman Islands withholding tax will be imposed. For purposes of illustration, the following discussion reflects the hypothetical taxes that might be required to be paid within mainland China, assuming that: (i) we have taxable earnings, and (ii) we determine to pay a dividend in the future:

	Tax calculation ⁽¹⁾
Hypothetical pre-tax earnings	100 %
Tax on earnings at statutory rate of 25% ⁽²⁾	(25)%
Net earnings available for distribution	75 %
Withholding tax at standard rate of 10% ⁽³⁾	(7.5)%
Net distribution to Parent/Shareholders	67.5 %

Notes:

- (1) For purposes of this example, the tax calculation has been simplified. The hypothetical book pre-tax earnings amount, not considering timing differences, is assumed to equal taxable income in China.
- (2) Certain of our PRC subsidiaries qualify for a 15% preferential income tax rate in China. However, such rate is subject to qualification, is temporary in nature, and may not be available in a future period when distributions are paid. For purposes of this hypothetical example, the table above reflects a maximum tax scenario under which the full statutory rate would be effective.
- (3) The PRC Enterprise Income Tax Law imposes a withholding income tax of 10% on dividends distributed by a foreign invested enterprise, or FIE, to its immediate holding company outside of China. A lower withholding income tax rate of 5% is applied if the FIE’s immediate holding company is registered in Hong Kong or other jurisdictions that have a tax treaty arrangement with China, subject to a qualification review at the time of the distribution. For purposes of this hypothetical example, the table above assumes a maximum tax scenario under which the full withholding tax would be applied.

A. [Reserved]

B. Capitalization and Indebtedness

Not required.

C. Reasons for the Offer and Use of Proceeds

Not required.

D. Risk Factors

Risk Factor Summary

The following summary highlights some of the principal risks that could adversely affect our business, financial condition or results of operations. This summary is not complete and the risks summarized below are not the only risks we face. These risks are discussed more fully further below in this section entitled “Risk Factors.” These risks include, but are not limited to, the following:

Risks Relating to Our Business and Industry

- Our results of operations have been and are expected to continue to be significantly impacted by the expected economic returns of Bitcoin mining.
- 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.
- 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.
- 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.
- 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.
- The ongoing coronavirus (“COVID-19”) pandemic could have a material adverse effect on our business operations, results of operations, cash flows and financial position.
- Changes in the Bitcoin algorithm or the mining mechanism may materially and adversely affect our business and results of operations.
- We may be unable to make the substantial research and development investments that are required to remain competitive in our business.
- Our Bitcoin mining machine business depends on supplies from limited numbers of third-party foundry partners, and any failure to obtain sufficient foundry capacity from these third-party foundry partners would significantly delay the shipment of our products.
- 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.
- 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.
- Our prepayments to suppliers may subject us to counterparty risk associated with such suppliers and negatively affect our liquidity and cash position.

- Failure at tape-out or failure to achieve the expected final test yields for our ASICs could negatively impact our operating results.
- 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.
- 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.
- Our Bitcoin mining machines use open source software and hardware as their basic controller system, which may subject us to certain risks.
- 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.
- 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.
- Our business is subject to various evolving PRC laws and regulations regarding data privacy and cyber-security. Failure of cyber-security and data privacy concerns could subject us to penalties, damage our reputation and brand, and harm our business and results of operations.
- 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.
- We may be involved in legal and other disputes from time to time, whether arising out of our operations, including disputes with our raw material or component suppliers, production partners, customers or employees, or class action lawsuits from our shareholders.

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.
- 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.
- Risks and uncertainties arising from the legal system of mainland China could result in a material adverse change in our operations and the value of our ADSs. Also, PRC governmental authorities’ oversight and control over offerings conducted overseas by, and foreign investment in, China-based issuers could limit or hinder our ability to offer or continue to offer securities to investors and result in a material adverse change in our operations and the value of our ADSs.
- 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.
- The PCAOB had historically been unable to inspect our auditors in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditors in the past has deprived our investors with the benefits of such inspections.
- Our ADSs may be delisted under the Holding Foreign Companies Accountable Act if the PCAOB is unable to inspect auditors who are located in China. The delisting of our ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.

Risks Relating to Doing Business in International Markets Outside the PRC

- 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.

Risks Relating to the ADSs

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

An investment in our ADSs involves a high degree of risk. You should carefully consider the following information about these risks, together with the other information appearing elsewhere in this annual report, before deciding to invest in our ordinary shares. The occurrence of any of the following risks could have a material adverse effect on our business, financial condition, results of operations and future growth prospects. In these circumstances, the market price of our ADSs could decline, 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 significantly impacted by the expected economic returns of Bitcoin mining.

Our revenues are primarily derived from the sales of Bitcoin mining machines and related parts, which are, in general, determined by the demand and pricing of our Bitcoin mining machines. Bitcoin miners' purchasing behavior is primarily driven by the expected economic returns of Bitcoin mining. An increase in the Bitcoin price is one of significant factors that could increase the expected economic returns generated by Bitcoin mining activities and stimulate the demand and average selling price for our Bitcoin mining machines, and vice versa. Bitcoin price fluctuated significantly in the past few years and resulted in corresponding fluctuations of our sale of Bitcoin mining machines. We expect our results of operations to continue to be affected by the fluctuations of Bitcoin price, as a significant portion of our revenue is expected to come from the sales of Bitcoin mining machines and related parts. Any future significant reductions in the price of Bitcoin and Bitcoin network transaction fees, and/or the maintenance of a lower Bitcoin price for a long term will likely have a material and adverse effect on our results of operations and financial condition. For example, if the Bitcoin price or Bitcoin network transaction fees drop and fail to recover, 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. We cannot assure you that the Bitcoin price will remain high enough to sustain our operations or that the price of Bitcoin will not decline significantly in the future. Further, fluctuations in the Bitcoin price can have an immediate impact on the trading price of our shares even before our financial performance is affected, if at all.

In addition to the volatility of Bitcoin price, various other factors, mostly beyond our control, could impact the expected economic returns of Bitcoin mining as well, including, among others, the overall imbalanced supply and demand for bitcoin mining machines, the supply and availability of mining farm resources, changes in electricity costs or other operating costs, the total network computing power, the cost-efficiency and the depreciation of mining machines, and a variety of special economic, geopolitical and regulatory factors. Additionally, 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 Bitcoin mining machines.

Furthermore, price reduction in our bitcoin mining machines due to a complex effect of fluctuations in Bitcoin price may subsequently 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 for Bitcoin mining machines, 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, as the Bitcoin price has fluctuated from the second half of 2022 to the first quarter of 2023, we continued to experience low demand and low prices in the Bitcoin mining machines market. Subsequently, another price drop on A12 series was offered in late March 2023, which in turn led to a further write-down to such inventories and related prepayments based on the most recent subsequent selling price, despite an inventories write-down recorded based on the price earlier. As a result, we recorded inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB629.4 million in 2022. If the Bitcoin price drops significantly in the future, we may make similar write-down again. 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 Bitcoin price drop in the past has also caused our customers who purchased our Bitcoin mining products on credit to be less willing to make payments. 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. In 2020, we recognized such price concessions of RMB11.5 million. We did not provide price concession in 2021 and 2022. We had ceased to provide credit sales for our clients since the second half of 2020, but we may offer sales on credit again to some of our customers in the future, and if the Bitcoin price drops significantly in the future, we will need to recognize such as implicit price concession.

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.

Historically, we generated substantially all of our revenues from the sales of our Bitcoin mining machines that incorporate our proprietary ASICs. In 2020, 2021 and 2022, sales of our Bitcoin mining machines and related parts and accessories accounted for 94.4%, 99.1% and 94.8% of our revenues, respectively. We may continue to generate a significant portion of our revenue from the sales of Bitcoin mining machines in the foreseeable future. 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 or displaced by another cryptocurrency, thereby causing Bitcoin to lose value or become worthless, which could adversely affect the sustainability of our business;
- 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 halving event occurred in May 2020, and the next halving event expected to take place in 2024, 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 or 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 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.

While we endeavor to expand our AI business, sales of Bitcoin mining machines continue to account for a substantial majority of our total revenue. Our AI revenue was RMB4.9 million, RMB17.0 million and RMB9.3 million for the years ended December 31, 2020, 2021 and 2022, respectively. Our future revenue growth of our AI business 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 our technologies or solutions become obsolete because of new technologies, our products may no longer be attractive to customers. 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.

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, our business could be significantly affected by, among other things, the regulatory and policy developments in countries and regions where we operate, such as China, United States, Singapore and Central Asia. Governmental authorities are likely to continue to issue new policies, laws, rules and regulations governing the blockchain and cryptocurrency industry we operate in and enhance enforcement of existing laws, rules and regulations.

In the recent years, the PRC government has been actively advancing a crackdown on Bitcoin mining and trading in China. For example, on May 21, 2021, the 51st meeting of the Financial Stability and Development Committee of the State Council announced a crackdown on bitcoin mining and trading activities in China. Accordingly, provincial authorities in the PRC have taken action to gradually crack down on cryptocurrency mining. For example, Sichuan Province ordered cryptocurrency mining in the province be “screened, cleaned up and terminated.” Inner Mongolia Autonomous Region and Qinghai Province have taken similar actions to stamp out cryptocurrency mining. On September 15, 2021, the People’s Bank of China, or PBOC, with nine other Chinese government authorities, jointly released the *Circular on Further Preventing and Handling the Risks Concerning Speculation in Virtual Currency Trading* (《关于进一步防范和处置虚拟货币交易炒作风险的通知》) (the “Circular No. 237”). Circular No. 237, for the first time, deems all cryptocurrency-related business activities, including: (i) exchanging legitimate currencies and cryptocurrencies or different types of crypto currencies for each other, (ii) trading cryptocurrencies as central counterparty, (iii) provision of intermediary services or pricing services for cryptocurrency transactions, (iv) issuance of tokens for financing, and (v) (for the first time) cryptocurrency related derivatives trading, as “illegal financial activities” that could involve illegal offerings of token notes, unauthorized public offerings of securities, illegal operation of futures business or illegal fundraising. It also provides that any cryptocurrency exchange offering services to Chinese residents from outside mainland China through the internet will also be regarded as conducting “illegal financial activities.” Also, on September 3, 2021, China’s National Development and Reform Commission (NDRC) and nine other authorities jointly issued a *Notice on Regulating Virtual Currency “Mining” Activities* (《关于整治虚拟货币“挖矿”活动的通知》) (the “Circular No. 1283”) to restrict cryptocurrency mining activities in the PRC. Circular No. 1283 imposes an outright ban on greenfield cryptocurrency mining projects, by including cryptocurrency mining as an “obsolete industry” in the Catalogue for Guiding Industry Restructuring (《产业结构调整指导目录》) (the “Catalogue”), which effectively prohibits investments in projects falling within this category. The revised Catalogue came into effect on December 30, 2021. Circular No. 1283 also calls for existing cryptocurrency mining projects to be phased out at a quicker pace. Required actions include stopping and penalizing illicit power supply, differential electricity tariffs, withdrawing access to the power market, termination of financial and fiscal support and financial services for these projects, and phase-out within the time limits prescribed by the Catalogue. Any further order of the PRC government to limit, eliminate, clean up and terminate cryptocurrency mining may result in a crackdown on the cryptocurrency market and adversely affect the sales of our mining machine. While we have been actively exploring international market and have had 97.2% of our total revenue generated from sales of Bitcoin mining machines and related parts and coming from the customers who undertake mining activities in countries outside of the PRC in 2022, the long-term impact of such restrictions could be detrimental to our business and profitability, and our business and results of operation may suffer and investors in our ADSs may lose part or all of their investment if further extreme restrictions follow.

Regulatory bodies in other jurisdictions, governmental or semi-governmental, have shown an interest in regulating or investigating companies engaged in the blockchain or cryptocurrency business. Restrictions imposed by the regulatory bodies in other jurisdictions may force us to restructure operations, perhaps significantly, which could result in significant costs and inefficiencies that harm our profitability, or even cause us to cease operations in the applicable jurisdiction. Cryptocurrency is a recent technological innovation and the regulatory schemes to which cryptocurrency and the related exchange may be subject have not been fully explored or developed in many countries. Thus, cryptocurrency faces an uncertain regulatory landscape in many countries. Some jurisdictions restrict various uses of cryptocurrencies, including the use of cryptocurrencies as a medium of exchange, the conversion between cryptocurrencies and fiat currencies or between cryptocurrencies, the provision of trading and other services related to cryptocurrencies by financial institutions and payment institutions, and initial coin offerings and other means of capital raising based on cryptocurrencies. We cannot assure you that these jurisdictions will not enact new laws or regulations that further restrict activities relate to cryptocurrencies. In addition, cryptocurrencies may be used by market participants for black market transactions, to conduct fraud, money laundering and terrorism-funding, tax evasion, economic sanction evasion or other illegal activities. As a result, governments may seek to regulate, restrict, control or ban the mining, use, holding and transferring of cryptocurrencies. We may not be able to eliminate all instances where other parties use Bitcoin mined with our Bitcoin mining machines to engage in money laundering or other illegal or improper activities. We cannot assure you that we will successfully detect and prevent all money laundering or other illegal or improper activities which may adversely affect our reputation, business, financial condition and results of operations. Furthermore, due to the environmental-impact concerns related to the potential high demand for electricity to support cryptocurrency mining activity, political concerns, and for other reasons, our customers may be required to cease mining operations without much or any prior notice by a national or local government's formal or informal requirement or because of the anticipation of an impending requirement. For example, due to the most recent power shortage and political unrest in Central Asia, some Bitcoin mining farms temporarily suspended mining activities in Central Asia. Our business, financial condition and results of operations may be materially and adversely affected by these adverse changes in the regulatory and policy environment in the markets where we sell our Bitcoin mining machines and related parts.

Each of our operating subsidiaries in Hong Kong, Singapore and United States has a limited operating history, which makes it hard for us to evaluate their ability to generate revenue through operations, and to date, none of them has generated significant revenues.

Our operating subsidiaries in Hong Kong, Singapore and the United States were recently formed in recent years to explore the markets for our products outside the PRC. Their limited operating history makes it difficult for us to evaluate their current business and future prospects. They have encountered, and will continue to encounter, risks and difficulties frequently experienced by growing companies in rapidly developing and changing industries, including challenges in forecasting accuracy, determining appropriate uses of their limited resources, gaining market acceptance, managing a complex and evolving regulatory landscape and developing new products. These subsidiaries' current or future operating model may require changes in order for them to scale their operations efficiently and be successful. Investors in our ADSs should consider the business and prospects of our subsidiaries in these countries in light of the risks and difficulties they face as early-stage companies.

We lack a significant operating history in the Bitcoin mining space, and our strategic focus on this relatively new business is subject to a number of significant risks and uncertainties that could affect our future viability.

We have recently adopted the development strategy to initiate the Bitcoin mining operations in international markets through collaborating with several cryptocurrency mining farms. However, there is a significant risk that we will be unable to achieve the anticipated benefits from such strategic collaborations, which would damage our business and could lead to the loss of our investment in Bitcoin mining, for a variety of reasons, including, among others:

- Because of supply chain disruptions resulting from the COVID-19 pandemic or geopolitical crises, we could in the future encounter delivery delays or other difficulties with the installing and operating our mining machines at the facility of our partners;
- Due to the environmental-impact concerns related to the potential high demand for electricity to support bitcoin mining activity and political concerns, and for other reasons, our partners may be required to cease mining operations without any prior notice by a national or local government's formal or informal requirement or because of the anticipation of an impending requirement;
- Bans from governments, together with pending legislation and other regulatory initiatives, may threaten the ability to use Bitcoin or cryptocurrencies as a medium of exchange;

- We may not be able to liquidate our holdings of Bitcoin at our desired prices if a precipitous decline in market prices occurs and this could negatively impact our future operations; and
- Our efforts may not provide the expected benefits in our anticipated time frame, if at all, and may prove more costly than expected, and we may be subject to the risks of adverse effects to our business, results of operations and liquidity if past and future undertakings and the associated changes to our business, do not prove to be cost effective or result in the cost savings and other benefits at the levels that we anticipate. Our intentions and expectations with regard to the execution of our business plan and the timing of any related initiatives, are subject to the change at any time based on management’s subjective evaluation of our overall business needs.

For all of these reasons, our plan to develop Bitcoin mining business may ultimately not be successful or will not achieve viable business scale or market acceptance.

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 that 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 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.

Additionally, the amount of Bitcoin awarded for solving each block is designed to decline approximately every four years, with the most recent halving event occurred in May 2020. 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 coupled with the decrease in Bitcoin reward, resulting in downward pressure on the expected economic return of Bitcoin mining and the demand for, and pricing of, our products, under the assumption that the price of Bitcoin does not increase enough.

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. In 2020, 2021 and 2022, we incurred research and development expense of RMB140.0 million, RMB332.8 million and RMB546.6 million (US\$79.3 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 machines 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 depends on supplies from limited numbers of third-party foundry partners, and any failure to obtain sufficient foundry capacity from these third-party foundry partners would significantly delay the shipment of our products.

As a fabless IC design company, we do not own any IC fabrication facilities and outsource the fabrication process of our ICs to third-party foundry partners. In 2020, the value of the wafers we purchased from the three major third-party foundry partners accounted for 66.1% of our total procurement of the year ended December 31, 2020. In 2021, the value of the wafers we purchased from the two major third-party foundry partners accounted for 66.0% of our total procurement of the year ended December 31, 2021. In 2022, the value of the wafers we purchased from the three major third-party foundry partners accounted for 76.2% of our total procurement of the year ended December 31, 2022. It is important for us to have a reliable relationship with our current and future third-party foundry partners to ensure adequate product supply to respond to customer demand.

As we rely on limited numbers of third-party foundry partners, we cannot guarantee that they will be able to meet our manufacturing requirements. The ability of our third-party foundry partners to provide us with foundry services is limited by their technology migration, available capacity, existing obligations and global semiconductor supply. In particular, we have experienced a global shortage in semiconductors beginning 2021, which may have adversely impacted the production activity and capacity of our third-party foundry partners. If these third-party foundry partners fail to succeed in their technology migration or secure enough semiconductors, they will not be able to deliver to us qualified ICs in a sufficient amount, 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 depend on our third-party foundry partners to allocate to us a portion of their 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 our third-party foundry partners raise their prices or are 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 them 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 our third-party foundry partners that are larger and/or better financed than we are, or that have long-term contracts with them, may receive preferential treatment in terms of capacity allocation or pricing. In addition, if we do not accurately forecast our capacity needs, our third-party foundry partners 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 our third-party foundry partners 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. We have historically contracted with a single foundry for a specific generation of our ASICs, which means that the failure, for whatever reason, of a single third-party foundry partner could materially and adversely affect a whole generation of our products.

Other risks associated with our dependence on a few third-party foundry partners 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 partners 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 any of our third-party foundry partners 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.

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 write-down. We recorded inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB44.9 million, RMB50.7 million and RMB629.4 million (US\$91.3 million) in 2020, 2021 and 2022, respectively. The carrying value of our inventories was RMB225.5 million, RMB812.4 million and RMB1,474.0 million (US\$213.7 million) as of December 31, 2020, 2021 and 2022, 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. 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. Though we have experienced significant revenue growth in the past, there is no guarantee that our revenue will continue to grow or at all. 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.

Historically, we have grown our scale of operations rapidly while our revenues experienced fluctuations due to, among others, the fluctuations of Bitcoin prices. We may not be able to grow our revenue in the future 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 limited numbers of third parties to package and test our products.

In addition to IC fabrication, we rely on limited numbers of production partners 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

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

In 2020, we experienced positive cash flow from operating activities of RMB42.3 million despite a net loss of RMB215.1 million. In 2021, we experienced positive cash flow from operating activities of RMB1,438.9 million and generated a net income of RMB2,000.3 million. In 2022, we generated net income of RMB486.4 million, while experienced negative cash flow from operating activities of RMB1,696.7 million. 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, up-front investment for our mining business, 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 requires 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 third-party foundry partners before the service is provided in order to secure the third-party foundry partners' production capacity. As of December 31, 2020, 2021 and 2022, the outstanding balance of prepayments we made to our third-party foundry partners amounted to RMB182.6 million, RMB1,299.8 million and RMB1,049.2 million (US\$152.1 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, 2020, 2021 and 2022, our trade receivables amounted to RMB7.1 million, RMB0.4 million and nil, respectively. We may have trade receivables in the future and 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 achieved multiple 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. While we have historically achieved high final test yields, 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 any of our third-party foundry partners 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 such third-party foundry partner 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, our third-party foundry partners and package and test partners. We cannot assure you that the cooperation will be successful and that any yield problems can be fixed.

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.

In March 2022, the COVID-19 resurgence, together with the resulting travel restrictions and quarantine measures, caused disruptions in the operations of our assembly plant in the PRC, which resulted in delays in the shipment of products to certain of our customers. There can be no assurance that our operations will not be further materially affected by power shortages, labor disputes, pandemics (e.g. COVID-19) 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.

As we enter into Bitcoin mining business, we will be subject to risks associated with our need for significant electrical power.

Bitcoin mining operations require significant amounts of electrical power, and, as we enter into Bitcoin mining business, we anticipate our demand and/or our partners' demand for electrical power will grow significantly. If we or our partners are unable to obtain sufficient electrical power on a cost-effective basis, we may not realize the anticipated benefits of our significant capital investments in the Bitcoin mining business.

Our Bitcoin mining business may also be materially adversely affected by the restrictions of government regulators in the jurisdictions where we operate on the energy usage of Bitcoin mining. Government regulators may restrict the ability of electricity suppliers to provide electricity to Bitcoin mining operations in times of electricity shortage, or may otherwise potentially restrict or prohibit the provision of electricity to Bitcoin mining operations. Moreover, if Bitcoin mining becomes more widespread, government scrutiny related to restrictions on Bitcoin mining facilities and their energy consumption may significantly increase. The considerable consumption of electricity by Bitcoin mining operation may also have a negative environmental impact, including contribution to climate change, which could set the public opinion against allowing the use of electricity for Bitcoin mining activities or create a negative consumer sentiment and perception of Bitcoin, specifically, or cryptocurrencies, generally. This, in turn, could lead to governmental measures restricting or prohibiting Bitcoin mining or the use of electricity for Bitcoin mining activities. Additionally, our mining operations could be materially adversely affected by power outages and similar disruptions. Given the power requirements for our Bitcoin mining machines, it would not be feasible to run our machines on back-up power generators in the event of a government restriction on electricity or a power outage. If we are unable to receive adequate power supply and are forced to reduce our operations due to the unavailability or cost of electrical power, it would have a material adverse effect on our business, prospects, financial condition and operating results.

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. 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, primarily 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, especially Mr. Nangeng Zhang.

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 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 Mr. 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.

Our share capital is 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. Mr. Nangeng Zhang, our chairman and chief executive officer, beneficially own 100% of our Class B ordinary shares, representing approximately 65.2% of the aggregate voting power of our issued and outstanding share capital as of December 31, 2022. 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 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 are a “controlled company” under the Nasdaq Stock Market Rules and, as a result, will rely on exemptions from certain corporate governance requirements that provide protection to shareholders of other companies.

We are a “controlled company” within the meaning of the Nasdaq corporate governance standards, as Mr. Nangeng Zhang, our chairman and chief executive officer, holds more than 50% of the aggregate voting power of our total issued and outstanding share capital. Under the Nasdaq rules, a controlled company is exempt from certain Nasdaq corporate governance requirements, including the requirements:

- for an annual performance evaluation of the nominating and corporate governance and compensation committees;
- that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter;
- addressing the committee’s purpose and responsibilities; and
- that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibility.

Although we have similar practices, they do not entirely conform to the Nasdaq requirements; therefore, we currently use these exemptions and intend to continue using them. Accordingly, investors will not have the same protections provided to shareholders of companies that are subject to all Nasdaq corporate governance requirements.

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 currently export our products to a number of countries outside of the PRC and derive sales from sales of our products to customers in those countries. We intend to further increase the sales of our current and future products to countries outside of the PRC. In addition, 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 recent years, the U.S. government 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. 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. 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.

We could be adversely affected by political tensions between the United States and China.

Political tensions between the United States and China have escalated in recent years due to, among other things, the trade war between the two countries since 2018, the COVID-19 outbreak, the PRC National People's Congress' passage of Law of the People's Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region, the imposition of U.S. sanctions on certain Chinese officials from China's central government and the Hong Kong Special Administrative Region by the U.S. government, and the imposition of sanctions on certain individuals from the U.S. by the Chinese government, various executive orders issued by former U.S. President Donald J. Trump, such as the executive order issued in November 2020 that prohibits U.S. persons from transacting publicly traded securities of certain "Communist Chinese military companies" named in such executive order, as well as the executive order issued in January 2021 that prohibits such transactions as are identified by the U.S. Secretary of Commerce with certain "Chinese connected software applications" as well as the Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and Other Measures promulgated by China's Ministry of Commerce on January 9, 2021, which will apply to Chinese individuals or entities that are purportedly barred by a foreign country's law from dealing with nationals or entities of a third country. Rising political tensions between China and the U.S. could reduce levels of trades, investments, technological exchanges and other economic activities between the two major economies, which would have a material adverse effect on global economic conditions and the stability of global financial markets. The measures taken by the U.S. and Chinese governments may have the effect of restricting our ability to transact or otherwise do business with entities within or outside of China and may cause investors to lose confidence in Chinese companies and counterparties, including us. If we were unable to conduct our business as it is currently conducted as a result of such regulatory changes, our business, results of operations and financial condition would be materially and adversely affected.

Furthermore, there have been recent media reports on deliberations within the U.S. government regarding potentially limiting or restricting China-based companies from accessing U.S. capital markets, and delisting China-based companies from U.S. national securities exchanges. In January 2021, after reversing its own delisting decision, the NYSE ultimately resolved to delist certain Chinese state-owned enterprises in the telecom industry in compliance with the executive order issued in November 2020, after receiving additional guidance from the U.S. Department of Treasury and its Office of Foreign Assets Control. These delistings have introduced greater confusion and uncertainty about the status and prospects of Chinese companies listed on the U.S. stock exchanges. If any further such deliberations were to materialize, the resulting legislation may have a material adverse impact on the stock performance of China-based issuers listed in the United States such as us, and we cannot assure you that we will always be able to maintain the listing of our ADSs on a national stock exchange in the U.S., such as the NYSE or the Nasdaq Stock Market, or that you will always be allowed to trade our shares or ADSs.

We face risks related to natural disasters, health epidemics, such as COVID-19, and other catastrophes, which could significantly disrupt our operations.

Our business could be materially and adversely affected by natural disasters or other catastrophes, such as earthquakes, fire, floods, hail, windstorms, severe weather conditions, environmental accidents, power loss, communications failures, explosions, terrorist attacks and similar events. Our business could also be materially and adversely affected by public health emergencies, such as the outbreak of avian influenza, severe acute respiratory syndrome, or SARS, Zika virus, Ebola virus, the 2019 novel coronavirus (COVID-19) or other local health epidemics in China and elsewhere and global pandemics. If any of our employees is suspected of having contracted any contagious disease, we may, under certain circumstances, be required to quarantine those employees and the affected areas of our operations. As a result, we may have to temporarily suspend part or all of our facilities. Furthermore, authorities may impose restrictions on travel and transportation and implement other preventative measures in affected regions to deal with the catastrophe or emergency, which may lead to the temporary closure of our facilities and declining economic activity at large.

In the recent period of time, as the Delta and Omicron variants of COVID-19 periodically spread in China, temporary lockdowns and suspension of business had been enforced in the regions affected. Due to the outbreak of Omicron variant in 2022, certain cities in China have imposed new restrictions and quarantine requirements with office closures and stay home orders. Besides, in March 2022, the COVID-19 resurgence, together with the resulting travel restrictions and quarantine measures, caused disruptions in the operations of our assembly plant in the PRC, which resulted in delays in the shipment of products to certain of our customers. At the end of November 2022, Chinese government eased strict zero COVID-19 policy which caused surge of COVID-19 cases in December 2022 and January 2023. A prolonged outbreak of any health epidemic or other adverse public health developments could have a material adverse effect on our business operations.

The COVID-19 pandemic has continued to adversely affect many aspects of our business, including our operations, customers, suppliers and projects. The extent to which the COVID-19 has and may persist to impact our ability to effectively operate continues to be highly uncertain. While we do not expect that the COVID-19 virus will continue to have a material adverse effect on our business or financial results at this time, it is not possible to predict the unanticipated consequences of the recurrence of COVID-19 variants on our future business performance and liquidity given the severe impact brought by the outbreak of COVID-19 since late 2019. We will continue to monitor and adhere to the policies, lockdowns, restrictions, and preventive measures implemented by the various government authorities, as well as general movement restrictions, social distancing and other measures imposed to slow the spread of COVID-19.

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.

Our business is subject to various evolving PRC laws and regulations regarding data privacy and cyber-security. Failure of cyber-security and data privacy concerns could subject us to penalties, damage our reputation and brand, and harm our business and results of operations.

We face significant challenges with respect to cyber-security and data privacy, including the receipt, processing, storage, and transmission of the data of our customers and others, much of which is confidential. While our principal business activities do not involve large amount of registered users and deal with vast amount of user data, we operate a small-scale online discussion forum for developers and therefore transmit and store limited amount of confidential and private information of our customers and others, such as personal information, including user accounts, phone numbers and E-mail accounts. As of December 31, 2022, our online discussion forum had far less than one million of registered users.

As such, we are subject to various regulatory requirements relating to cyber-security and data privacy, including, without limitation the PRC Cybersecurity Law. We are required by these laws and regulations to ensure the confidentiality, integrity, availability, and authenticity of the information of our customers and others, which is also essential to maintaining their confidence in our products. We have adopted strict information security policies and deployed advanced measures to implement the policies, including, among others, advanced encryption technologies. However, advances in technology, an increased level of sophistication and diversity of our products and services, an increased level of expertise of hackers, new discoveries in the field of cryptography or others can still result in a compromise or breach of our websites. If we are unable to protect our systems, and hence the information stored in our systems, from unauthorized access, use, disclosure, disruption, modification, or destruction, such problems or security breaches could cause a loss, give rise to our liabilities to the owners of confidential information, or subject us to fines and other penalties. In addition, complying with various laws and regulations could cause us to incur substantial costs or require us to change our business practices, including our data practices, in a manner adverse to our business.

In addition, regulatory requirements on cyber-security and data privacy are constantly evolving and can be subject to varying interpretations or significant changes, resulting in uncertainties about the scope of our responsibilities in that regard. For example, on June 10, 2021, the Standing Committee of the National People's Congress promulgated the PRC Data Security Law (《中华人民共和国数据安全法》), which took effect in September 2021. The PRC Data Security Law provides for a security review procedure for the data activities that may affect national security. Additionally, the Revised Review Measures, which became effective on February 15, 2022, set forth the cybersecurity review mechanism for critical information infrastructure operators and network platform operators, and provided that critical information infrastructure operators who procure internet products and services and network platform operators engaging in data processing activities that affect or may affect national security shall be subject to a cybersecurity review. The Revised Review Measures further stipulate that if a network platform operator has personal information of over one million users and intends to be listed in a foreign country, it must be subject to the cybersecurity review. The exact scope of "critical information infrastructure operators" and "network platform operators" under the Revised Review Measures and the current regulatory regime remains unclear, and the PRC government authorities may have wide discretion in the interpretation and enforcement of these laws. Therefore, it is uncertain whether we would be deemed as a critical information infrastructure operator or a network platform operator under PRC law. As advised by Commerce & Finance Law Offices, our PRC legal advisor, the Revised Review Measures remain unclear on whether the relevant requirements will be applicable to companies that have been listed in the United States, such as us. It also remains uncertain whether the future regulatory changes would impose additional restrictions on companies like us. We cannot predict the impact of the Revised Review Measures, if any, at this stage, and we will closely monitor and assess any development in the rule-making process. If we are required to complete such review or approval by any further laws and regulations or authorities, we face uncertainties as to whether such clearance can be timely obtained, or at all. If we are not able to comply with the cybersecurity and data privacy requirements in a timely manner, or at all, we may be subject to government enforcement actions and investigations, fines, penalties, suspension of our non-compliant operations, among other sanctions, which could materially and adversely affect our business and results of operations.

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

The amended Enterprise Income Tax Law and its implementation rules permit certain "high and new technology enterprises strongly supported by the state," or HNTEs, which hold independent ownership of core intellectual property to enjoy a preferential enterprise income tax rate, or EIT rate, of 15% subject to certain qualification criteria. HNTEs status is subject to review and renewal every three years. Currently, we have two PRC subsidiaries that are recognized as HNTE and are thus eligible for the favorable 15% enterprise income tax rate from 2022 to 2024. However, if any of these subsidiaries fails to pass the review by, and filing with, the relevant tax authorities to be qualified as a HNTE, such company will no longer enjoy the corresponding preferential tax treatment described above.

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. 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.

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

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.

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, or after the publication of third-party research reports. For example, a negative research report was published about us by Marcus Aurelius Value on February 20, 2020. Subsequently, on March 4, 2020, a putative class action was filed in the United States District Court of Oregon (the "Federal Action") against us and certain of our officers and directors, among others. The complaint alleges that our registration statement on Form F-1, initially filed with the Securities and Exchange Commission on October 28, 2019 (File No. 333-234356), contained material misstatements and omissions in violation of federal securities laws. On March 6, 2020, another putative class action, making substantially similar allegations, was filed in New York County Supreme Court (the "State Action") against us and certain of our officers and directors. On June 1, 2020, we filed a motion to stay all proceedings in the State Action pending adjudication of the Federal Action, which was granted on July 21, 2020. Subsequently, the Federal Action was transferred to the U.S. District Court for the Southern District of New York (the "Court") on September 2, 2020. On October 7, 2020, lead plaintiffs in the Federal Action filed an amended complaint asserting claims under Section 11 of the Securities Act and Sections 10(b) and 20(a) of the Exchange Act for that the registration statement failed to disclose three alleged related party transactions. On December 7, 2020, we filed a motion to dismiss the amended complaint in the Federal Action. On July 8, 2021, the Court dismissed the first amended complaint but allowed plaintiffs to file a second amended complaint by August 6, 2021. On August 6, 2021, plaintiffs filed a letter motion for leave to file a second amended complaint. On August 27, 2021, we filed a letter response to oppose plaintiffs' August 6, 2021 letter motion and to seek a final judgment dismissing the Federal Action to be entered. On March 31, 2022, the Court denied plaintiffs' motion for leave to file a second amended complaint as futile and dismissed Plaintiffs' claims with prejudice. Plaintiffs did not appeal. Following dismissal with prejudice of the of the Federal Action, plaintiff voluntarily discontinued the State Action with prejudice on June 2, 2022.

On April 15, 2021, a new putative class action was filed in the U.S. District Court for the Southern District of New York against us and certain of our officers and directors. The complaint alleges that our statements in February 2021 about increased visibility into revenue and the size and quality of orders we were receiving were materially false and misleading. Plaintiff claims that the truth about our revenue was revealed in April 2021, when we announced our latest financial results. On December 9, 2021, the Court appointed Bill Lu and Liying Huang as lead plaintiffs and Brager Eagle & Squire, P.C. as lead plaintiffs' counsel. On February 7, 2022, lead plaintiffs filed an amended complaint asserting the same claims under Sections 10(b) and 20(a) of the Exchange Act against the same set of defendants. The amended complaint alleges our November 30, 2020 and February 10, 2021 press releases and the April 9, 2021 interview of our chief executive officer in an article published by Decrypt contained were false and misleading statements regarding the pre-sale orders we had received and our ability to secure sufficient chip supply to meet the increasing demand for mining machines, because those statements allegedly left "investors with the false impression that revenue in the fourth quarter 2020 would be solid" and allegedly omitted that the pre-sale orders were locked in at lower prices than the re-bounding Bitcoin market prices during the third quarter of 2019 and fourth quarter of 2020, and we had been experiencing significant supply chain disruptions during the fourth quarter of 2020. On April 8, 2022, we filed a motion to dismiss the amended complaint, which has been fully briefed as of July 7, 2022. As of the date of this annual report, the Court issued an order granting our motion to dismiss the case in its entirety. The Court granted lead plaintiffs leave to further amend their amended complaint, the deadline of which is April 26, 2023.

The class action suits that we are aware of and if we were involved in a class action suit in the future, 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.

A significant portion of our income is contributed by a limited number of clients. If we cannot retain these clients for any reason or expand our client base, our income may decrease and the financial condition and results of operations of us may be materially and adversely affected.

For the year ended December 31, 2022, our top three customers account for 33%, 22% and 16% of total revenue from us, respectively. Although we plan to continue to expand our client base, launch more products and solutions, and generate income from a wider range of clients, we cannot guarantee you that we will be able to succeed or that such client concentration will decrease. If we fail to retain our top clients, our overall income may decrease and the financial condition and results of operations of us may be materially and adversely affected.

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.

In addition, we may not be able to recover losses relating to our business pursuant to the commercial agreements we enter with our suppliers, partners or third parties. Under these agreements, some suppliers, partners and parties are not liable for any special, incidental, indirect, intangible, or consequential damages arising out of, or in connection with, among other things, the terms of the agreements or performance thereunder. Further, it may be the case that in no event will the aggregate liability pursuant to these agreements hold a party liable for any loss or damage exceeding the fees paid or payable to the party by the Company during a period immediately preceding the incident giving rise to such liability. Notwithstanding the foregoing, the liability of a party may not be limited in respect of direct damages arising from, or in any way related to, the fraud, willful misconduct or gross negligence of the party in question.

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 no outstanding borrowings as of December 31, 2022. 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.

Adverse developments affecting the financial services industry could adversely affect our current and projected business operations and our financial condition and results of operations.

Adverse developments that affect financial institutions, such as events involving liquidity that are rumored or actual, have in the past and may in the future lead to bank failures and market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank (“SVB”) was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation (“FDIC”) as receiver. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership. The Department of the Treasury, the Federal Reserve and the FDIC released a statement that indicated that all depositors of SVB and Signature Bank would have access to all of their funds, including funds held in uninsured deposit accounts, after only one business day of closure.

We do not hold cash deposits at SVB and have withdrawn all our deposits from Signature Bank. Also, we do not hold securities at SVB or Signature Bank and have not experienced any adverse impact to our liquidity or to our current and projected business operations, financial condition or results of operations. However, uncertainty remains over liquidity concerns in the broader financial services industry, and our business, our business partners, or industry as a whole may be adversely impacted in ways that we cannot predict at this time.

Although we assess our banking relationships as we believe necessary or appropriate, our access to cash in amounts adequate to finance or capitalize our current and projected future business operations could be significantly impaired by factors that affect the financial institutions with which we have banking relationships, and in turn, us. These factors could include, among others, events such as liquidity constraints or failures, the ability to perform obligations under various types of financial, credit or liquidity agreements or arrangements, disruptions or instability in the financial services industry or financial markets, or concerns or negative expectations about the prospects for companies in the financial services industry. These factors could also include factors involving financial markets or the financial services industry generally. The results of events or concerns that involve one or more of these factors could include a variety of material and adverse impacts on our current and projected business operations and our financial condition and results of operations. These could include, but may not be limited to, delayed access to deposits or other financial assets or the uninsured loss of deposits or other financial assets; or termination of cash management arrangements and/or delays in accessing or actual loss of funds subject to cash management arrangements.

In addition, widespread investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Any decline in available funding or access to our cash and liquidity resources could, among other risks, adversely impact our ability to meet our operating expenses, financial obligations or fulfill our other obligations, result in breaches of our financial and/or contractual obligations or result in violations of federal or state wage and hour laws. Any of these impacts, or any other impacts resulting from the factors described above or other related or similar factors not described above, could have material adverse impacts on our liquidity and our current and/or projected business operations and financial condition and results of operations.

In addition, our business partners could be adversely affected by any of the liquidity or other risks that are described above as factors, which in turn, could have a material adverse effect on our current and/or projected business operations and results of operations and financial condition. Any business partner bankruptcy or insolvency, or any breach or default by a business partner, or the loss of any significant business partner relationships, could result in material adverse impacts on our current and/or projected business operations and financial condition.

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 rely on our production partners in and outside of PRC for the fabrication, testing and packaging for our ASICs. Any significant deterioration in the cross-strait relationship may have a negative impact on the ability of our production partners outside of PRC 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. We rely on suppliers in the United States for the supply of certain equipment and tools. 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 all 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. Any of these events 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 also the prospect of a brewing global recession as the result of the COVID-19 pandemic. 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 severely 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.

Substantially all of our assets and operations are located in China. Accordingly, our business, financial condition, results of operations and prospects may be influenced by economic, political and social conditions in China generally. 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.

Risks and uncertainties arising from the legal system of mainland China could result in a material adverse change in our operations and the value of our ADSs. Also, PRC governmental authorities' oversight and control over offerings conducted overseas by, and foreign investment in, China-based issuers could limit or hinder our ability to offer or continue to offer securities to investors and result in a material adverse change in our operations and the value of our ADSs.

We conduct our business primarily through our PRC operating subsidiaries. Our operations in China are governed by PRC laws and regulations. The legal system of mainland China is based on written statutes, and court decisions may be cited for reference, but have limited precedential value. We face uncertainties in terms of enforcement of PRC laws, regulations and rules, which may increase our difficulties in strict compliance with all regulatory requirements and limit legal protections available to us and our investors, including you.

From time to time, we may have to resort to administrative and court proceedings to enforce the legal protection that we enjoy either by law or contract. However, any such litigation may take a long time, resulting in substantial costs and diversion of our resources and management attention, and we cannot predict the outcome of administrative and court proceedings.

The PRC governmental authorities have oversight and discretion over the conduct of our business, and it may stricter requirements and urge us to adjust accordingly, which could result in a material adverse change in our operation and/or the value of our ADSs.

In addition, the PRC government has recently announced its plans to enhance its regulatory oversight of Chinese companies listing overseas. The Opinions on Intensifying Crack Down on Illegal Securities Activities (《关于依法从严打击证券违法活动的意见》) issued on July 6, 2021 called for:

- tightening oversight of data security, cross-border data flow and administration of classified information, as well as amendments to relevant regulation to specify responsibilities of overseas listed Chinese companies with respect to data security and information security;
- enhanced oversight of overseas listed companies as well as overseas equity fundraising and listing by Chinese companies; and
- extraterritorial application of China's securities laws.

The CSRC, promulgated the Overseas Listing Trial Measures and five relevant guidelines on February 17, 2023, which became effective on March 31, 2023. The Overseas Listing Trial Measures regulate both direct and indirect overseas offering and listing by PRC domestic companies by adopting a filing-based regulatory regime. The Overseas Listing Trial Measures provide that if the issuer both meets the following criteria, the overseas securities offering and listing conducted by such issuer will be deemed as indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) 50% or more of the issuer's operating revenue, total profit, total assets or net assets as documented in its audited consolidated financial statements for the most recent fiscal year is accounted for by the issuer's domestic companies; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The determination as to whether or not an overseas offering and listing by domestic companies is indirect, shall be made on a substance over form basis.

On the same day, the CSRC also held a press conference for the release of the Trial Measures and issued the Notice on Administration for the Filing of Overseas Offering and Listing by Domestic Companies, which, among others, clarifies that on or prior to the effective date of the Overseas Listing Trial Measures, domestic companies that have been completed their overseas offering and listing, which are called as "the stock enterprises (存量企业)". As a stock enterprise (存量企业), we shall file with the CSRC within 3 working days after the subsequent securities offering is completed. The CSRC shall order rectification, issue warnings and impose fines to the company fails to fulfill filing procedure as stipulated in Overseas Listing Trial Measures.

In addition, the CSRC published the Provisions on Strengthening Confidentiality and Archives Administration in Respect of Overseas Issuance and Listing of Securities by Domestic Enterprises (《关于加强境内企业境外发行证券和上市相关保密和档案管理工作的规定》) on February 24, 2023, which became effective on March 31, 2023. The CSRC stipulates domestic enterprises, securities companies and securities service agencies which provide the corresponding services in the course of overseas issuance and listing of domestic enterprises, shall strengthen legal awareness of confidentiality of State secrets and archives administration, establish a sound system for confidentiality and archives work, adopt the requisite measures to perform the responsibilities of confidentiality and archives administration.

As there are still uncertainties regarding the interpretation and implementation of such regulatory guidance, we cannot assure you that we will always be able to comply with new regulatory requirements relating to our future overseas capital-raising activities. We may become subject to more stringent requirements with respect to matters including cross-border investigation and enforcement of legal claims.

The Chinese government may promulgate relevant laws, rules and regulations that may impose additional and significant obligations and liabilities on overseas listed Chinese companies regarding data security, cross-border data flow, and compliance with China's securities laws. See also "—Risks Relating to Our Business and Industry—Our business is subject to various evolving PRC laws and regulations regarding data privacy and cyber-security. Failure of cyber-security and data privacy concerns could subject us to penalties, damage our reputation and brand, and harm our business and results of operations." It is uncertain whether or how these new laws, rules and regulations and the interpretation and implementation thereof may affect us, but among other things, our ability and the ability of our PRC subsidiaries to obtain external financing through the issuance of equity securities overseas could be negatively affected.

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

We were advised by Commerce & Finance Law Offices, our PRC legal adviser, 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 annual report, 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.

The PCAOB had historically been unable to inspect our auditors in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditors in the past has deprived our investors with the benefits of such inspections.

Our auditors, the independent registered public accounting firms that issue the audit report included in this annual report, as auditors of companies that are traded publicly in the United States and a firm registered with the PCAOB, are subject to laws in the United States pursuant to which the PCAOB conducts regular inspections to assess its compliance with the applicable professional standards. The auditors are located in mainland China, a jurisdiction where the PCAOB was historically unable to conduct inspections and investigations completely before 2022. As a result, we and investors in the ADSs were deprived of the benefits of such PCAOB inspections. The inability of the PCAOB to conduct inspections of auditors in China in the past has made it more difficult to evaluate the effectiveness of our independent registered public accounting firms' audit procedures or quality control procedures as compared to auditors outside of China that are subject to the PCAOB inspections. On December 15, 2022, the PCAOB issued a report that vacated its December 16, 2021 determination and removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. However, if the PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong, and we use an accounting firm headquartered in one of these jurisdictions to issue an audit report on our financial statements filed with the Securities and Exchange Commission, we and investors in our ADSs would be deprived of the benefits of such PCAOB inspections again, which could cause investors and potential investors in the ADSs to lose confidence in our audit procedures and reported financial information and the quality of our financial statements.

Our ADSs may be delisted under the Holding Foreign Companies Accountable Act if the PCAOB is unable to inspect auditors who are located in China. The delisting of our ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.

The Holding Foreign Companies Accountable Act, or the HFCAA, was enacted on December 18, 2020. The HFCAA, which became effective on January 1, 2021, states if the SEC determines that an issuer that is required to file reports under Section 13 or 15(d) of the Securities Exchange Act of 1934, or a registrant, has filed audit reports issued by a registered public accounting firm that has not been subject to inspection by the PCAOB for three consecutive years beginning in 2021, the SEC shall prohibit that registrant's shares or ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the U.S.

In September 2021, the PCAOB adopted a rule related to the PCAOB's responsibilities under the HFCAA, which establishes a framework for the PCAOB to determine, as contemplated under the HFCAA, whether the PCAOB is unable to inspect or investigate completely registered public accounting firms located in a foreign jurisdiction because of a position taken by one or more authorities in that jurisdiction. The rule was approved by the SEC in November 2021.

On December 2, 2021, the SEC adopted final amendments implementing the disclosure and submission requirements of the Holding Foreign Companies Accountable Act, or the HFCAA. The final amendments establish the SEC's procedures for determining whether a registrant is a "Commission-Identified Issuer" under the HFCAA and prohibiting the trading of Commission-Identified Issuer's securities. If the SEC determines that we are a Commission-Identified Issuer under the HFCAA for three consecutive years, or if the audit report filed as part of our annual report with the SEC is otherwise deemed not to be in compliance with the requirements of the Exchange Act due to the Public Company Accounting Oversight Board, or the PCAOB's inability to inspect our auditor, the SEC will prohibit our ordinary shares or the ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the U.S. In the event of such determination, the Nasdaq is expected to delist our ADSs.

On December 16, 2021, the PCAOB issued a report to notify the SEC its determinations that it is unable to inspect or investigate completely PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong, and identifies the registered public accounting firms in mainland China and Hong Kong that are subject to such determinations. Our auditors, KPMG Huazhen LLP and PricewaterhouseCoopers Zhong Tian LLP, the independent registered public accounting firms that issue the audit report included in the Form 20-F, is located in China and is included in the list of PCAOB identified firms in the determination report issued in December 2021.

Consequently, we were conclusively identified as a "Commission-Identified Issuer" on May 26, 2022.

On December 15, 2022, the PCAOB announced that it has secured complete access to inspect and investigate completely PCAOB-registered public accounting firms headquartered in mainland China and Hong Kong. The PCAOB also vacated its previous determinations issued in December 2021. Therefore, our auditor is currently able to be fully inspected and investigated by the PCAOB. Accordingly, until such time as the PCAOB issues any new determination, we are at no risk of having our securities subject to a trading prohibition under the HFCAA.

On December 29, 2022, the Consolidated Appropriations Act, 2023 was signed into law, which, among other things, amended the HFCAA to reduce to number of consecutive years an issuer can be identified a Commission-Identified Issuer before the SEC must impose an initial trading prohibition on the issuer's securities from three years to two years. Therefore, once an issuer is identified as a Commission-Identified Issuer for two consecutive years, the SEC is required under the HFCAA to prohibit the trading of the issuer's securities on a national securities exchange and in the over-the-counter market.

Each year, the PCAOB will determine whether it can inspect and investigate completely audit firms in mainland China and Hong Kong, among other jurisdictions. If the PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong and we use an accounting firm headquartered in one of these jurisdictions to issue an audit report on our financial statements filed with the SEC, we would be identified as a Commission-Identified Issuer following the filing of the annual report on Form 20-F for the relevant fiscal year. In accordance with the HFCAA, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the United States if we are identified as a Commission-Identified Issuer for two consecutive years in the future. The delisting of our ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment. If our ADSs are prohibited from trading in the United States, there is no certainty that we will be able to list on a non-U.S. exchange or that a market for our shares will develop outside of the United States. A prohibition of being able to trade in the United States would substantially impair your ability to sell or purchase our ADSs when you wish to do so, and the risk and uncertainty associated with delisting would have a negative impact on the price of our ADSs. Also, such a prohibition would significantly affect our ability to raise capital on terms acceptable to us, or at all, which would have a material adverse impact on our business, financial condition, and prospects.

Proceedings instituted by the SEC against “big four” PRC-based accounting firms, including our independent registered public accounting firms, 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 firms, 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 firms. 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 firms, 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 firms were denied, even temporarily, the ability to practice before the SEC and we were unable to timely find other registered public accounting firms 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 holding company incorporated in Cayman Islands and conduct our operation 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.

Pursuant to the Enterprise Income Tax Law of the PRC (《中华人民共和国企业所得税法》), or 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 outside China. Therefore, although certain 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 Doing Business in International Markets outside the PRC

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 globally. 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, including contracts with our existing and future customers and partners;
- 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.

Risks Relating to the 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 fluctuations of Bitcoin price and 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;
- 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;

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- 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. On March 4, 2020, a putative class action was filed in the United States District Court of Oregon (the “Federal Action”) against us and certain of our officers and directors, among others. The complaint alleges that our registration statement on Form F-1, initially filed with the Securities and Exchange Commission on October 28, 2019 (File No. 333-234356), contained material misstatements and omissions in violation of federal securities laws. On March 6, 2020, another putative class action, making substantially similar allegations, was filed in New York County Supreme Court (the “State Action”) against us and certain of our officers and directors. On June 1, 2020, we filed a motion to stay all proceedings in the State Action pending adjudication of the Federal Action, which was granted on July 21, 2020. Subsequently, the Federal Action was transferred to the U.S. District Court for the Southern District of New York (the “Court”) on September 2, 2020. On October 7, 2020, lead plaintiffs in the Federal Action filed an amended complaint asserting claims under Section 11 of the Securities Act and Sections 10(b) and 20(a) of the Exchange Act for that the registration statement failed to disclose three alleged related party transactions. On December 7, 2020, we filed a motion to dismiss in the Federal Action and our motion to dismiss the amended complaint in the Federal Action. On July 8, 2021, the Court dismissed the first amended complaint but allowed plaintiffs to file a second amended complaint by August 6, 2021. On August 6, 2021, plaintiffs filed a letter motion for leave to file a second amended complaint. On August 27, 2021, we filed a letter response to oppose plaintiffs’ August 6, 2021 letter motion and to seek a final judgment dismissing the Federal Action to be entered. On March 31, 2022, the Court denied plaintiffs’ motion for leave to file a second amended complaint as futile and dismissed Plaintiffs’ claims with prejudice. Plaintiffs did not appeal. Following dismissal with prejudice of the Federal Action, plaintiff voluntarily discontinued the State Action with prejudice on June 2, 2022.

On April 15, 2021, a new putative class action was filed in the U.S. District Court for the Southern District of New York against us and certain of our officers and directors. The complaint alleges that our statements in February 2021 about increased visibility into revenue and the size and quality of orders we were receiving were materially false and misleading. Plaintiff claims that the truth about our revenue was revealed in April 2021, when we announced our latest financial results. On December 9, 2021, the Court appointed Bill Lu and Liying Huang as lead plaintiffs and Brager Eagle & Squire, P.C. as lead plaintiffs’ counsel. On February 7, 2022, lead plaintiffs filed an amended complaint asserting the same claims under Sections 10(b) and 20(a) of the Exchange Act against the same set of defendants. The amended complaint alleges our November 30, 2020 and February 10, 2021 press releases and the April 9, 2021 interview of our chief executive officer in an article published by Decrypt contained were false and misleading statements regarding the pre-sale orders we had received and our ability to secure sufficient chip supply to meet the increasing demand for mining machines, because those statements allegedly left “investors with the false impression that revenue in the fourth quarter 2020 would be solid” and allegedly omitted that the pre-sale orders were locked in at lower prices than the re-bounding Bitcoin market prices during the third quarter of 2019 and fourth quarter of 2020, and we had been experiencing significant supply chain disruptions during the fourth quarter of 2020. On April 8, 2022, we filed a motion to dismiss the amended complaint, which has been fully briefed as of July 7, 2022. As of the date of this annual report, the Court issued an order granting our motion to dismiss the case in its entirety. The Court granted lead plaintiffs leave to further amend their amended complaint, the deadline of which is April 26, 2023. The class action suits that we are aware of and if we were involved in a class action suit in the future, 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 or lower down the target price of our 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.

Because we do not expect to pay dividends in the foreseeable future, 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 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 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.

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.

Our amended and restated 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 from seeking to obtain control of our company in a tender offer or similar transaction. If any 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, among other things, our memorandum and articles of association, as amended, the Companies Act 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, our register of mortgages and charges and special resolutions of our shareholders) 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 our initial public 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 less 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.

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

We are a Cayman Islands exempted company and a large portion of our assets are located outside of the United States. A substantial portion of 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.

Fluctuations in the exchange rate between the Renminbi and the U.S. dollars, Hong Kong dollars and Singapore dollars could result in foreign currency exchange losses and could materially reduce the value of your investment.

Our sales in China are denominated in Renminbi, and our international sales are generally denominated in U.S. dollars. Our costs and capital expenditures are largely denominated in Renminbi and foreign currencies, including U.S. dollars, Hong Kong dollars and Singapore dollars. Fluctuations in exchange rates could affect our net profit margins and could result in foreign exchange and operating gains or losses. In addition, our foreign currency exchange losses may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currencies.

The value of the Renminbi against the U.S. dollars, Hong Kong dollars, Singapore dollars and other local currencies is affected by, among other things, changes in China's political and economic conditions and China's foreign exchange policies. In the long term, Renminbi may further depreciate against U.S. dollars or other foreign currencies, depending on the market supply and demand with reference to a basket of currencies. It is difficult to predict how long this current situation may last and when and how it may change again.

In addition, we are a holding company and we rely on dividends primarily from our PRC operating subsidiaries for our cash needs. Although we have not received any dividend from our operating subsidiaries in the PRC, we may receive such dividends in the future. 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 our initial public offering into Renminbi for our operations, appreciation of the Renminbi against the U.S. dollars 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. dollars against the Renminbi would have a negative effect on the U.S. dollars 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 though we opted to comply with such requirement and had KPMG Huazhen LLP, our independent registered public accounting firm, issue a report on the effectiveness of our internal control over financial reporting. 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\$1.235 billion; (b) the last day of our fiscal year following the fifth anniversary of the completion of our initial public 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 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.

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.

We currently report under the Exchange Act as a non-U.S. company with foreign private issuer status. Because we qualify as a foreign private issuer under the Exchange Act, we are exempt from certain provisions of the Exchange Act that are applicable to U.S. domestic public companies, including:

- 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 are required to file an annual report on Form 20-F within four months of the end of each fiscal year. In addition, we intend to publish our results on a quarterly basis 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 Class A 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 depository. Upon receipt of your voting instructions, the depository will vote the underlying Class A 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, the minimum notice period required for convening a general meeting is at least ten calendar days. When a general meeting is convened, you may not receive sufficient advance notice to withdraw the underlying Class A ordinary shares represented by your ADSs to allow you to vote with respect to any specific matter. If we ask for your instructions, the depository 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 depository to vote the underlying Class A ordinary shares represented by your ADSs. In addition, the depository 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 Class A ordinary shares represented by your ADSs are not voted as you requested.

The depository 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 depository may give us a discretionary proxy to vote the ordinary shares underlying the ADSs at shareholders' meetings if we have timely provided the depository with notice of meeting and related voting materials and (i) we have instructed the depository that we wish a discretionary proxy to be given, (ii) we have informed the depository 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.

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 depository arising out of or relating to our shares, the ADSs or the deposit agreement, including any claim under the U.S. federal securities laws. As the waiver relates to claims arising as a matter of contract in relation to the ADSs, we believe that, as a matter of construction of the clause, the waiver would likely to continue to apply to ADS holders who withdraw the Class A ordinary shares represented by the ADSs from the ADS facility with respect to claims arising before the withdrawal, and the waiver would most likely not apply to ADS holders who subsequently withdraw the Class A ordinary shares represented by ADSs from the ADS facility with respect to claims arising after the withdrawal. However, to our knowledge, there has been no case law on the applicability of the jury trial waiver to ADS holders who subsequently withdraw the Class A ordinary shares represented by the ADSs from the ADS facility.

If we or the depository 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 depository 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 depository. If a lawsuit is brought against either or both of us and the depository 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 plaintiff(s) 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 depository of compliance with U.S. federal securities laws and the rules and regulations promulgated thereunder.

You have the right to arbitration under the deposit agreement. However, it may not be most beneficial.

The deposit agreement provides that ADS holders and the depository 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 or ADSs or the deposit agreement settled by arbitration in New York, New York rather than in a court of law, 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.

The deposit agreement may be amended or terminated without your consent.

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. However, amendment to certain rights that may increase costs or prejudice a substantial right of ADS holders will not take effect until 30 days after notice thereof in accordance with the deposit agreement.

You, as holders of ADSs, may have fewer rights than holders of our ordinary shares and must act through the depository 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 Class A 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 depository. Upon receipt of your voting instructions, the depository will try, as far as is practicable, to vote the underlying Class A 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 depository will try to vote the underlying Class A ordinary shares represented by your ADSs in accordance with these instructions. If we do not instruct the depository to ask for your instructions, the depository 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.

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 depository 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 depository 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 depository. However, the depository 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 depository 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 depository needs to maintain an exact number of ADS holders on its books for a specified period. The depository may also close its books in emergencies, and on weekends and public holidays. The depository may refuse to deliver, transfer or register transfers of our ADSs generally when our share register or the books of the depository are closed, or at any time if we or the depository 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.

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.

We are subject to reporting obligations under the U.S. securities laws. The SEC, as required under Section 404 of the Sarbanes-Oxley Act of 2002, adopted rules requiring every public company to include a management report on such company's internal control over financial reporting in its annual report, which contains management's assessment of the effectiveness of the company's internal control over financial reporting. We were subject to such requirement starting from fiscal year 2020. In addition, once we cease to be an "emerging growth company," as such term is defined in the Jumpstart Our Business Startups Act of 2012 (as amended by the Fixing America's Surface Transportation Act of 2015), or the JOBS Act, an independent registered public accounting firm for a public company must issue an attestation report on the effectiveness of our internal control over financial reporting. However, we opted to have KPMG Huazhen LLP, our independent registered public accounting firm, issue a report on the effectiveness of our internal control over financial reporting, despite the fact that, as an emerging growth company, we are not legally required to do so.

In 2020 and 2021, we and our independent registered public accounting firms identified two material weaknesses in our internal control over financial reporting. 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. We have implemented a number of measures to address the material weakness that had been identified. For details of these remedial measures, see "Item 15. Controls and Procedures—Remediation of the Material Weakness in Internal Control over Financial Reporting." While, as of December 31, 2022, based on our management's assessment on the performance of the remediation measures, we determined that the material weakness had been remediated, in the future we may determine that we have additional material weaknesses, or our independent registered public accounting firm may disagree with our management assessment of the effectiveness of our internal controls.

Our management has concluded that our internal control over financial reporting was effective as of December 31, 2022. See "Item 15. Controls and Procedures—Management's Annual Report on Internal Control over Financial Reporting."

However, if we fail to maintain the adequacy of our internal control over financial reporting, as these standards are modified, supplemented or amended from time to time, we may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404. If we fail to achieve and maintain an effective internal control environment, we could suffer material misstatements in our financial statements and fail to meet our reporting obligations, which would likely cause investors to lose confidence in our reported financial information. This could in turn limit our access to capital markets, harm our results of operations, and lead to a decline in the trading price of the ADSs. Additionally, ineffective internal control over financial reporting could expose us to increased risk of fraud or misuse of corporate assets and subject us to potential delisting from the stock exchange on which we list, regulatory investigations and civil or criminal sanctions. We may also be required to restate our financial statements for prior periods. Furthermore, we have incurred and anticipate that we will continue to incur considerable costs, management time and other resources in an effort to comply with Section 404 of the Sarbanes-Oxley Act and other requirements. Moreover, ineffective internal control over financial reporting could significantly hinder our ability to prevent fraud.

We have incurred and expect to continue to incur significant costs as a public company, which could lower our profits or make it more difficult to run our business.

As a public company, we have incurred and expect to continue to incur significant legal, accounting and other expenses that we did not incur as a private company to ensure that we comply with the various requirements on corporate governance practices imposed by the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the SEC and Nasdaq Global Market.

For example, we have increased the number of independent directors and adopted policies regarding internal controls and disclosure controls and procedures. We have also incurred additional costs associated with our public company reporting requirements. We expect that these rules and regulations will continue to cause us to incur elevated legal and financial compliance costs, devote substantial management effort to ensure compliance and make some corporate activities more time-consuming and costly. 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 a company with less than US\$1.235 billion in net revenues for our last financial 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 exemption from the auditor attestation requirement under Section 404 of the Sarbanes-Oxley Act of 2002 in the assessment of the emerging growth company’s internal control over financial reporting and permission to delay adopting new or revised accounting standards until such time as those standards apply to private companies. Once 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. However, we opted to have KPMG Huazhen LLP, our independent registered public accounting firm, issue a report on the effectiveness of our internal control over financial reporting, despite the fact that, as an emerging growth company, we are not legally required to do so.

In the past, shareholders of a public company often brought securities class action suits against companies following periods of instability in the market price of those companies’ 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, which could harm our results of operations and require us to incur significant expenses to defend the suit. 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.

As a foreign private issuer, 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 less 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, a foreign private issuer may elect to comply with the practice of its home country and not to comply with certain Nasdaq corporate governance requirements, including the requirements that (i) a majority of the board of directors consists of independent directors, (ii) a nominating and corporate governance committee be established that is composed entirely of independent directors and has a written charter addressing the committee’s purpose and responsibilities, (iii) a compensation committee be established that is composed entirely of independent directors and has a written charter addressing the committee’s purpose and responsibilities, and (iv) an annual meeting of shareholders be held no later than one year after the end of the issuer’s fiscal year-end. Although we have similar practices, they do not entirely conform to the Nasdaq requirements; therefore, we currently use these exemptions and intend to continue using them. Accordingly, investors will not have the same protections provided to shareholders of companies that are subject to all Nasdaq corporate governance requirements.

There can be no assurance that we will not be a passive foreign investment company for U.S. federal income tax purposes, which could result in adverse U.S. federal income tax consequences to U.S. Holders of our ADSs or ordinary shares.

Based upon the market price of our ADSs, the value of our assets and the nature and composition of our income and assets, we believe we were not a PFIC for our taxable year ended December 31, 2022, although there can be no assurance in this regard.

In general, we will be a PFIC for any taxable year if, applying the applicable look-through rules, either:

- at least 75% of our gross income is passive income; or
- at least 50% of the value (generally 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 and involves extensive factual investigation, including ascertaining the fair market value of all of our assets on a quarterly basis and the character of each item of income that we earn during the relevant taxable year, and is subject to uncertainty in several respects. The determination of whether we will be a PFIC for any taxable year may also depend in part upon the value of our goodwill and other unbooked intangibles not reflected on our balance sheet (which may depend upon the market price of our ADSs or ordinary shares from time to time, which may fluctuate significantly) and also may be affected by how, and how quickly, we spend our liquid assets and the cash we generate from our operations and raise in any offering. Accordingly, there can be no assurance that we will not be a PFIC for our current or any future taxable year. The U.S. Internal Revenue Service, or the IRS, does not issue rulings with respect to PFIC status, and we cannot assure you that the IRS, or a court, will agree with any determination we make.

If we are a PFIC for any taxable year during which a United States Holder (as defined in “Item 10. Additional Information-E. Taxation-United States Federal Income Tax Considerations”) hold our ADSs or ordinary shares, such U.S. Holder may be subject to certain adverse United States federal income tax consequences. For example, if we are or become a PFIC, a United States Holder may become subject to increased tax liabilities under United States federal income tax laws and regulations, and will become subject to burdensome reporting requirements. See “Item 10. Additional Information-E. Taxation-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.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

We are a Cayman Islands holding company. We have conducted our operations principally through our PRC operating subsidiaries. On January 19, 2013, Mr. Nangeng Zhang, our chairman and chief executive officer, and his team, shipped the world’s first batch of mining machines incorporating ASIC technology to consumers in Bitcoin’s history under the brand name, *Avalon*. Later, in order to continue the developing of mining machines of Avalon brand, which was subsequently renamed *AvalonMiner* brand, Beijing Canaan Creative Information Technology Co., Ltd. was incorporated and was subsequently renamed Hangzhou Canaan Intelligence Information Technology Co., Ltd., 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.

On November 21, 2019, we consummated our initial public offering (the “IPO”) on the Nasdaq Global Market, where 10,000,000 American Depositary Shares (“ADSs”) were issued at the price of US\$9.00 per ADS for a total gross proceeds of US\$90 million. Each ADS represents 15 Class A ordinary shares.

Since our IPO, as part of our efforts to expand our business globally, we have gradually established our subsidiaries in Hong Kong and Singapore.

On April 8, 2022, the Company entered into an at the market offering agreement (as amended by the Amendment No. 1 to ATM Agreement dated as of November 23, 2022 and as may be further amended, supplemented or otherwise modified from time to time, the “ATM Agreement”), with H.C. Wainwright & Co., LLC, acting as our sole sales agent (the “Sales Agent”), relating to the sale of ADSs, each representing 15 Class A ordinary shares, par value of \$0.00000005 per share, offered pursuant to the prospectus supplement and the accompanying prospectus to the registration statement on Form F-3 (File No. 333- 255470) (such offering, the “ATM Offering”, or “At The Market Offering”). In accordance with the terms of the ATM Agreement, we may offer and sell ADSs having an aggregate offering price of up to \$750,000,000 from time to time through the Sales Agent under such prospectus supplement and the accompanying prospectus. As of December 31, 2022, we have not yet sold any ADSs pursuant to the ATM Offering.

We have no obligation to sell any ADSs pursuant to the ATM Agreement and may at any time suspend sales pursuant to the ATM Agreement. The principal executive offices of our main operations are located at 28 Ayer Rajah Crescent #06-08, S139959, Singapore. Our telephone number at this address is +65 6305 6618. 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.

SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC on www.sec.gov. You can also find such information on our website <https://investor.canaan-creative.com>.

B. Business Overview

We provide supercomputing solutions through our proprietary high performance computing ASICs. We have strong ASIC chip design capability underpinned by over ten years of industry experience and expertise of our founders and management team. We are one of the few fabless IC design companies with the advanced technology to independently design ASIC, established access to leading wafer foundry capacity and proven in-house capability to produce Bitcoin mining machines. We primarily dedicated technology and expertise in ASIC applications to Bitcoin mining machines and are a leading producer of Bitcoin mining machines in the global market. In addition, with our technology expertise and know-how in ASIC chip design, we strive to expand into AI fields and provide holistic AI solutions to our customers. Our PRC operating subsidiaries have delivered commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance. We believe our extensive experience and expertise in ASIC applications position us well in our future endeavors.

Leveraging our deep understanding of the cryptocurrency industry and strong technology as applied to ASIC chip design, we intend to capture the growth opportunity along the value chain of the cryptocurrency industry to enhance our offerings and achieve a more stable financial performance. We have started with the Bitcoin mining business through our strategic collaboration with certain cryptocurrency mining farms and aim to develop the Bitcoin mining business as the second engine to capitalize on the Bitcoin ecosystem and synergize with our bitcoin mining machines sales. We endeavor to grow our deployed computing power for mining and improve the energized hash rate to enhance our mining business. For the year ended December 31, 2020, 2021 and 2022, we generated revenue of nil, RMB21.7 million and RMB218.6 million (US\$31.7 million) from the Bitcoin mining business, respectively.

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

- Our expertise in the development, designing and production of Bitcoin mining machines;
- 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;
- 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 long-term 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;
- Our long-term partnerships with leading global suppliers, which have enabled us to achieve high-quality, high yield rate and stable production; and
- Our penetration into the Bitcoin mining business by leveraging our experience in Bitcoin mining machines production and sales.

Our Business Model

We are a fabless IC designer engaged in the front-end and back-end of IC design, which are the major components of the IC product development chain. We currently dedicate our technology and expertise in ASIC chip design to Bitcoin mining machines and AI applications. We, through our PRC operating subsidiaries, independently design and develop our products in-house, including the design of proprietary ASIC chips for our Bitcoin mining machines. Front-end IC design and back-end IC design are the key parts of the IC design process. We determine the parameters of the IC chip, establish the basic logic of the design, map out the initial plan for the physical layout, and conduct back-end verification on the design. We then work closely with industry-leading third-party suppliers to fabricate, test and package the IC products we design. Moreover, we have established in-house production capabilities to assemble both Bitcoin mining machines and AI chips. We assemble our Bitcoin mining machines primarily at our assembly plant located in the PRC by integrating the ICs produced by us and related components we procure. We believe our outstanding technical expertise and production experience in IC development chain enables us to continuously introduce ICs with higher performance and power efficiency for application in both the blockchain and AI fields. In addition, we have started with the Bitcoin mining business through our strategic collaboration with certain cryptocurrency mining farms and aim to develop the Bitcoin mining business as the second engine to capitalize on the Bitcoin ecosystem and synergize with our Bitcoin mining machines sales. As we endeavor to grow our deployed computing power for mining and improve the energized hash rate to enhance our mining business, we believe that such business will play a more significant role in supplementing our Bitcoin mining machines sales, mitigate our inventory risks and contribute to our financial and operating results.

Our Products

Bitcoin Mining Machines

Our technology and expertise in ASIC applications are primarily dedicated to the design, development, production and sales of our proprietary ASIC-based Bitcoin mining machines under the AvalonMiner brand. We, through our operating subsidiaries, offer a single line of Bitcoin mining machines, under the AvalonMiner brand to customers in the United States, Indonesia, Malaysia, Australia and other countries across the globe. Our AvalonMiner Bitcoin mining machines feature our proprietary ASICs, and the ASICs are integrated with other components we procured, including a circuit board, PMU boards, a cooling fan, heat sensors, and enclosed with an aluminum casing. Historically, we introduced new series of Bitcoin mining machines almost every year incorporating the latest technological development in terms of ASIC design and process technology. We, through our operating subsidiaries, also sell Bitcoin mining machine parts and accessories, 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	Number of ASICs in Each Product	Computing Power (GH/s)	Power Consumption (W/GHs)
A841	March 2018	104	13,000	0.10
A851	July 2018	104	14,500	0.10
A852	April 2019	104	15,000	0.10
A921	August 2018	104	20,000	0.09
A911	January 2019	204	19,500	0.09
A1047	April 2019	240	37,000	0.07
A1066	July 2019	342	50,000	0.07
A1066 pro	September 2019	324	55,000	0.06
A1246	September 2020	360	90,000	0.04
A1266	April 2022	360	100,000	0.04
A1346	October 2022	360	110,000	0.03
A1366	October 2022	360	130,000	0.03

Leveraging our deep understanding of the cryptocurrency industry and strong technology as applied to ASIC chip design, we have started with the Bitcoin mining business through our strategic collaboration with certain cryptocurrency mining farms and aim to develop the Bitcoin mining business as the second engine to capitalize on the Bitcoin ecosystem and synergize with our bitcoin mining machines sales. Along with the deployment of our Bitcoin mining machines into our Bitcoin mining business, as of December 31, 2022, the net carrying value of mining equipment located in Central Asia and United States was RMB523.2 million, collectively.

ASICs for AI Applications

We, through our PRC operating subsidiaries, began to develop ASICs for AI applications since 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. We, through our PRC operating subsidiaries, have delivered 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 significant experience in reducing the size and increasing the power efficiency of the ASICs while achieving high computing power.

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

Product	Status
Kendryte K210 - 28nm	<ul style="list-style-type: none">● Released in September 2018● Mass production and shipment of final products in 4th quarter 2018
Kendryte K510 - 28nm	<ul style="list-style-type: none">● Released in July 2021● Mass production and shipment of final products in 4th quarter 2021

Our AI chips empower our clients to provide AI solutions in the field of IoT through its machine vision and machine hearing capabilities. These 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. Our AI chips can also be used for the several applications. For example, image and voice recognition can be used as an authentication method for devices, such as AI-powered face unlock for smart door-locks, and commercial transactions, such as smart entrances.

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. We, through our PRC operating subsidiaries, have also actively explored collaboration with business partners and have integrated our AI chips in different IoT vertical markets, such as smart locks and smart meters.

Sales and Marketing

We, through our operating subsidiaries, conduct the marketing of our Bitcoin mining machines mainly through word of mouth, press releases of our product launches and exhibitions when we launch a new product. Certain of our available products are also advertised on our website, which is updated periodically. From time to time, we, through our operating subsidiaries, maintain a presence on social media in order to raise awareness of our brand. In the first half of 2022, we, through our operating subsidiaries, launched an online store mainly targeting retail customers from overseas markets.

We have assembled a dedicated team of marketing personnel and software engineers to focus on the development and marketing of our AI products. To generate interest from our customers, we actively promote our latest research and development achievements and display our sample products. We are also in the process of working with a number of industry participants to further explore their interest in our AI products.

Our Customer Base

Historically, a substantial portion of our revenues were generated from the sales to customers located in the PRC. Because of the adverse changes in the PRC regulatory environment, we have been actively exploring the international markets outside the PRC and began to generate more sales from customers outside the PRC in 2021 and 2022. We generated 16.0%, 64.4% and 97.2% of our total revenues generated from sales of Bitcoin mining machines and related parts and from sales to customers outside the PRC, in 2020, 2021 and 2022, respectively.

Bitcoin Mining Machines

We, through our operating subsidiaries, generally sell our Bitcoin mining machines and related products to individual or corporate customers on a first-pay-first-serve basis, though we prioritize certain customers that we believe have stronger potential for a longer-term relationship. Our operating subsidiaries generally do not enter into long-term agreements with our mining machine customers. Sales are typically made on one-off sales contract or purchase order bases. All of our mining machines are distributed through direct sales. Nevertheless, our operating subsidiaries do not restrict resales of our mining machine products by our customers. Except for situations where our Bitcoin mining products have major defects upon delivery, our customers cannot return or exchange their purchases for upgrades, even in the event that their old Bitcoin mining products may no longer be economical for Bitcoin mining purpose.

Historically, a significant portion of our Bitcoin mining machines were sold to customers located in the PRC. To hedge against the adverse changes of the regulatory environment in the PRC, we have been actively exploring the international markets outside the PRC and the revenue contribution from customers outside the PRC, such as customers in the Southeast Asia, the United States, Australia and Central Asia, accounted for 97.2% of our total revenues generated from sales of Bitcoin mining machines and related parts in 2022.

AI Applications

Our AI applications are primarily sold to companies in the IoT industry. We plan to increase our sales and marketing efforts to cover major customer groups in the IoT field. 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.

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 Mr. Nangeng Zhang, our chairman and chief executive officer. Mr. Zhang and his team invested one of the first cryptocurrency mining machines incorporating ASIC technology.

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 130 team members, which is responsible for chip design and optimization and (ii) an AI products group consisting of 162 team members, which are responsible for the design of our Kendryte series including algorithm optimization and end application, both as of December 31, 2022.

As of December 31, 2022, our research and development team is comprised of 292 members, representing approximately 54.0% of our total employees. Our research and development team includes 157 members with a master's degree or above. In addition, Mr. Zhang, as our chairman and chief executive officer, leads our research and development efforts and has extensive experience in the industry. 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, through our PRC operating subsidiaries, 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.

Research and Development Achievements

Our research and development efforts have yielded significant results that 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 December 31, 2022, we, through our subsidiaries, have registered 192 patents in the PRC, 2 patents in Hong Kong, 9 patents in the United States, 1 patent in the Eurasian Patent Organization and 4 patents in Australia. The total of 205 patents includes 57 inventions, 112 utility model patents and 36 exterior design patents. We have also, through our PRC subsidiaries, registered 117 software copyrights and 71 IC layout-design rights in the PRC, as of December 31, 2022.

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. 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.

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, through our operating subsidiaries, 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 partners are 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, through our operating subsidiaries, partner with leading global production partners. Considering the chip capacity shortage and supply chain restrictions that the semiconductor market has encountered, our operating subsidiaries maintain our cooperation with more than one production partners and suppliers in order to diversify our supply base and reduce supplier centralization risk. Our research and development team has been working to improve our chip designs to be compatible with chip node of different sizes and different manufacturing environments.

IC Fabrication

We, mainly through our operating subsidiaries, partner with three leading third-party foundry partners for IC fabrication. We generally enter into a three-year framework agreement with such third-party foundry partners to ascertain their production resource that can be allocated to us before we place an order according to our business need. Once an order is placed and accepted, we are generally required to prepay 50% of the purchase price in order to secure production capacity. The wafers are delivered in an average of approximately four months from the time when an order is placed.

Packaging and Testing

We, through our operating subsidiaries, work with leading packaging and testing partners. According to our agreements, we provide rolling forecasts and firm orders for our packaging and testing partners to purchase necessary materials. Our operating subsidiaries typically settle with our packaging and testing partners on a monthly basis and are required to pay them within 30 days upon receipt of invoices.

Assembly Plant

We have in-house capabilities to produce our products at our assembly plant located in the PRC with a total gross floor area of 7,378 square meters. Also, leveraging our Singapore headquarters, we have diversified our supply chain by adding production and logistic resources in Southeast Asia in the second quarter of 2022. Subject to the amount of ICs obtained 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. We also require our fabrication, packaging and testing service providers to apply their stringent quality control standards. In particular, our operating subsidiaries have attained the CE certification and U.S. Federal Communication Commission certification for some of our AvalonMiner products.

We, through our PRC operating subsidiaries, 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, through our PRC operating subsidiaries, devote significant resources to quality control of our products with a dedicated team located in Beijing.

Warranty and After Sales Services

We, through our operating subsidiaries, provide warranties of 360 days, 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, through our operating subsidiaries, have devised a standard operating procedure for customer service. By the end of year 2022, we have expanded our service capabilities with over ten aftersales service stations worldwide. We, through our operating subsidiaries, collect and record customer feedback and complaints from different channels and make timely responses in order to achieve customer satisfaction.

We, through our operating subsidiaries, accept exchanges of our Bitcoin mining machines only for major defects. None of our operating subsidiaries has 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 annual report, none of our operating subsidiaries has 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.

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. As more people invest in Bitcoin and cryptocurrencies, more semiconductor industry players are trying to design chips for Bitcoin mining. With our years of experience designing and producing ASIC chips and mining machines, we have built up competitive strengths that have enabled us to navigate the volatility of the Bitcoin prices and demand. 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 consider our patents, IC layout and design rights, copyrights, trademarks, domain names, know-how, proprietary technologies and similar intellectual property 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 December 31, 2022, we, through our operating subsidiaries, had registered 380 trademarks, including 93 in the PRC, 56 in Hong Kong, 16 in Taiwan, 20 in Japan, 18 in Republic of Korea, 13 in the United States, 28 in Russia, 35 in Central Asia, 17 in the Kingdom of Norway, 21 in European Union, 28 in Republic of Singapore, 17 in Iceland, 12 in the United Kingdom and 6 in Mexico.

As of December 31, 2022, we, through our subsidiaries, have registered 192 patents in the PRC, 2 patents in Hong Kong, 9 patents in the United States, 1 patent in the Eurasian Patent Organization and 4 patents in Australia. The total of 205 patents includes 57 inventions, 112 utility model patents and 36 exterior design patents. We have also, through our PRC subsidiaries, registered 117 software copyrights and 71 IC layout-design rights in the PRC, as of December 31, 2022.

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. Our operating subsidiaries 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 our operating subsidiaries have taken will prevent misappropriation of our technology. From time to time, we, through our operating subsidiaries, may have to resort to litigation to enforce our intellectual property rights, which could result in substantial costs and diversion of our resources.

We, through our operating subsidiaries, have in the past entered, and may in the future continue 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.

Insurance

Our operating subsidiaries do not maintain business liability or interruption insurance, which, based on publicly available information available to us relating to IC design companies, is in line with customary industry practice. 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.

Employees

As of December 31, 2022, we and our operating subsidiaries employed a total of 541 employees that are classified as follows:

Function	Number of Employees	Percentage of Total Number of Employees
Management	92	17.0 %
Sales and marketing	23	4.2 %
Research and development	292	54.0 %
Others	134	24.8 %
Total	541	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, through our operation subsidiaries, 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

Our PRC operating subsidiaries 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 December 31, 2022, we and our operating subsidiaries occupied a total of 15 properties with an aggregate gross floor area of approximately 19,731 square meters.

Environmental Matters

Our operating subsidiaries are subject to environmental laws and regulations in the jurisdictions where they operate. 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 material applicable requirements under relevant 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.

The operations of our operating subsidiaries 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

On March 4, 2020, a putative class action was filed in the United States District Court of Oregon against us, certain of our officers and directors and the underwriters in our IPO. The complaint alleges that our registration statement on Form F-1, initially filed with the Securities and Exchange Commission on October 28, 2019 (File No. 333-234356), contained material misstatements and omissions in violation of federal securities laws. On March 6, 2020, another putative class action, making substantially similar allegations, was filed in New York County Supreme Court (the “State Action”) against us and certain of our officers and directors. On June 1, 2020, we filed a motion to stay all proceedings in the State Action pending adjudication of the Federal Action, which was granted on July 21, 2020. Subsequently, the Federal Action was transferred to the U.S. District Court for the Southern District of New York (the “Court”) on September 2, 2020. On October 7, 2020, lead plaintiffs in the Federal Action filed an amended complaint asserting claims under Section 11 of the Securities Act and Sections 10(b) and 20(a) of the Exchange Act for that the registration statement failed to disclose three alleged related party transactions. On December 7, 2020, we filed a motion to dismiss in the Federal Action and our motion to dismiss the amended complaint in the Federal Action. On July 8, 2021, the Court dismissed the first amended complaint but allowed plaintiffs to file a second amended complaint by August 6, 2021. On August 6, 2021, plaintiffs filed a letter motion for leave to file a second amended complaint. On August 27, 2021, we filed a letter response to oppose plaintiffs’ August 6, 2021 letter motion and to seek a final judgment dismissing the Federal Action to be entered. On March 31, 2022, the Court denied plaintiffs’ motion for leave to file a second amended complaint as futile and dismissed Plaintiffs’ claims with prejudice. Plaintiffs did not appeal. Following dismissal with prejudice of the Federal Action, plaintiff voluntarily discontinued the State Action with prejudice on June 2, 2022.

On April 15, 2021, a new putative class action was filed in the U.S. District Court for the Southern District of New York against us and certain of our officers and directors. The complaint alleges that our statements in February 2021 about increased visibility into revenue and the size and quality of orders we were receiving were materially false and misleading. Plaintiff claims that the truth about our revenue was revealed in April 2021, when we announced our latest financial results. On December 9, 2021, the Court appointed Bill Lu and Liying Huang as lead plaintiffs and Brager Eagle & Squire, P.C. as lead plaintiffs’ counsel. On February 7, 2022, lead plaintiffs filed an amended complaint asserting the same claims under Sections 10(b) and 20(a) of the Exchange Act against the same set of defendants. The amended complaint alleges our November 30, 2020 and February 10, 2021 press releases and the April 9, 2021 interview of our chief executive officer in an article published by Decrypt contained false and misleading statements regarding the pre-sale orders we had received and our ability to secure sufficient chip supply to meet the increasing demand for mining machines, because those statements allegedly left “investors with the false impression that revenue in the fourth quarter 2020 would be solid” and allegedly omitted that the pre-sale orders were locked in at lower prices than the re-bounding Bitcoin market prices during the third quarter of 2019 and fourth quarter of 2020, and we had been experiencing significant supply chain disruptions during the fourth quarter of 2020. On April 8, 2022, we filed a motion to dismiss the amended complaint, which has been fully briefed as of July 7, 2022. As of the date of this annual report, the Court issued an order granting our motion to dismiss the case in its entirety. The Court granted lead plaintiffs leave to further amend their amended complaint, the deadline of which is April 26, 2023. Other than the above, we and our subsidiaries 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.

Regulations in the PRC

This section summarizes the principal current PRC laws and regulations relevant to the business and operations of our PRC operating subsidiaries.

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 the operations and business of our PRC operating subsidiaries. This summary does not purport to be a complete description of all the laws and regulations, which apply to the business and operations of our PRC operating subsidiaries. Investors should note that the following summary is based on relevant laws and regulations in force as of the date of this annual report, 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 Catalog of Industries for Encouraged Foreign Investment (2022 Edition) (《鼓励外商投资产业目录(2022修订)》), or the Foreign Investment Catalog, which was jointly promulgated by the Ministry of Commerce of the PRC, or MOFCOM, and the NDRC, on October 26, 2022 and became effective on January 1, 2023. 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 330, 331, 335, 336, 339 and 340 of encouraged foreign invested industries listed in the Foreign Investment Catalog.

Pursuant to the Provisions for Guiding the Foreign Investment Direction (《指导外商投资方向规定》), 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 (《国务院关于印发鼓励软件产业和集成电路产业发展若干政策的通知》) 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 (《国务院关于印发进一步鼓励软件产业和集成电路产业发展若干政策的通知》) 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 (《关于软件和集成电路企业认定管理有关问题的公告》) 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%.

As demonstrated by the Circular of the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Education, the Ministry of Finance, the Ministry of Human Resources and Social Security, the Ministry of Commerce, the State Taxation Administration, the State Administration for Market Regulation, the National Bureau of Statistics, the Chinese Academy of Engineering, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission and the China National Intellectual Property Administration on Issuing the Special Action Plan for Enhancing Design Capacity in the Manufacturing Industry (2019-2022) (《工业和信息化部、国家发展和改革委员会、教育部、财政部、人力资源和社会保障部、商务部、国家税务总局、国家市场监督管理总局、国家统计局、中国工程院、中国银行保险监督管理委员会、中国证券监督管理委员会、国家知识产权局关于印发制造业设计能力提升专项行动计划(2019-2022年)的通知》) issued on October 11, 2019, the integrated circuit design industry will be vigorously developed in the recent years as realizing the design upgrading of traditional advantageous industries.

Pursuant to the Circular of the State Council on Issuing Several Policies for Promoting the High-quality Development of the Integrated Circuit Industry and the Software Industry in the New Era (《国务院关于印发新时期促进集成电路产业和软件产业高质量发展若干政策的通知》) issued on July 27, 2020, the integrated circuit industry and software industry are considered as the core of information industry. The integrated circuit industry has received strong support from eight aspects such as finance and taxation, investment and financing, research and development, import and export, intellectual property rights and market application, etc.

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 of the People's Bank of China, Ministry of Industry and Information Technology, China Banking Regulatory Commission, China Securities Regulatory Commission, and China Insurance Regulatory Commission on the Prevention of Risks from Bitcoin (《中国人民银行、工业和信息化部、中国银行业监督管理委员会、中国证券监督管理委员会、中国保险监督管理委员会关于防范比特币风险的通知》) 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 Announcement of the People's Bank of China, the Cyberspace Administration of China, the Ministry of Industry and Information Technology, the State Administration for Industry and Commerce, the China Banking Regulatory Commission, the China Securities Regulatory Commission and the China Insurance Regulatory Commission on Preventing Initial Coin Offerings (ICO) Risks (《中国人民银行、中央网信办、工业和信息化部、工商总局、银监会、证监会、保监会关于防范代币发行融资风险的公告》) 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.

According to the Circular on Regulating Virtual Currency "Mining" Activities (《关于整治虚拟货币“挖矿”活动的通知》) jointly promulgated by the National Development and Reform Commission of the PRC, the Publicity Department of the CPC Central Committee, the Office of Cyberspace Affairs Commission of the CPC Central Committee, the Ministry of Industry and Information Technology, the Ministry of Public Security, the Ministry of Finance, the People's Bank of China, the State Administration of Taxation, the State Administration for Market Regulation, the China Banking and Insurance Regulatory Commission and the National Energy Administration on September 3, 2021, the PRC government classifies the virtual currency mining activities as the eliminated industry.

According to the Circular on Further Preventing and Disposing of Virtual Currency Trading Speculation Risks (《关于进一步防范和处置虚拟货币交易炒作风险的通知》) jointly promulgated by the People's Bank of China, the Office of Cyberspace Affairs Commission of the CPC Central Committee, the Supreme People's Court, the Supreme People's Procuratorate, the Ministry of Industry and Information Technology, the Ministry of Public Security, the State Administration for Market Regulation, the PRC Banking and Insurance Regulatory Commission, CSRC and the State Administration of Foreign Exchange on September 15, 2021, virtual currency-related business activities, such as exchange between legal tender currencies and virtual currencies, exchange between virtual currencies, trading virtual currencies as central counterparty, providing information intermediary and pricing services for virtual currency trading, token issuance and financing, and virtual currency derivatives trading are illegal financial activities and are strictly prohibited and resolutely banned. Virtual currency-related business activities of an overseas virtual currency exchange which provides services to PRC residents via the Internet are illegal financial activities.

On March 12, 2022, the National Development and Reform Commission of the PRC published the Market Access Negative List (2022 Edition) (《市场准入负面清单(2022年版)》), which lists the virtual currency mining activities as the "backward production processes and equipment" under the eliminated item in the Catalogue for Guiding Industrial Restructuring (《产业结构调整指导目录》). According to the List, market entities are prohibited from investing in eliminated items. The above regulations and policies may result in no customers in the PRC buying our products.

PRC Laws and Regulations relating to Intellectual Property Rights Trademark

The Trademark Law of the PRC (《中华人民共和国商标法》) was promulgated on August 23, 1982 with the last amendment effective from November 1, 2019. The Implementing Regulations of the Trademark Law of the PRC (《中华人民共和国商标法实施条例》) 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 CNIPA 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. Twelve 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 (《中华人民共和国专利法》), promulgated on March 12, 1984 with the last amendment effective from June 1, 2021, and the Detailed Implementing Rules of the Patent Law of the PRC (《中华人民共和国专利法实施细则》) promulgated on June 15, 2001 with the last amendment effective from February 1, 2010, respectively, an inventor or a designer may apply to China National Intellectual Property Administration, or the CNIPA 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 CNIPA. 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 the PRC (《中华人民共和国著作权法》), promulgated on September 7, 1990 with the last amendment promulgated on November 11, 2020 and to be effective on June 1, 2021, protects copyright and explicitly covers computer software copyright. The Regulations on the Computer Software Protection (《计算机软件保护条例》), 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 (《计算机软件著作权登记办法》), 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 (《集成电路布图设计保护条例》) 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 (《集成电路布图设计保护条例实施细则》) were promulgated by CNIPA, 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 filing 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 (《互联网域名管理办法》) issued by the Ministry of Industry and Information Technology (中华人民共和国工业和信息化部), or the MIIT, on August 24, 2017 which became effective on November 1, 2017, the Measures on Domain Name Disputes Resolution (《中国互联网络信息中心域名争议解决办法》) issued by China Internet Network Information Center (中国互联网络信息中心), or the CENIC, which became effective on June 28, 2012 (abolished on November 21, 2014), and the Announcement of Issuance and Implementation on the Detailed Implementing Rules of national TLD (《关于发布并实施<国家顶级域名注册实施细则>系列规定的公告》) issued by CENIC, which became effective on June 18, 2019. 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 CENIC for resolution.

PRC Laws relating to Product Quality

The Product Quality Law of the PRC (《中华人民共和国产品质量法》) 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 (《中华人民共和国安全生产法》) promulgated on June 29, 2002, with the latest amended version effective from September 1, 2021, 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 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 (《高新技术企业认定管理办法》), 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 the PRC on the Administration of Tax Collection (《中华人民共和国税收征收管理法》) and the Detailed Implementing Rules of the Law of the PRC on the Administration of Tax Collection (《中华人民共和国税收征收管理法实施细则》). 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 (《关于非居民企业间接转让财产企业所得税若干问题的公告》) promulgated and with effect from February 3, 2015 and with last amendment on December 29, 2017, or Circular 7, and the Announcement of the State Administration of Taxation on Issues Concerning Withholding of Income Tax of Non-resident Enterprises at Source (《国家税务总局关于非居民企业所得税源泉扣缴有关问题的公告》) promulgated on October 17, 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 non-resident enterprises and proceed 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 Interim Regulations on Value-Added Tax of the PRC (《中华人民共和国增值税暂行条例》) promulgated by the Stated Council on December 13, 1993 with the latest amended version effective from November 19, 2017, and its implementing rules (《中华人民共和国增值税暂行条例实施细则》) promulgated by MOF on December 25, 1993 and revised on December 15, 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 Circular of Value-added Tax Policies of Software Products (《关于软件产品增值税政策的通知》), a general taxpayer who sells its self-developed 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 registration certificate for software products (软件产品登记证书) or registration certificate for software copyrights (计算机软件著作权登记证书) 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 (《财政部、税务总局关于调整增值税税率的通知》), which came into effect on May 1, 2018, 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 (《关于深化增值税改革有关政策的公告》), which was promulgated by MOF, State Administration of Taxation and the General Administration of Customs on March 20, 2019 and came into effect on April 1, 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 Foreign Investment Law of the People's Republic of China (《中华人民共和国外商投资法》), which was promulgated by the National People's Congress of the PRC on March 15, 2019 and became effective on January 1, 2020, the organization form and structure and operating rules of foreign-funded enterprises are subject to the provisions of the Company Law of the People's Republic of China, the Partnership Enterprise Law of the People's Republic of China and other applicable laws. According to the Company Law of the People's Republic of China, 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 (《内地和香港特别行政区关于对所得避免双重征税和防止偷漏税的安排》), 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 Concerning the Implementation of Dividend Clauses in Tax Treaties (《关于执行税收协定股息条款有关问题的通知》), 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 (《非居民享受税收协定待遇管理办法(试行)》), 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 (《非居民享受税收协定待遇管理办法(试行)》) has been repealed by the Administrative Measures on Tax Convention Treatment for Non-Resident Taxpayers (《非居民纳税人享受税收协定待遇管理办法》), 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.

Since January 1, 2020, the Administrative Measures on Tax Convention Treatment for Non-Resident Taxpayers (《非居民纳税人享受税收协定待遇管理办法》) has been replaced by the Announcement of the State Taxation Administration on Issuing the Administrative Measures for Entitlement to Treaty Benefits for Non-resident Taxpayers (《国家税务总局关于发布<非居民纳税人享受协定待遇管理办法>的公告》), which was promulgated on October 14, 2019, Entitlement to treaty benefits for non-resident taxpayers shall be handled by means of “self-judgment of eligibility, declaration of entitlement, and retention of relevant materials for future reference,” and non-resident taxpayers shall retain relevant information proving the status of “beneficial owner” in the case of entitlement to dividends clauses.

PRC Laws and Regulations relating to Labor

Pursuant to the PRC Labor Law (《中华人民共和国劳动法》) promulgated on July 5, 1994 and effective from January 1, 1995, and last revised on December 29, 2018, as well as the PRC Labor Contract Law (《中华人民共和国劳动合同法》) promulgated on June 29, 2007, 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 (《社会保险费征缴暂行条例》) 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 (《国务院关于完善企业职工基本养老保险制度的决定》) promulgated on December 3, 2005, the Decision of the State Council on Establishment of Basic Medical Insurance System for Urban Employee (《国务院关于建立城镇职工基本医疗保险制度的决定》) issued by State Council with effect from December 14, 1998, the Regulations on Unemployment Insurance (《失业保险条例》) effective from January 22, 1999, Regulations on Work-Related Injury Insurance (《工伤保险条例》) promulgated on April 27, 2003 with effect from January 1, 2004, and as amended on December 20, 2010 and effective from January 1, 2011, and the Interim Measures concerning the Maternity Insurance for Enterprise Employees (《企业职工生育保险试行办法》) 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 (《中华人民共和国社会保险法》), which became effective on July 1, 2011 with last amendment on December 29, 2018, 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 (《住房公积金管理条例》) 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 (《中华人民共和国外汇管理条例》) promulgated by the State Council on January 29, 1996 and amended on August 5, 2008 with effect from August 5, 2008, and various regulations issued by the State Administration of Foreign Exchange (国家外汇管理局), 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 on Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment (《国家外汇管理局关于进一步改进和调整直接投资外汇管理政策的通知》), or SAFE Circular 59, which became effective on December 17, 2012, with last amendment on December 30, 2019. 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 (《国家外汇管理局关于改革外商投资企业外汇资本金结汇管理方式的通知》), or SAFE Circular 19, which came into effect on June 1, 2015 with its last amendment on December 30, 2019. According to SAFE Circular 19, the foreign exchange capital of foreign-invested enterprises, or the FIE, shall be subject to a discretionary foreign exchange settlement, or the Discretionary Foreign Exchange Settlement. The Discretionary 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 Discretionary 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, the 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 (《国家外汇管理局关于境内居民通过特殊目的公司境外投融资及返程投资外汇管理有关问题的通知》), 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 the Circular on Further Simplifying and Improving the Direct Investment-related Foreign Exchange Administration Policies (《关于进一步简化和改进直接投资外汇管理政策的通知》), or SAFE Circular 13, which was promulgated by SAFE on February 13, 2015 and became effective on June 1, 2015, with its last amendment on December 30, 2019, 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.

SAFE Circular 7

Pursuant to the Circular of the State Administration of Foreign Exchange on the Relevant Issues Concerning the Administration of Foreign Exchange for Domestic Individuals' Participation in Equity Incentive Programs of Overseas Listed Companies (《国家外汇管理局关于境内个人参与境外上市公司股权激励计划外汇管理有关问题的通知》), all individuals who participate in the same equity incentive program of an overseas listed company shall, through their domestic company, collectively entrust one domestic agency to solely handle the relevant matters for them including registration of foreign exchange, opening of the account and transfer and conversion of funds, and one overseas agency shall solely handle such matters including individuals' exercise of rights, the purchase and sale of relevant stocks or equities and transfer of relevant funds.

Regulations in the United States

The following sets forth a description of certain laws, regulations and government policies relating to cryptocurrencies and cryptocurrency mining in the United States, which we consider a key market for our overseas business.

We are not aware of any law that currently makes it *per se* illegal for a natural person or entity simply to possess, sell, or trade Bitcoin on its own behalf in connection with lawful transactions in the United States, provided that any transaction complies generally with applicable law. Nonetheless, in the United States, both the federal government and individual states have regulations in place that govern the offer, sale, and transmission of various types of cryptocurrency, including but not limited to Bitcoin, and the legal status of Bitcoin and other cryptocurrencies continues to evolve.

The United States Commodity Futures Trading Commission, or CFTC, has taken the position that crypto currencies, such as Bitcoin, are “commodities” covered by the Commodity Exchange Act and subject to regulation by the CFTC. In March 2018, a United States federal court affirmed the CFTC’s authority to regulate cryptocurrencies. This means that the CFTC has jurisdiction over any futures, options or derivatives contracts involving cryptocurrencies as well as any fraud or manipulation involving cryptocurrencies in the spot market. Our Bitcoin mining machines are not intended to be used either for any futures, options or derivatives trading or to enable fraud or manipulation. However, to the extent that any mining activity using our products were to be deemed a form of fraud or manipulation, or our products were otherwise used for fraud or manipulation, we could potentially be subject to regulatory or private actions related to those uses.

In addition, while the SEC has taken the position that Bitcoin, Ether, and certain cryptocurrencies subject to significant operational restrictions are not “securities” regulated by the federal securities laws, it is likely that the SEC will view almost all other cryptocurrencies other than Bitcoin and Ether that can be mined to be “securities,” based on their status as “investment contracts” under the guidance provided by the SEC “Framework for ‘Investment Contract’ Analysis of Digital Assets,” and the application of the test under *SEC v. W. J. Howey Co.* (the “*Howey test*”) to cryptocurrencies. It is similarly likely that these other cryptocurrencies will be treated as securities under the laws of the individual states.

The status of additional cryptocurrencies as securities could impose significant restrictions on us or our customers with operations that are located in the United States or involve United States residents. Typically, offerings and distributions of securities in the United States are required to register with the SEC under the Securities Act and, in compliance with state law, with applicable state regulators. If the offering of a cryptocurrency that can be mined using our Bitcoin mining machines is deemed a security, miners may be required to cease mining that cryptocurrency, which would negatively affect our business. In addition, if our company were viewed as facilitating an illegal distribution of a cryptocurrency, our company could be subject to liability associated with its product sales. Further, even if a cryptocurrency that is considered to be a security is legally distributed under the US securities laws, the miners of that cryptocurrency could be viewed as statutory underwriters or as “brokers” subject to regulation under the Exchange Act because they are effecting transactions in those securities for a fee (i.e., mining rewards). This outcome would again potentially reduce the viability of our product sales and could also subject us to liability. Any of these developments could limit the future development of our business. See “Item 3. Key Information—D. 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 operations and financial position.”

Further, the Department of the Treasury’s Financial Crimes Enforcement Network, or FinCEN, regulates “money transmitters,” including certain administrators and exchangers of cryptocurrencies, and state laws also regulate money transmission; more generally, cryptocurrency transactions may implicate a variety of federal and state laws designed to counter money laundering. In that regard, it should be noted that U.S. Secretary of the Treasury Steven Mnuchin has indicated that federal regulators are specifically looking for potential money laundering activities involving cryptocurrency.

C. Organizational Structure

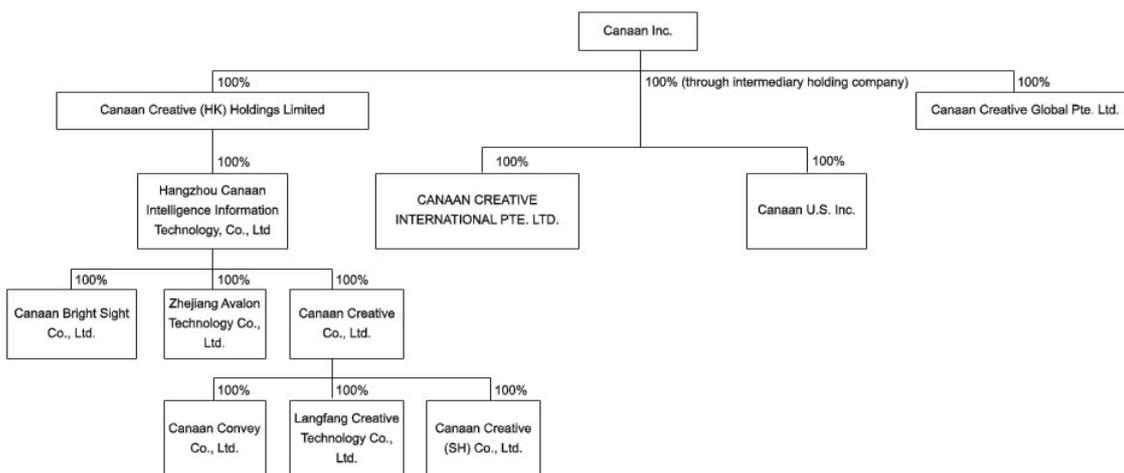
We are a holding company incorporated in Cayman Islands and do not have substantive operations. Like many large scale, multinational companies with businesses around the world, we conduct our business through a number of subsidiaries across the world, as we expand through organic growth and/or acquisitions and consolidations of new businesses.

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The following is a list of our principal subsidiaries as of the date of this annual report on Form 20-F, and their respective date of incorporation, jurisdictions of incorporation, principal activities and the ownership interest we hold:

Name of principal subsidiaries	Place of incorporation	Equity interest held	Principal activities
Canaan Creative (HK) Holdings Limited	Hong Kong Special Administrative Region	100 %	Research and development of ICs
Hangzhou Canaan Intelligence Information Technology Co., Ltd.	Hangzhou, China	100 %	Research and development of ICs
Canaan Creative Co., Ltd.	Beijing, China	100 %	Research and development of ICs
Langfang Creative Technology Co., Ltd.	Langfang, China	100 %	Assembly of mining equipments and spare parts
Canaan Convey Co., Ltd.	Beijing, China	100 %	International distribution of mining equipments and spare parts
Zhejiang Avalon Technology Co., Ltd.	Hangzhou, China	100 %	Distribution of mining equipments and spare parts
Canaan Bright Sight Co., Ltd.	Beijing, China	100 %	International distribution of AI products
Canaan Creative (SH) Co., Ltd.	Shanghai, China	100 %	Research and development of ICs
Canaan Creative Global Pte. Ltd.	Singapore	100 %	International headquarters, research and development of ICs, international distribution of mining equipments and spare parts
Canaan U.S. Inc.	United States	100 %	International distribution of mining equipments and spare parts, mining business
Canaan Creative International PTE. Ltd.	Singapore	100 %	Mining business

The following diagram illustrates our corporate structure, including our principal subsidiaries described above, as of the date of this annual report on Form 20-F:



D. Property, Plants and Equipment

Please refer to “B. Business Overview—Properties” for a discussion of our property, plants and equipment.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Unless otherwise stated, the discussion and analysis of our financial condition and results of operation in this section apply to our financial information as prepared according to U.S. GAAP. You should read the following discussion and analysis of our financial condition and operating results in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report. The following discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results and the timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under “Item 3. Key Information—D. Risk Factors.”

A. Operating Results Overview

We provide supercomputing solutions through our proprietary high performance computing ASICs. We have strong ASIC chip design capability underpinned by over ten years of industry experience and expertise of our founders and management team. We are one of the few fabless IC design companies with the advanced technology to independently design ASIC, established access to leading wafer foundry capacity and proven in-house capability to produce Bitcoin mining machines. We primarily dedicated technology and expertise in ASIC applications to Bitcoin mining machines and are a leading producer of Bitcoin mining machines in the global market. In addition, with our technology expertise and know-how in ASIC chip design, we strive to expand into AI fields and provide holistic AI solutions to our customers. Our PRC operating subsidiaries have delivered commercial edge computing AI chips based on Risc-V architecture and self-developed neural-network accelerator with outstanding performance. We believe our extensive experience and expertise in ASIC applications position us well in our future endeavors.

Leveraging our deep understanding of the cryptocurrency industry and strong technology as applied to ASIC chip design, we intend to capture the growth opportunity along the value chain of the cryptocurrency industry to enhance our offerings and achieve a more stable financial performance. We have started with the Bitcoin mining business through our strategic collaboration with certain cryptocurrency mining farms and aim to develop the Bitcoin mining business as the second engine to capitalize on the Bitcoin ecosystem and synergize with our bitcoin mining machines sales. We endeavor to grow our deployed computing power for mining and improve the energized hash rate to enhance our mining business. For the year ended December 31, 2020, 2021 and 2022, we generated revenue of nil, RMB21.7 million and RMB218.6 million (US\$31.7 million) from the Bitcoin mining business, respectively.

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

- Our expertise in the development, designing and production of Bitcoin mining machines;
- 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;
- 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 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 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 long-term 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;
- Our long-term partnerships with leading global suppliers, which have enabled us to achieve high-quality, high yield rate and stable production; and
- Our penetration into the Bitcoin mining business by leveraging our experience in Bitcoin mining machines production and sales.

Our Business Model

We are a fabless IC designer engaged in the front-end and back-end of IC design, which are the major components of the IC product development chain. We currently dedicate our technology and expertise in ASIC chip design to Bitcoin mining machines and AI applications. We, through our PRC operating subsidiaries, independently design and develop our products in-house, including the design of proprietary ASIC chips for our Bitcoin mining machines. Front-end IC design and back-end IC design are the key parts of the IC design process. We determine the parameters of the IC chip, establish the basic logic of the design, map out the initial plan for the physical layout, and conduct back-end verification on the design. We then work closely with industry-leading third-party suppliers to fabricate, test and package the IC products we design. Moreover, we have established in-house production capabilities to assemble both Bitcoin mining machines and AI chips. We assemble our Bitcoin mining machines primarily at our assembly plant located in the PRC by integrating the ICs produced by us and related components we procure. We believe our outstanding technical expertise and production experience in IC development chain enables us to continuously introduce ICs with higher performance and power efficiency for application in both the blockchain and AI fields. In addition, we have started with the Bitcoin mining business through our strategic collaboration with certain cryptocurrency mining farms and aim to develop the Bitcoin mining business as the second engine to capitalize on the Bitcoin ecosystem and synergize with our Bitcoin mining machines sales. As we endeavor to grow our deployed computing power for mining and improve the energized hash rate to enhance our mining business, we believe that such business will play a more significant role in supplementing our Bitcoin mining machines sales, mitigate our inventory risks and contribute to our financial and operating results.

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:

- expected economic returns on Bitcoin mining activities, in particular, 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
- impact of COVID-19 pandemic; and
- the regulatory environment.

Expected economic returns on Bitcoin mining activities, in particular, the fluctuations of Bitcoin price

Our revenues are primarily derived from the sales of Bitcoin mining machines and related parts, which are, in general, determined by the demand and pricing of our Bitcoin mining machines. Bitcoin miners' purchasing behavior are primarily driven by the expected economic returns of Bitcoin mining. In addition, we also generate a portion of our revenues from our Bitcoin mining business, which is also primarily driven by the expected economic returns of Bitcoin mining. An increase in the Bitcoin price is a significant factor that could increase the expected economic returns generated by Bitcoin mining activities and stimulate the demand and average selling price for our Bitcoin mining machines, and vice versa. Bitcoin price fluctuated significantly in the past few years and resulted in corresponding fluctuations of our sale of Bitcoin mining machines. We expect our results of operations to continue to be affected by the fluctuations of Bitcoin price, as a significant portion of our revenue is expected to come from the sales of Bitcoin mining machines and related parts and a portion of our revenues is expected to come from our Bitcoin mining business. 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.

In addition to the volatility of Bitcoin price, various other factors, mostly beyond our control, could impact the expected economic returns of Bitcoin mining as well, including, among others, increase in the Bitcoin's total network hash rate, increase in transaction fees, increase in electricity costs or other operating costs, increase in computing power and efficiency of mining machines, and a variety of special economic, geopolitical and regulatory factors.

Additionally, 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 for Bitcoin mining machines, 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, as the Bitcoin price has fluctuated from the second half of 2022 to the first quarter of 2023, we continued to experience low demand and low prices in the Bitcoin mining machines market. Subsequently, another price drop on A12 series was offered in late March 2023, which in turn led to a further write-down to such inventories and related prepayments based on the most recent subsequent selling price, despite an inventories write-down recorded based on the price earlier. As a result, we recorded inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB629.4 million in 2022. If the Bitcoin price drops significantly in the future, we may make similar write-down 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.

Furthermore, Bitcoin price drop in the past also led to our offering of credit sales to certain customers, instead of full prepayment before delivery of products. 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. In 2020, we recognized such price concessions of RMB11.5 million. We did not provide price concession in 2021 and 2022.

Acceptance and Development of Blockchain Technology Applications, Especially Bitcoin

Our current blockchain application is designed for Bitcoin mining. Our revenues derived from sales of Bitcoin mining machines and related parts were RMB422.6 million in 2020, RMB4,939.9 million in 2021 and RMB4,150.3 million (US\$601.7 million) in 2022. For the years ended December 31, 2020, 2021 and 2022, we generated revenue of nil, RMB21.7 million and RMB218.6 million (US\$31.7 million) from the Bitcoin mining business, respectively. 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.

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 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, in 2022, we mainly relied on two third-party foundry partners for our Bitcoin mining machine business, and we cannot guarantee that they will be able to meet our manufacturing requirements or capacity or that they will not raise their prices. In addition, our final test yield is a function of both product design, which is developed by us, and process technology of our third-party foundry partners. If any of our third-party foundry partners 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. See “Item 3. Key Information-D. Risk Factors-Risks Relating to Our Business and Industry- Failure at tape-out or failure to achieve the expected final test yields for our ASICs could negatively impact our operating results.” 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. 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.

Impact of COVID-19 Pandemic

The COVID-19 pandemic has had, and, together with any subsequent outbreaks driven by new variants of COVID-19, may continue to have, a significant impact on our operations and financial results. The potential downturn brought by and the duration of the COVID-19 pandemic may be difficult to assess or predict where actual effects will depend on many factors beyond our control. The extent to which the COVID-19 pandemic impacts our long-term results remains uncertain, and we are closely monitoring its impact on us.

In 2020, our operations were significantly affected by the COVID-19 pandemic. The revenue contribution from our Bitcoin mining machine business decreased in the first few months of 2020 compared to the prior period, partly due to the outbreak of COVID-19, which significantly affected the expected returns on Bitcoin related activities such as mining, and in turn resulted in a much lower demand and average selling price of our Bitcoin mining machines. Our Bitcoin mining machine business has been gradually recovering in 2021, underpinned by higher average selling price and more customer orders, following the effective control of the outbreaks in the PRC, the resumption of business activities and the gradual recovery of the global general economy. However, there have been significant resurgence of COVID-19 cases from time to time, including the COVID-19 Delta and Omicron variant cases. And we may experience disruptions to our business operations resulting from supply interruptions, quarantines, self-isolations, or other movement and restrictions on the ability of our employees or our counterparties to perform their jobs. For example, in March 2022, the COVID-19 resurgence, together with the resulting travel restrictions and quarantine measures, caused disruptions in the operations of our assembly plant in the PRC, which resulted in delays in the shipment of products to certain customers. Also, due to the outbreak of Omicron variant in 2022, certain cities in China have imposed new restrictions and quarantine requirements with office closures and stay home orders. At the end of November 2022, Chinese government eased strict zero COVID-19 policy which caused surge of COVID-19 cases in December 2022 and January 2023. The future impact of the COVID-19 pandemic is still highly uncertain and there is no assurance that the COVID-19 pandemic or any other pandemic, or other unfavorable global economic, business or political conditions, will not materially and adversely affect our business, prospects, financial condition, and operating results.

Regulatory Environment

Historically, a significant portion of our Bitcoin mining machines were sold to customers located in China. Because of the adverse changes in the regulatory environment in the PRC, we have been actively exploring the international markets outside the PRC and our revenues generated from sales to customers outside China, such as customers in Southeast Asia, the United States, Australia and Central Asia, represented 97.2% of our total revenues generated from sales of Bitcoin mining machines and related parts in 2022. As such, we need to ensure that we are compliant with the existing and future laws and regulations relating to our business in the various jurisdictions that are material to our business and operations. See “Item 3. Key Information-D. 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 operations and financial position.”

If a government in any jurisdiction changes its policy or regulations to prevent or limit the development of Bitcoin or cryptocurrencies generally, the price of Bitcoin and the demand for our mining machines as well as the future development of other cryptocurrency related business would decrease or fail, and our business operations and financial results could be adversely affected. Therefore, our ability to comply with government policies and regulations, and to anticipate and respond to potential changes in government policies and regulations will have a significant impact on our business operations and our overall results of operations.

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. Revenues derived from the sale of our AI products was RMB4.9 million in 2020, RMB17.0 million in 2021 and RMB9.3 million (US\$1.4 million) in 2022. 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.

Key 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,						
	2020		2021		2022		
	RMB	%	RMB	%	RMB	US\$	
	(in millions, except for percentage)						
Products revenue	427.5	95.5	4,956.9	99.4	4,159.6	603.1	95.0
Bitcoin mining machines ⁽¹⁾	422.6	94.4	4,939.9	99.1	4,150.3	601.7	94.8
AI products	4.9	1.1	17.0	0.3	9.3	1.4	0.2
Mining revenue	—	—	21.7	0.4	218.6	31.7	5.0
Leases revenue ⁽²⁾	19.0	4.2	7.6	0.2	—	—	—
Maintenance service revenue	0.3	0.1	0.2	0.0	—	—	—
Other revenues	0.9	0.2	0.3	0.0	0.7	0.1	0.0
Total	447.7	100.0	4,986.7	100.0	4,378.9	634.9	100.0

Notes:

- (1) Substantially all of our bitcoin mining machines products revenue is attributable to sales of Bitcoin mining machines, with the remainder consisting of Bitcoin mining machine parts and accessories.
- (2) 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. We ceased leasing mining equipment in the second quarter of 2021.

Our revenue is primary affected by the total computing power sold and their average selling price. The average selling price of our Bitcoin mining machines changes from period to period and is primarily affected by the Bitcoin price and expected economic returns on Bitcoin mining activities, and the performance of the mining machines. The Bitcoin price and expected economic returns on Bitcoin mining activities could significantly affect the demand of mining machines and in turn the average selling price of Bitcoin mining machines. See “-Key Factors Affecting Our Results of Operations” for details of factors affecting economic return on Bitcoin mining activities and the market demands. Particularly, a significant fluctuation in Bitcoin price in a short period of time could significantly reverse the trend of average selling price of Bitcoin mining machines in certain periods of time. For example, a significant drop in the Bitcoin price in the fourth quarter of 2022 reduced the average selling price of Bitcoin mining machines in the same periods. This is typically the case of our A13 series products which were released just before the Bitcoin price drop and, despite its much stronger computing power, had a lower average selling price as compared with our A12 series products in 2022. 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,								
	2020			2021			2022		
	Revenue	Total Computing Power Sold	ASP per Thash	Revenue	Total Computing Power Sold	ASP per Thash	Revenue	Total Computing Power Sold	ASP per Thash
	RMB in millions	Thash/s	RMB	RMB in millions	Thash/s	RMB	RMB in millions	Thash/s	RMB
A8 series ⁽¹⁾	6.2	699,292	9	—	—	—	—	—	—
A9 series ⁽²⁾	1.7	47,536	35	—	—	—	—	—	—
A10 series ⁽³⁾	350.8	5,477,423	64	1.0	102,259	10	—	—	—
A11 series ⁽⁴⁾	40.7	297,170	137	2.8	85,083	33	—	—	—
A12 series ⁽⁵⁾	14.2	79,307	178	4,913.7	22,154,791	222	4,140.0	15,102,553	274
A13 series ⁽⁶⁾	—	—	—	—	—	—	0.7	6,201	116
Total	413.5	6,600,729	63	4,917.5	22,342,133	220	4,140.7	15,108,754	274

Notes:

- (1) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.
- (2) Mainly includes our A921 and A911 Bitcoin mining machines.

- (3) Mainly includes our A1047, A1066 and A1066 Pro Bitcoin mining machines.
- (4) Mainly includes our A1146 Pro, A1166 and A1166 Pro Bitcoin mining machines.
- (5) Mainly includes our A1246 and A1266 Bitcoin mining machines.
- (6) Mainly includes our A1346 Bitcoin mining machines.

Moreover, 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 of production.

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 inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments and tax surcharges. The following table sets forth a breakdown of our cost of revenues, expressed as an absolute amount and as a percentage of our total cost of revenues, for the years indicated.

	Year ended December 31,						
	2020		2021		2022		
	RMB	%	RMB	%	RMB	US\$	
Cost of revenues excluding the impact of write-down	1,159.6	282.9	2,170.5	101.6	2,240.5	324.8	79.2
Inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments	44.9	11.0	50.7	2.4	629.4	91.3	22.2
Transfer of inventories write-down and prepayment write-down	(794.6)	(193.9)	(85.2)	(4.0)	(38.8)	(5.6)	(1.4)
Total cost of revenues	409.9	100.0	2,136.0	100.0	2,831.1	410.5	100.0

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

We make inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments 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 and changes of market demands. For example, as the Bitcoin price has fluctuated from the second half of 2022 to the first quarter of 2023, we continued to experience low demand and low prices in the Bitcoin mining machines market. Subsequently, another price drop on A12 series was offered in late March 2023, which in turn led to a further write-down to such inventories and related prepayments based on the most recent subsequent selling price, despite an inventories write-down recorded based on the price earlier. As a result, we recorded inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB629.4 million in 2022. 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 following table sets out the average selling cost of our Bitcoin mining machines expressed in terms of computing power:

	Year ended December 31,					
	2020		2021		2022	
	Total Computing Power Sold Thash/s	Selling Cost per Thash RMB	Total Computing Power Sold Thash/s	Selling Cost per Thash RMB	Total Computing Power Sold Thash/s	Selling Cost per Thash RMB
A8 series ⁽¹⁾	699,292	171	—	—	—	—
A9 series ⁽²⁾	47,536	225	—	—	—	—
A10 series ⁽³⁾	5,477,423	153	102,259	153	—	—
A11 series ⁽⁴⁾	297,170	158	85,083	118	—	—
A12 series ⁽⁵⁾	79,307	106	22,154,791	88	15,102,553	97
A13 series ⁽⁶⁾	—	—	—	—	6,201	82
Total	6,600,729	155	22,342,133	89	15,108,754	97

Notes:

- (1) Mainly includes our A821, A841, A851 and A852 Bitcoin mining machines.
- (2) Mainly includes our A921 and A911 Bitcoin mining machines.
- (3) Mainly includes our A1047, A1066 and A1066 Pro Bitcoin mining machines.
- (4) Mainly includes our A1146 Pro, A1166 and A1166 Pro Bitcoin mining machines.
- (5) Mainly includes our A1246 and A1266 Bitcoin mining machines.
- (6) Mainly includes our A1346 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.

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 2020, 2021 and 2022, our gross profit was RMB37.8 million, RMB2,850.7 million and RMB1,547.8 million (US\$224.4 million), respectively. Our overall gross profit margin in 2020, 2021 and 2022 was 8.4%, 57.2% and 35.3%, respectively. During the first three quarters of 2020, the decline in total computing power sold and the average selling price per Thash/s resulted in lower gross profit and gross profit margin. Because of the increased average selling price of our Bitcoin mining machines driven by the increasing Bitcoin price, our gross profit and gross profit margin both increased in 2021. As the Bitcoin price dropped again in the second half of 2022, we experienced a decrease in demand and average selling price of our Bitcoin mining machines, thereby leading to lower Bitcoin mining machines revenue. Additionally, we recorded an inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB629.4 million (US\$91.3 million) in 2022, which resulted in the increase in our cost of revenues and therefore lower gross margin in 2022.

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,						
	2020		2021		2022		
	RMB	%	RMB	%	RMB	US\$	
Research and development expenses	140.0	31.3	332.8	6.7	546.6	79.2	12.5
-Share-based compensation expense included in research and development expenses	0.7	0.2	99.2	2.0	66.1	9.6	1.5
Sales and marketing expenses	20.0	4.5	100.5	2.0	63.0	9.1	1.4
-Share-based compensation expense included in sales and marketing expenses	0.0	0.0	8.2	0.0	16.3	2.4	0.4
General and administrative expenses	131.6	29.4	589.1	11.8	580.5	84.2	13.3
-Share-based compensation expense included in general and administrative expenses	2.3	0.5	383.8	7.7	324.1	47.0	7.4
Impairment on cryptocurrency	—	—	—	—	53.0	7.7	1.2
Total	291.6	65.1	1,022.4	20.5	1,243.1	180.2	28.4

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, general office expense and professional service fees.

Impairment on cryptocurrency. Impairment on cryptocurrency to be recognized is measured by the amount by which the carrying amount of cryptocurrencies exceeds the fair value of the cryptocurrencies. The recoverable amount of cryptocurrencies is based on the fair value less costs of disposal. The fair value of the cryptocurrencies is determined by using the quoted price on the cryptocurrencies platform website well recognized by the block chain users.

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, Singapore and United States

Our subsidiary incorporated in Hong Kong is subject to Hong Kong profit tax at a rate of 8.25% for profit of up to HK\$2.0 million and 16.5% for the remainder. Our subsidiaries in Singapore and United States are subject to income tax rates of 17.0% and 21.0%, respectively. No Hong Kong, Singapore and United States profit or income tax has been levied as we did not have an assessable profit that was earned in or derived from the Hong Kong, Singapore and United States subsidiaries during the periods presented. Dividends income received from PRC subsidiaries are not subject to Hong Kong, Singapore and United States profits or income tax.

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 last amended on December 29, 2018. The Enterprise Income Tax Law provides that enterprises organized under the laws of jurisdictions outside China with their "de facto management bodies" located within China may be considered PRC resident enterprises and therefore subject to 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.

Recent Accounting Pronouncements

A list of recently issued accounting pronouncements that are relevant to us is included in “Notes to the Consolidated Financial Statements—2. Summary of Significant Accounting Policies” of our audited consolidated financial statements included elsewhere in this annual report.

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 annual report. The operating results in any period are not necessarily indicative of the results that may be expected for any future period.

	Year ended December 31			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
	(in millions)			
Revenues:				
Products revenue	427.5	4,956.9	4,159.6	603.1
Mining revenue	—	21.7	218.6	31.7
Leases revenue	19.0	7.6	—	—
Maintenance service revenue	0.3	0.2	—	—
Other revenues	0.9	0.3	0.7	0.1
Total revenues	447.7	4,986.7	4,378.9	634.9
Cost of revenues	(409.9)	(2,136.0)	(2,831.1)	(410.5)
Gross profit	37.8	2,850.7	1,547.8	224.4
Operating expenses:				
Research and development expenses	(140.0)	(332.8)	(546.6)	(79.2)
Sales and marketing expenses	(20.0)	(100.5)	(63.0)	(9.1)
General and administrative expenses	(131.6)	(589.1)	(580.5)	(84.2)
Impairment on cryptocurrency	—	—	(53.0)	(7.7)
Total operating expenses	(291.6)	(1,022.4)	(1,243.1)	(180.2)
Income/(loss) from operations:	(253.9)	1,828.3	304.7	44.2
Interest income	3.2	7.3	15.9	2.3
Change in fair value of warranty liability	—	190.2	24.6	3.6
Investment income	5.8	0.3	—	—
Foreign exchange gain, net	2.4	17.9	243.0	35.2
Other income, net	31.0	6.4	22.1	3.2
Income/(loss) before income tax expense	(215.1)	2,050.4	610.3	88.5
Income tax expense	—	(50.1)	(124.0)	(18.0)
Net income/(loss)	(215.1)	2,000.3	486.3	70.5
Foreign currency translation adjustment, net of nil tax	(24.2)	(22.1)	97.1	14.1
Total comprehensive income/(loss)	(239.3)	1,978.1	583.4	84.6

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Revenue. Our revenue decreased by 12.2% to RMB4,378.9 million (US\$634.9 million) in 2022 from RMB4,986.7 million in 2021, primarily due to a decrease in the sales volume of our Bitcoin mining machines in terms of computing power from 22.3 million Thash/s in 2021 to 15.1 million Thash/s in 2022, which in turn was the result of the Bitcoin price drop in 2022.

Cost of revenues. Our cost of revenues increased by 32.5% to RMB2,831.1 million (US\$410.5 million) in 2022 from RMB2,136.0 million in 2021. Such increase was the result of the fact that (i) we recorded RMB629.4 million (US\$91.3 million) for inventories write-down, prepayment write-down and provision for reserve for inventory purchase commitments which increased the cost of revenues in 2022 as well as (ii) the depreciation of mining machines increased from RMB1.3 million in 2021 to RMB208.0 million (US\$30.2 million) in 2022 due to our growing mining machine fleet for the mining business in the full year of 2022.

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Gross profit. As a result of the foregoing, our gross profit decreased to RMB1,547.8 million (US\$224.4 million) in 2022 from RMB2,850.7 million in 2021. Our gross margin was 35.3% in 2022.

Operating expenses. Our total operating expenses increased by 21.6% to RMB1,243.1 million (US\$172.6 million) in 2022 from RMB1,022.4 million in 2021.

Research and development expenses. Our research and development expenses increased by 64.2% to RMB546.6 million (US\$79.3 million) in 2022 from RMB332.8 million in 2021. The increase was primarily due to an increase of RMB174.6 million in staff cost primarily due to an increase in the number of our research and development employees and an increase of RMB96.0 million one-off incremental development expenses for our A13 series products, partially offset by a decrease of RMB33.1 million in share-based compensation. As a result of the foregoing, our research and development expenses as a percentage of our revenues increased from 6.7% in 2021 to 12.5% in 2022.

Selling and marketing expenses. Our selling and marketing expenses decreased by 37.3% to RMB63.0 million (US\$9.1 million) in 2022 from RMB100.5 million in 2021. The decrease was mainly driven by a decrease of RMB52.4 million in staff costs due to the declined sales performance, partially offset by an increase of RMB8.1 million in share-based compensation. Our selling and marketing expenses as a percentage of our revenues thereby decreased from 2.0% in 2021 to 1.4% in 2022.

General and administrative expenses. Our general and administrative expenses decreased by 1.3% to RMB580.5 million (US\$84.2 million) in 2022 from RMB589.1 million in 2021. The decrease was primarily due to a decrease of RMB59.7 million in share-based compensation due to the declined share incentive grants, partially offset by an increase of RMB20.8 million in staff cost primarily due to talent structure optimization and an increase of RMB17.7 million in professional service fees primarily incurred for the expansion of our business globally. However, due to a decrease in our revenue, our general and administrative expenses as a percentage of our revenues increased from 11.8% in 2021 to 13.3% in 2022.

Impairment on cryptocurrency. Our impairment on cryptocurrency increased to RMB53.0 million (US\$7.7 million) in 2022 from nil in 2021, due to the Bitcoin price dropped in the second half of 2022. As of December 31, 2022, we held approximately 757 bitcoins, with the fair value of a single bitcoin of approximately US\$16.6 thousands.

Interest income. Our interest income increased by 118.0% to RMB15.9 million (US\$2.3 million) in 2022 from RMB7.3 million in 2021, primarily due to the increased interest rates of bank deposits.

Change in fair value of warrant liability. Our change in fair value of warrant liability incurred RMB24.6 million (US\$3.6 million) in 2022, compared to RMB190.2 million in 2021, due to the fair value change in warrants issued in May 2021 and repurchased in June 2022.

Foreign exchange gain. Our foreign exchange gain increased by 1,258.1% to RMB243.0 million (US\$35.2 million) in 2022 from RMB17.9 million in 2021, as a result of the U.S. dollar appreciation against the Renminbi in 2022.

Others, net. Our net other income was RMB22.1 million (US\$3.2 million) in 2022 and RMB6.4 million in 2021, both of which were primarily from government grants.

Income before income tax expenses. We recorded income before income tax expenses of RMB610.3 million (US\$88.5 million) in 2022 and RMB2,050.4 million in 2021.

Income tax expense. Our income tax expense was RMB124.0 million (US\$18.0 million) in 2022, and our effective tax rate increased from 2.4% in 2021 to 20.3% in 2022 due to the decreased tax loss carry-forwards utilized in 2022.

Net income. As a result of the foregoing, we recorded a net income of RMB486.3 million (US\$70.5 million) in 2022, compared to RMB2,000.3 million in 2021.

Foreign currency translation adjustment, net of nil tax. We recorded RMB97.1 million (US\$14.1 million) of positive foreign currency translation adjustment, net of nil tax in 2022, while we recorded RMB22.1 million of negative foreign currency translation adjustment, net of nil tax in 2021, primarily due to the fluctuation of exchange rates.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue. Our revenue increased by 1,013.9% to RMB4,986.7 million (US\$782.5 million) in 2021 from RMB447.7 million in 2020, primarily due to the increase in total computing power sold from 6.6 million Thash/s in 2020 to 22.3 million Thash/s in 2021, and the increase in average selling price per Thash/s from RMB63 per Thash/s in 2020 to RMB220 per Thash/s in 2021.

Cost of revenues. Our cost of revenues increased by 421.1% to RMB2,136.0 million (US\$335.2 million) in 2021 from RMB409.9 million in 2020. Such increase was the result of an increase in the Company's computing power sales volume from 6.6 million Thash/s in 2020 to 22.3 million Thash/s in 2021, partially offset by a decrease of per Thash/s cost from RMB155 in 2020 to RMB89 in 2021, which in turn was the result of the advancement of production technology and the decrease of wafer cost.

Gross profit. As a result of the foregoing, our gross profit improved to RMB2,850.7 million (US\$447.3 million) in 2021 from RMB37.8 million in 2020. Our gross margin was 57.2% in 2021.

Operating expenses. Our total operating expenses increased by 250.6% to RMB1,022.4 million (US\$160.4 million) in 2021 from RMB291.6 million in 2020.

Research and development expenses. Our research and development expenses increased by 137.7% to RMB332.8 million (US\$52.2 million) in 2021 from RMB140.0 million in 2020. The increase was primarily due to (i) an increase of RMB98.5 million in share-based compensation due to additional share incentive grants, (ii) an increase of RMB44.9 million of material expenses primarily due to incremental development costs for our A12 series products, and (iii) an increase of RMB41.6 million in staff cost primarily due to an increase in the number of our research and development employees. Our research and development expenses as a percentage of our revenues decreased from 31.3% in 2020 to 6.7% in 2021 due to an increase in our revenue.

Selling and marketing expenses. Our selling and marketing expenses increased by 402.5% to RMB100.5 million (US\$15.8 million) in 2021 from RMB20.0 million in 2020. The increase was mainly attributable to (i) an increase of RMB70.1 million in staff cost primarily due to sales incentive associated with increased sales performance, and (ii) an increase of RMB8.2 million in share-based compensation due to additional share incentive grants. Our selling and marketing expenses as a percentage of our revenues decreased from 4.5% in 2020 to 2.0% in 2021 due to an increase in our revenue.

General and administrative expenses. Our general and administrative expenses increased by 347.6% to RMB589.1 million (US\$92.4 million) in 2021 from RMB131.6 million in 2020. The increase was primarily due to (i) an increase of RMB381.5 million in share-based compensation due to additional share incentive grants, (ii) an increase of RMB63.3 million in staff cost primarily due to talent structure optimization and (iii) an increase of RMB14.6 million in professional service fees primarily incurred for the expansion of our business globally. Our general and administrative expenses as a percentage of our revenues decreased from 29.4% in 2020 to 11.8% in 2021 due to an increase in our revenue.

Interest income. Our interest income increased by 128.1% to RMB7.3 million (US\$1.1 million) in 2021 from RMB3.2 million in 2020, primarily due to the increase in cash and cash equivalents.

Change in fair value of warrant liability. Our change in fair value of warrant liability incurred RMB190.2 million (US\$29.9 million) in 2021, compared to nil in 2020, due to the fair value change in warrants issued in May 2021.

Investment income. Our investment income decreased by 94.8% to RMB0.3 million (US\$0.04 million) in 2021 from RMB5.8 million in 2020, due to the decrease in the purchase of investment products.

Interest expense and guarantee fee. Our interest expense decreased to nil in 2021 from RMB3.6 million in 2020, primarily because no loans incurred in 2021.

Foreign exchange gain. Our foreign exchange gain increased by 645.8% to RMB17.9 million (US\$2.8 million) in 2021 from RMB2.4 million in 2020, as a result of the impact of currency fluctuation on our non-RMB denominated assets and liabilities.

Value added tax refund. We did not record any value added tax refund in 2021 and 2020, primarily due to the decrease of sales by Hangzhou Canaan.

Others, net. Our net other income was RMB6.4 million (US\$1.0 million) in 2021 and RMB31.0 million in 2020, both of which were primarily from government grants.

Income/(loss) before income tax expenses. We recorded income before income tax expenses of RMB2,050.4 million (US\$321.7 million) in 2021, while we recorded a loss before income tax expenses of RMB215.1 million in 2020.

Income tax expense. Our income tax expense was RMB50.1 million (US\$7.9 million) in 2021, and our effective tax rate increased from nil in 2020 to 2.4% in 2021 due to the increased taxable income generated in 2021.

Net income/(loss). As a result of the foregoing, we recorded a net income of RMB2,000.3 million (US\$313.9 million) in 2021, while we recorded a net loss of RMB215.1 million in 2020.

Foreign currency translation adjustment, net of nil tax. We recorded RMB22.1 million (US\$3.5 million) of negative foreign currency transaction adjustment, net of nil tax in 2021, while we recorded RMB24.2 million of negative foreign currency translation adjustment, net of nil tax in 2020, primarily due to the fluctuation of exchange rates.

B. 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 December 31, 2022, we had aggregate cash and cash equivalents of RMB707.3 million (US\$102.5 million).

From 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. We have repaid these outstanding short-term loans as of December 31, 2020.

The weighted average interest rate for all of our borrowings was approximately 3.16%, nil and nil per annum for the years ended December 31, 2020, 2021 and 2022, 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.

Summary of Cash Flows

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

	Year ended December 31			
	2020	2021	2022	
	RMB	RMB	RMB	US\$
	(in millions)			
Net cash (used in)/provided by operating activities	42.3	1,438.9	(1,696.7)	(246.0)
Net cash (used in)/provided by investing activities	(49.6)	5.1	(30.3)	(4.4)
Net cash provided by/(used in) financing activities	(111.9)	905.8	(365.5)	(53.0)
Net increase/(decrease) in cash and cash equivalents, restricted cash	(119.2)	2,349.8	(2,092.5)	(303.4)
Effect of exchange rate changes on cash and cash equivalents, restricted cash	(9.8)	(13.9)	68.1	9.9
Cash and cash equivalents, restricted cash at the beginning of year	524.8	395.8	2,731.7	396.1
Cash and cash equivalents, restricted cash at the end of year	395.8	2,731.7	707.3	102.5

Operating Activities

Net cash used in operating activities in 2022 was RMB1,696.7 million (US\$246.0 million). The principal items accounting for the difference between our net cash used in operating activities and our net income of RMB486.4 million (US\$70.5 million) were a RMB1,559.1 million (US\$226.1 million) increase in inventories and a RMB1,386.1 million (US\$201.0 million) decrease in contract liabilities, partially offset by RMB467.3 million (US\$67.7 million) in inventories write-down and RMB407.4 million (US\$59.1 million) in share-based compensation expense.

Net cash provided by operating activities in 2021 was RMB1,438.9 million. The principal items accounting for the difference between our net cash provided by operating activities and our net income of RMB2,000.3 million were a RMB1,413.5 million increase in prepayments and other current assets and a RMB787.6 million increase in inventories, partially offset by a RMB910.3 million increase in contract liability and a RMB491.5 million in share-based compensation expense.

Net cash provided by operating activities in 2020 was RMB42.3 million. The principal items accounting for the difference between our net cash provided by operating activities and our net loss of RMB215.1 million were a RMB422.1 million increase in contract liabilities.

Investing Activities

Net cash used in investing activities was RMB30.3 million (US\$4.4 million) in 2022, which was primarily attributable to purchase of property, equipment and software of RMB95.1 million (US\$13.8 million), which was partially offset by proceeds from disposal of cryptocurrency of RMB64.8 million (US\$9.4 million).

Net cash provided by investing activities was RMB5.1 million in 2021, which was primarily attributable to proceeds from the disposal of short-term investments of RMB62.7 million, which was partially offset by purchase of property, equipment and software of RMB37.7 million and payment for other investments of RMB20.0 million.

Net cash used in investing activities was RMB49.6 million in 2020, which was primarily attributable to payment for short-term investments of RMB1,334.1 million, which was partially offset by proceeds from disposal of short-term investments of RMB1,288.5 million.

Financing Activities

Net cash used in financing activities was RMB365.5 million (US\$53.0 million) in 2022, which was attributable to the payment for repurchase of ordinary shares of RMB234.3 million (US\$34.0 million), repurchase for tax withholdings on vesting of restricted share units of RMB157.3 million (US\$22.8 million) and repurchase of warrants of RMB44.3 million (US\$6.4 million), partially offset by proceeds from resale of treasury stock of RMB70.4 million (US\$10.2 million).

Net cash provided by financing activities was RMB905.8 million in 2021, which was attributable to proceeds from registered direct offering of RMB1,029.5 million, which was partially offset by the payment for repurchase of ordinary shares of RMB104.1 million.

Net cash used in financing activities was RMB111.9 million in 2020, which was attributable to repayment of borrowings of RMB217.0 million, repurchase of ordinary shares of RMB40.0 million, which was partially offset by proceeds from borrowings of RMB152.0 million.

Capital Expenditures

We made capital expenditures of RMB2.2 million, RMB37.7 million and RMB95.1 million (US\$13.8 million) in 2020, 2021 and 2022, respectively. Our capital expenditures primarily comprise expenditures for the purchase of equipment and software and other long-term assets. We will continue to make capital expenditures to meet the expected growth of our business.

Holding Company Structure

Canaan Inc. is a holding company with no material operations of its own. We conduct our operations through our operating subsidiaries in different countries. Canaan Inc.'s ability to pay dividends depends upon its receipt of dividends from our operating subsidiaries. If our existing operating 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.

For us to remit cash to our PRC subsidiaries, including the net proceeds from any offering of securities outside of China, we may do so through equity investments into our PRC subsidiaries or provision of shareholders' loan to our PRC subsidiaries. We may also establish new operating subsidiaries in the PRC. The maximum amount of equity investment the Company can make into its PRC subsidiaries is not subject to any limitations, while the maximum amount of shareholder loans the Company's PRC subsidiaries can incur is determined by the difference between its registered capital and total investment amount. The table below sets forth the amount of cash remitted to our PRC subsidiaries through our Hong Kong subsidiary in 2020, 2021 and 2022:

Year	Method	Amount
2020	Shareholder loan	RMB111.6 million
2021	Shareholder loan	RMB294.3 million
2022	N/A	Nil

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 2021 and 2022 were increases of 0.9% and 2.0%, 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.

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

Technology and Product Offering Development

See "Item 4. Information on the Company—B. Business Overview."

Intellectual Property

See "Item 4. Information on the Company—B. Business Overview—Intellectual Property."

D. Trend Information

Please refer to “—A. Results of Operations” for a discussion of the most recent trends in our products and sales by the end of 2022. In addition, please refer to discussions included in such Item for a discussion of known trends, uncertainties, demands, commitments or events that we believe are reasonably likely to have a material effect on our net sales and operating revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information to be not necessarily indicative of our future operating results or financial condition.

E. Critical Accounting Estimates

We prepare our consolidated 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, revenues and expenses recognized in the consolidated financial statements. Our management evaluates whether estimates should be made on an ongoing basis, utilizing historical experience, consultation with experts and other methods management considers reasonable in the particular circumstances. However, uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amount of the assets or liabilities in the future.

We consider an accounting estimate to be critical if: (i) the accounting estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made, and (ii) changes in the estimate that are reasonably likely to occur from period to period or use of different estimates that we reasonably could have used in the current period, would have a material impact on our financial condition or results of operations. There are other items within our financial statements that require estimation but are not deemed critical, as defined above. Changes in estimates used in these and other items could have a material impact on our financial statements.

We have listed below our critical accounting estimates which require management to make difficult, subjective and complex judgements often as a result of the need to make estimate on matters that are inherently uncertain and because it is likely that materially different amounts would be reported under different conditions or assumptions. Actual results could differ from those estimates.

Valuation of Inventories and Prepayments and Provision for Reserve on Inventory Purchase Commitments

Inventories, consist of finished goods, work in process and raw materials, which are purchased from contractual manufacturers and component suppliers. Inventories are stated at the lower of cost and net realizable value. 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 market promotions. We also record a write-down for the prepayment to third-party suppliers for foundry services when we believe 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. In 2022, we entered into several contracts to purchase foundry service in 2023. These contracts represent firm purchase commitments which are evaluated for potential losses. We assessed the loss contingency for firm purchase commitments taking into account the estimated selling price of mining equipment products. The provision was determined by applying a methodology similar to that used in the lower of cost or net realizable value with respect to inventory, using estimates of the costs to convert raw materials into final products in order to determine net realizable value.

For purposes of our valuation analysis of inventories write-down, prepayments write-down and provision for reserve for inventory purchase commitments, we develop estimated selling price of mining equipment based on the most recent subsequent selling price. We also consider sales and sales orders after each reporting period-end but before the issuance of our financial statements to assess the accuracy of the estimates. We recorded inventory write-down, prepayment write-down and provision for reserve for inventory purchase commitments of RMB44.9 million, RMB50.7 million and RMB629.4 million (US\$91.3 million) in 2020, 2021 and 2022, respectively, as a result of the decline in the estimated selling price of mining equipment based on the most recent subsequent selling price.

Revenue from contracts with customers (ASC 606)

We recognize 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.

We generate 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, we may adjust 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. Our sales arrangements usually require a full prepayment before the delivery of products. We started to offer credit sales to certain significant, long-standing customers in China in 2018. 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 its credit sales customers if the price of Bitcoin decreases 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, we will adjust these estimates, which would affect revenue and earnings in the period when 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 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 to the date of issuance of the 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. 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. During the years ended December 31, 2020, 2021 and 2022, we recognized price concessions provided to our customers in the amounts of RMB11.5 million, nil and nil, respectively, due to the reason that we had ceased to provide credit sales for our clients since the second half of 2020. During the year ended December 31, 2022, the adjustment to the previously estimated variable considerations was nil (years ended December 31, 2020 and 2021: RMB14.7 million and nil), which was recorded as revenue of this year.

The amount of variable consideration is estimated based upon the most likely amount of consideration to which we will be entitled. All estimates are based on historical experience and our best judgment at the time to the extent it is probable that a significant reversal of revenue previously recognized will not occur. All estimates of variable consideration are reassessed periodically. The total transaction price is allocated to the single performance obligation. The accounting estimate is considered to be critical for the year ended December 31, 2020.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

Name	Age	Position/Title
Nangeng Zhang	40	Chairman of the Board and Chief Executive Officer
James Jin Cheng	44	Chief Financial Officer
Wenjun Zhang	57	Independent Director
Hongchao Du	55	Independent Director
Zhitang Shu	56	Independent Director
Yaping Zhang	48	Independent Director
Lu Meng	40	Secretary to the Board

Nangeng Zhang is a founding member of our Company and has served as our Chairman of the Board and chief executive officer since our inception. Mr. Zhang has approximately 14 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.

James Jin Cheng has served as our chief financial officer since August 2021. Mr. Cheng has more than 20 years of experience in financial planning and management. Prior to joining Canaan, Mr. Cheng spent almost 6 years at Zhaopin.com, a career platform in China formerly listed on the NYSE, as a Vice President. From September 2013 to September 2015, Mr. Cheng served as the Director of Finance for Lenovo China and Asia Pacific Division. From February 2005 to August 2013, Mr. Cheng held several managerial roles at Nokia China, such as senior sales finance controller. From March 2003 to January 2005, Mr. Cheng worked as a demand planning manager at Effem Foods Beijing, a company of Mars. Mr. Cheng holds a bachelor's degree in accounting from Shanghai Jiao Tong University, a MBA degree from the Bi-MBA program at Peking University, and a Master of Science in Global Finance degree from Fordham University in New York. Mr. Cheng is also a fellow member of the Chartered Institute of Management Accountants (CIMA) since 2016 and a fellow member of the Institute of Public Accountants (IPA) since 2019. Mr. Cheng brings strong financial and accounting skills to the Company's board of directors.

Wenjun Zhang has served as our independent director since August 2020. Mr. Zhang has over 20 years of experience in corporate management, capable of managing various function units and coordinate cross department cooperation. Mr. Zhang has also served as a managing director at Beijing Zhijian Engineering Co. Ltd. since December 2012. Mr. Zhang served as a vice president at Mesnac Co. Ltd., a public company listed on the Shenzhen Stock Exchange (SZSE: 002073) from March 1999 to November 2012. He served as a vice general manager at Dalian Rubber & Plastics Machinery Works from May 1995 to February 1999. Mr. Zhang served as a project manager at Dalian Int'l Economic & Technical Corporation from October 1993 to April 1995. Mr. Zhang served as an engineer at Dalian Rubber & Plastics Machinery Works from September 1986 to September 1993. Mr. Zhang received a bachelor's degree in plastic and polymer engineering technology from Beijing University of Chemical Technology in the PRC in 1986 and a master's degree in political economy from Beijing Normal University in the PRC in 1999.

Hongchao Du has served as our independent director since August 2020. Mr. Du has more than 28 years of experience in informational technology. From March 1993 to August 1997, Mr. Du developed a series of English-Chinese translation software such as "English-Chinese Communication," "Instant Communication," and other real-time screen English-Chinese translation systems. From July 1996 to October 1999, he developed the first internet-based Chinese-version Windows platform "Cross-Strait Communication." In April 2000, he established the largest IT community in China, DoNews.com. All these software and platforms has been widely used by both domestic and overseas users. Mr. Du served as a consultant in charge of Internet and new media at the State-owned Assets Supervision and Administration Commission of the State Council from December 2014 to December 2016, and was the launch expert of the Internet+ of Internet Society of China from January 2016 to December 2020. In addition, Mr. Du developed an all-purpose game card and duplicating system, which won the gold medal of the National University Science and Technology Achievement Expo in October 1991.

Zhitang Shu has served as our independent director since August 2020. Mr. Shu has more than 10 years of experience in business management and legal services. Mr. Shu has also served as the founding partner, a member of the management committee and the initiator of the business development and facilitation committee at Merits & Tree Law Offices since March 2017. Mr. Shu served as an associate at Commerce & Finance Law Offices since February 2007 and became a partner till March 2017. Mr. Shu served as a training manager at Ping An Insurance Company, sales manager at Taikang Life Insurance Company, manager assistant at Du Li Real Estate Development Co., Ltd., head of marketing at Beijing Aerospace Purin Technology Co., Ltd., from October 1992 to December 2006. Mr. Shu served as cadre at Hubei Xiangfan Science and Technology Committee from July 1988 to October 1992. Mr. Shu received a bachelor's degree in law from Renmin University of China in the PRC in 2013 and a master's degree in EMBA from Cheung Kong Graduate School of Business in the PRC in 2019.

Yaping Zhang has served as our independent director since August 2020. Ms. Zhang has more than 20 years of experience in corporate financial management, including nine years of experience serving as a financial manager in a public company. Since July 2021, Ms. Zhang has served as the deputy general manager of Beijing Yade Jiaye Investment Co., Ltd. She served as a director of finance at Beijing Jingxi Cultural Tourism Co., Ltd., a public company listed on the Shenzhen Stock Exchange (SZSE: 000802) from April 2011 to June 2020. Ms. Zhang served as a deputy manager of finance department at China Huali Holdings Group Co., Ltd. from May 2004 to April 2011. Ms. Zhang served as an account at Beijing Zhuzong Zhuzhaiyi Company from July 1997 to May 2004. Ms. Zhang received a bachelor's degree in enterprise finance from Capital University of Economics in 1997. Ms. Zhang is qualified as a certified public accountant (CPA) and a senior international financial manager, and she also obtained mid-level and senior-level accountant certification.

Lu Meng has served as the secretary to our board of directors since March 2022. Ms. Meng joined our company in September 2018 and has served as the assistant to the chief executive officer and administrative director of our company. Ms. Meng has long-term working experience in Internet, technology and media industry. Ms. Meng previously served as a senior manager at Kuaishou Technology (HK: 1024) from March 2018 to September 2018. Prior to that, Ms. Meng served as a senior general affairs project manager at Baidu, Inc. (Nasdaq: BIDU; HK: 9888) from August 2013 to September 2017. From October 2010 to March 2013, Ms. Meng served as the assistant to the vice president at IBM China Research Laboratory. Ms. Meng holds a bachelor's degree in applied chemistry and a master's degree in analytical chemistry from University of Science and Technology Beijing.

B. Compensation

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 2022, we and our subsidiaries paid an aggregate of RMB27.0 million (US\$3.9 million) in cash 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.

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.

Share Incentive Plan

2018 Share Incentive Plan

We adopted a share incentive plan in April 2018, or the 2018 Share Incentive Plan, which provided for the grant of restricted ordinary shares. We have granted all 25,812 restricted ordinary shares, before the one-for-2,000 share division, authorized under the 2018 Share Award Scheme. As of the date of this annual report, after the share division, 51,624,000 restricted ordinary shares exist under the 2018 Share Incentive Plan, out of which 9,244,516 restricted ordinary shares have been canceled due to departing employees, 16,000,000 restricted ordinary shares and 13,928,205 restricted share units have vested in November 2019, 4,002,052 restricted share units have vested on November 21, 2020 and 5,757,945 restricted share units have vested on November 21, 2021, respectively.

Amended and Restated 2018 Share Incentive Plan

In April 2021, our board of directors approved an amendment to the 2018 Share Incentive Plan, or the Amended and Restated 2018 Share Incentive Plan. Pursuant to the Amended and Restated 2018 Share Incentive Plan, in April 2021 and on every January 1 thereafter during which the 2018 Share Incentive Plan remains in effect, the maximum aggregate number of Class A Ordinary Shares which may be subject to awards under the 2018 Share Incentive Plan will be automatically increased by 15.0% of the total number of ordinary Shares issued and outstanding on December 31 of the preceding calendar year, if and whenever the unallocated ordinary Shares which may be issuable under the 2018 Share Incentive Plan account for less than 3% of the then total issued and outstanding ordinary Shares. In May and September 2021, our board of directors approved an increase by 94,927,065 ordinary shares and 63,774,885 ordinary shares, representing 4.0% and 2.7% of total issued and outstanding shares at the end of 2021 pursuant to the Amended and Restated 2018 Share Incentive Plan, respectively. As of December 31, 2022, 299,179,140 restricted share units and 114,000,000 share options have been granted under the Amended and Restated 2018 Share Incentive Plan, 148,834,905 restricted share units have vested and 26,553,180 restricted share units have been cancelled due to departing employees.

C. Board Practices Board of Directors

Our board of directors consists of five directors. 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 Diversity

Board Diversity Matrix (As of April 19, 2023)				
Country of Principal Executive Offices:	Singapore			
Foreign Private Issuer	Yes			
Disclosure Prohibited Under Home Country Law	No			
Total Number of Directors	5			
	Female	Male	Non-Binary	Did Not Disclose Gender
Part I: Gender Identity				
Directors	1	4	N/A	N/A
Part II: Demographic Background				
Underrepresented Individual in Home Country Jurisdiction	0			
LGBTQ+	0			
Did Not Disclose Demographic Background	N/A			

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

Our audit committee consists of Yaping Zhang, Zhitang Shu and Wenjun Zhang. Yaping Zhang is the chairman of our audit committee. Yaping Zhang satisfies the criteria of an audit committee financial expert as set forth under the applicable rules of the SEC. Each of Yaping Zhang, Zhitang Shu and Wenjun Zhang satisfies the requirements for an “independent director” within the meaning of the Nasdaq Stock Market Rules and meets 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 consists solely of independent directors.

The audit committee oversees our accounting and financial reporting processes and the audits of our financial statements. Our audit committee is responsible for, among other things:

- selecting, and evaluating the qualifications, performance and independence of, the independent auditors;
- pre-approving or, as permitted, approving auditing and non-auditing services permitted to be performed by the independent auditors;
- considering the adequacy of our internal accounting controls and audit procedures;
- reviewing with the independent auditors 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 auditors;
- 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 auditors; and
- reporting regularly to the full board of directors.

Compensation Committee

Our compensation committee consists of Hongchao Du and Nangeng Zhang. Hongchao Du is the chairman of our compensation committee. Hongchao Du satisfies the requirements for an “independent director” within the meaning of the Nasdaq Stock Market Rules.

Our compensation committee is 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 consists of Nangeng Zhang and Hongchao Du. Nangeng Zhang is the chairman of our nominating and corporate governance committee. Hongchao Du satisfies the requirements for an “independent director” within the meaning of the Nasdaq Stock Market Rules.

Our nominating and corporate governance committee is 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 have posted a copy of our code of business conduct and ethics on our website at <http://investor.canaan-creative.com>.

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.

D. Employees

See "Item 4. Information on the Company—B. Business Overview—Employees."

E. Share Ownership

The following table sets forth information as of the date of this report 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.

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The total number of ordinary shares outstanding as of 2,827,121,777, 2023 comprises 2,515,497,333 Class A ordinary shares and 311,624,444 Class B ordinary shares.

	Ordinary Shares Beneficially Owned			
	Number of Class A ordinary shares	Number of Class B ordinary shares	% of total ordinary shares on an as-converted basis	% of voting power†
Directors and Executive Officers:*				
Nangeng Zhang ⁽¹⁾	**	311,624,444	11.7	65.3
James Jin Cheng	—	—	—	—
Lu Meng	**	**	**	**
Wenjun Zhang	—	—	—	—
Hongchao Du	—	—	—	—
Zhitang Shu	—	—	—	—
Yaping Zhang	—	—	—	—
Directors and Executive Officers as a Group	**	311,624,444	11.7	65.3
Principal Shareholders:				
Flueqel Ltd. ⁽²⁾	—	311,624,444	11.0	65.0
Spring River Greater China Fund ⁽³⁾	194,992,395	—	6.9	2.7

Notes:

* The business address for our directors and executive officers is 28 Ayer Rajah Crescent #06-08, S139959, Singapore.

** Beneficially owns less than 1% of our outstanding shares.

† 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 (i) a number of Class A ordinary shares that Nangeng Zhang has the right to acquire upon exercise of the options within 60 days pursuant to the terms relating to the restricted share units granted to him under the Amended and Restated 2018 Share Incentive Plan, and (ii) 311,624,444 Class B 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 is the beneficiary. Flueqel Ltd. is further described in footnote 2 below.

(2) Represents 311,624,444 Class B 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 is the beneficiary. The registered address of Flueqel Ltd. is Sertus Chambers, P.O. Box 905, Quastisky Building, Road Town, Tortola, British Virgin Islands.

(3) Represents 194,992,395 Class A ordinary shares directly held by Spring River Greater China Fund as reported in the Schedule 13G/A filed by Spring River Greater China Fund with the SEC on January 31, 2023. Spring River Greater China Fund is incorporated under the laws of the Cayman Islands. The principal business office address of Spring River Greater China Fund is 12A1, 12/F, OfficePlus@Mongkok, Mong Kok, Kolwoon, Hong Kong

To our knowledge and based on our review of our register of members as of the date of this report, 2023, 2,397,927,225 Class A ordinary shares were held of record by one holder that reside in the United States, being The Bank of New York Mellon, the depository of our ADS program. The number of beneficial owners of our ADSs in the United States is likely to be much larger than the number of record holder of our Class A ordinary shares in the United States. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

See “Item 6. Directors, Senior Management and Employees—E. Share Ownership”

B. Related Party Transactions

None.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

Please refer to Item 18 for a list of our annual consolidated financial statements filed as part of this annual report on Form 20-F.

Legal Proceedings

See “Item 4. Information on the Company—B. Business Overview—Legal Proceedings.”

Dividend Policy and Distributions

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. 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.

B. Significant Changes

We have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

Our ADSs, each representing 15 of our Class A ordinary shares, have been listed on the Nasdaq Global Market since November 21, 2019 under the symbol “CAN.” See Exhibit 2.4 to this Form 20-F for a description of our ADSs.

B. Plan of Distribution

Not applicable.

C. Markets

Our ADSs, each representing 15 of our Class A ordinary shares, have been listed on the Nasdaq Global Market since November 21, 2019 under the symbol “CAN.”

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

We incorporate by reference into this annual report the description of our amended and restated memorandum and articles of association contained in our Form F-1 registration statement (File No. 333-234356), as amended, initially filed with the Securities and Exchange Commission on October 28, 2019. Our shareholders adopted our amended and restated memorandum and articles of association by unanimous resolutions passed on October 4, 2019, and effective immediately prior to the completion of our initial public offering.

C. Material Contracts

On April 8, 2022, we entered into an at the market offering agreement (as amended by the Amendment No. 1 to ATM Agreement dated as of November 23, 2022 and as may be further amended, supplemented or otherwise modified from time to time, the “ATM”) with H.C. Wainwright & Co., LLC (“Wainwright”), as pursuant to which we may offer and sell, from time to time, through Wainwright, ADSs, each representing 15 Class A ordinary shares, par value of \$0.00000005 per share. We have no obligation to sell any ADSs pursuant to the ATM Offering Agreement and may at any time suspend sales pursuant to the ATM Offering Agreement.

On June 23, 2022, we entered into agreements with certain warrant holders (the “Warrant Holders”) to repurchase over 4.72 million outstanding warrants (“Warrants”) of the Company for an aggregate purchase price of approximately US\$6.61 million. The Warrants were issued by us in May 2021 pursuant to (i) certain Securities Purchase Agreement (the “SPA”) between the Company and the purchasers party thereto, dated April 29, 2021, and (ii) certain placement agent agreement between the Company and the placement agents thereto, dated April 29, 2021. The transaction closed on in 2022.

D. Exchange Controls

See “Item 4. Information on the Company—B. Business Overview—Regulations in the PRC— PRC Laws and Regulations Relating to Foreign Exchange.”

E. Taxation

The following is summaries of certain 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 or holder. The discussion is based on laws and relevant interpretations thereof in effect as of the date of this annual report, 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. 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 last 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 certain 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” (generally, property held for investment) within the meaning of Section 1221 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, 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;

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- 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) in the case of a trust that was treated as a domestic trust under the law in effect before 1997, 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 Code and U.S. Treasury regulations, rulings and judicial decisions thereunder as of the date hereof. Such authorities may be replaced, revoked or modified, possibly with retroactive effect, and which replacement, revocation, or modification could significantly affect the tax consequences described below. In addition, this discussion is based, in part, upon representations made by the depository to us and assumes that the deposit agreement, and all other related agreements, will be performed in accordance with their terms. We have not sought any ruling from the IRS with respect to the statements made and the conclusions reached in the following discussion and there can be no assurance that the IRS or a court will agree with our statements and conclusions.

This discussion does not represent a detailed description of all of the United States federal income tax consequences applicable to a United States Holder in light of individual circumstances, including if a United States Holder is subject to special tax rules such as:

- a broker or dealer in stock, securities or currencies;
- a bank and certain other financial institutions;
- 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 person that has elected the mark-to-market method of accounting for our securities;
- a certain former citizen or resident of the United States subject to Section 877 of the Code;
- an entity subject to the United States anti-inversion rules;
- a person liable for alternative minimum tax;
- a person who owns or is deemed to own 10% or more of our total stock by vote or value;
- a partnership or other pass-through entity for United States federal income tax purposes, or persons holding ordinary shares through such entities;
- 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 United States Holder is a partner of a partnership holding the ADSs or ordinary shares, such United States Holder should consult its tax advisors regarding the tax consequences of investing in and holding our ADSs or ordinary shares.

This discussion does not contain a detailed description of all the United States federal income tax consequences to United States Holders and does not address the Medicare tax on net investment income, any tax consequences arising in respect of the Foreign Account Tax Compliance Act, United States federal estate and gift taxes or the effects of any state, local or non-United States tax laws. United States Holders should consult its tax advisors concerning the particular United States federal tax consequences of the purchase, ownership and disposition of our ADSs or ordinary shares, as well as any consequences arising under the laws of any other taxing jurisdiction.

ADSs

A United States Holder of our ADSs, for United States federal income tax purposes, should generally 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. The remainder of this discussion assumes that a United States Holder of the ADSs will be treated in this manner.

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 the United States Holder’s 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, United States Holders should expect that a distribution will generally be treated as a dividend for United States federal income tax purposes. Such dividends will not be eligible for the dividends received deduction allowed to corporations under the Code.

With respect to non-corporate United States Holders, certain dividends received from a “qualified foreign corporation” may qualify for reduced rates of taxation applicable to “qualified dividend income”. A non-United States corporation is treated as a “qualified foreign corporation” (a) with respect to dividends paid by that corporation on shares (or ADSs backed by such shares) that are readily tradable on an established securities market in the United States or if such non-United States corporation is eligible for the benefits of a qualifying income tax treaty with the United States that includes an exchange of information program.

Under a published IRS Notice, ordinary shares are considered to be readily tradable on an established securities market in the United States if they are listed on the Nasdaq Global Market, as our ADSs are. Thus, we believe, but cannot guarantee, that dividends we pay on the ADSs will meet the conditions required for these reduced tax rates. Since our ordinary shares are not 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 also can be no assurance that the ADSs will be considered readily tradable on an established securities market in the United States 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.

Even if dividends would be treated as paid by a qualified foreign corporation, a non-corporate United States Holder will not be eligible for reduced rates of taxation if it does not hold our ADSs for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date (disregarding certain periods of ownership while the United States Holder's risk of loss is diminished) or if such United States Holder elects to treat the dividend income as "investment income" pursuant to Section 163(d)(4) of the Code. 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. 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 a United States Holder's 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 and recently issued Treasury Regulations have introduced additional requirements and limitations to the foreign tax credit rules.

United States Holder's should consult its tax advisors regarding the availability of the lower tax rates applicable to qualified dividend income for any dividends that we pay with respect to the ADSs or ordinary shares, as well as the effect of any change in applicable law after the date of this annual report on Form 20-F, and the availability of any foreign tax credit.

Passive Foreign Investment Company

Based upon the market price of our ADSs, the value of our assets and the nature and composition of our income and assets, we do not believe that we were a PFIC for our taxable year ended December 31, 2022, although there can be no assurance in this regard. The IRS does not issue rulings with respect to PFIC status, and we cannot assure you that the IRS, or a court, will agree with any determination we make.

In general, we will be a PFIC for any taxable year if, applying the applicable look-through rules, either:

- at least 75% of our gross income is passive income; or
- at least 50% of the value (generally 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 and cash equivalents, securities held for investment purposes and certain other similar assets are generally 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, it is possible that we may become a PFIC in any future taxable year due to changes in our asset or income composition. Because we have valued our goodwill and other unbooked intangibles not reflected on our balance sheet based on the 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 a United States Holder holds the ADSs or ordinary shares, such United States Holder will be subject to special tax rules discussed below.

If we are a PFIC for any taxable year during which a United States Holder holds the ADSs or ordinary shares and absent certain elections (including a mark-to-market election, a qualified electing fund election and a deemed sale election, each as described below), such United States Holder 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 a United States Holder’s holding period in our ADSs or ordinary shares. Under these special tax rules:

- the excess distribution and/or gain will be allocated ratably over a United States Holder’s 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 for individuals or corporations in the United States, as applicable, and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

The tax liability for amounts allocated to years prior to the year of disposition or excess distribution cannot be offset by any net operating losses for such years, and gains (but not losses) from a sale or other disposition of the ADSs or ordinary shares cannot be treated as capital, even if a United States Holder holds the ADSs or ordinary shares as capital assets.

If we are a PFIC with respect to a United States Holder for any taxable year during such United States Holder’s holding period for our ADSs or ordinary shares and any of our non-U.S. subsidiaries that are corporations (or other corporations in which we directly or indirectly own equity interests) is also a PFIC, such United States Holder would generally be treated as owning a proportionate amount (by value) of the shares of each such non-U.S. entity that is a PFIC (each such corporation, a lower tier PFIC) for purposes of the application of these rules. United States Holders are strongly encouraged to consult their tax advisors regarding the application of the PFIC rules to any of our lower tier PFICs.

Deemed Sale Election

If we are a PFIC for any taxable year in which a United States Holder holds the ADSs or ordinary shares (unless such United States Holder makes a valid mark-to-market election as discussed below), such United States Holder will generally be subject to the special tax rules described above for that year and for each subsequent year in which such United States Holder holds the ADSs or ordinary shares (even if we cease to be a PFIC in such subsequent years). However, if we cease to be a PFIC, a United States Holder can avoid the continuing impact of the PFIC rules by making a “deemed sale” election to recognize gain as if such United States Holder’s ADSs or ordinary shares had been sold for their fair market value on the last day of the last taxable year during which we were a PFIC and any gain from such deemed sale would be taxed as an “excess distribution” as described above. Any loss from the deemed sale is not recognized. After the deemed sale election, the United States Holder’s ADSs or ordinary shares with respect to which such election was made will not be treated as shares in a PFIC unless we subsequently become a PFIC. United States Holders are urged to consult its tax advisors about a deemed sale election.

Mark-to-Market Election

If we are a PFIC with respect to a United States Holder for any taxable year during such United States Holder’s holding period for our ADSs or ordinary shares, then in lieu of being subject to the special tax rules discussed above, a United States Holder may make a “mark-to-market election” with respect to such United States Holder’s ADSs or ordinary shares, provided such ADSs or ordinary shares are treated as “marketable stock.” Our 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). Our ADSs are currently 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. Only the ADSs and not the ordinary shares are listed on the Nasdaq Global Market. Consequently, if a United States Holder is a holder of our ordinary shares that are not represented by our ADSs, such United States Holder generally will not be eligible to make a mark-to-market election.

If a United States Holder makes an effective mark-to-market election, for each taxable year that we are a PFIC, such United States Holder will include as ordinary income the excess of the fair market value of the ADSs held at the end of the year over such United States Holder's adjusted tax basis in the ADSs. A United States Holder will be entitled to deduct as an ordinary loss in each such year the excess of its 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. A United States Holder's 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 our 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 a United States Holder makes 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. If a United States Holder makes a valid mark-to-market election and we cease to be a PFIC, the United States Holder will not be required to take into account the mark-to-market gain or loss described above during any period for which we are not a PFIC. United States Holders are urged to consult its tax advisors about the availability of the mark-to-market election, and whether making the election would be advisable in light of such United States Holder's particular circumstances.

Qualified Election Fund Election

In certain circumstances, a shareholder in a PFIC may avoid some of the disadvantageous tax treatment described above by making a "qualified electing fund" election under Section 1295 of the Code. However, this option is not available to United States Holders because we do not intend to comply with the requirements necessary to permit United States Holders to make this election.

Reporting Requirements

For any taxable year for which we are a PFIC with respect to a United States Holder, such United States Holder will generally be required to file IRS Form 8621 regarding distributions received on our ADSs or ordinary shares and any gain realized on the disposition of our ADSs or ordinary shares, and certain United States Holders will be required to file an annual information return (also on IRS Form 8621) relating to their ownership of our ADSs or ordinary shares. Significant penalties are imposed for failure to file such form. United States Holders are urged to consult its 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.

Sale, Exchange or Other Taxable Disposition of our ADSs or Ordinary Shares

For United States federal income tax purposes, a United States Holder will recognize taxable gain or loss on any sale, exchange or other taxable disposition of the ADSs or ordinary shares in an amount equal to the difference between the amount realized for the ADSs or ordinary shares and the United States Holder's 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 such United States Holder has 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 a United States Holder will generally be treated as United States source gain or loss for foreign tax credit limitation purposes, which could limit the availability of foreign tax credits. However, if we are treated as a PRC resident enterprise for PRC tax purposes and PRC tax were imposed on any gain, and if a United States Holder is eligible for the benefits of the Treaty, such United States Holder may elect to treat such gain as PRC source gain under the Treaty for foreign tax credit purposes. If such an election is made, the gain so treated will be treated as a separate class or "basket" of income for foreign tax credit purposes. United States Holders should consult their tax advisors regarding the proper treatment of gain or loss, as well as the availability of a foreign tax credit, in their particular circumstances.

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 a United States Holder within the United States (and in certain cases, outside the United States), unless a United States Holder is an exempt recipient. A backup withholding tax may apply to such payments if a United States Holder fails 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 a United States Holder's United States federal income tax liability provided the required information is timely furnished to the Internal Revenue Service.

Specified Foreign Financial Assets

Individual United States Holders and certain domestic entities generally will be required to submit certain information to the IRS with respect to their beneficial ownership of our ADSs or ordinary shares as is necessary to identify the class or issue of which our ADSs or ordinary shares are a part. These requirements are subject to exceptions, including an exception for ADSs or ordinary shares held in accounts maintained by certain financial institutions and an exception applicable if the aggregate value of all "specified foreign financial assets" (as defined in the Code) does not exceed US\$50,000. This law also imposes penalties if a United States Holder is required to submit such information to the IRS and fails to do so. United States Holders are urged to consult their tax advisors regarding the potential reporting requirements that may be imposed with respect to ownership of our ADSs or ordinary shares.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We have filed this annual report on Form 20-F, including exhibits, with the SEC. As allowed by the SEC, in Item 19 of this annual report, we incorporate by reference certain information we filed with the SEC. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this annual report.

You may read and copy this annual report, including the exhibits incorporated by reference in this annual report, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 and at the SEC's regional offices in New York, New York and Chicago, Illinois. You also can request copies of this annual report, including the exhibits incorporated by reference in this annual report, upon payment of a duplicating fee, by writing information on the operation of the SEC's Public Reference Room.

The SEC also maintains a website at www.sec.gov that contains reports, proxy statements and other information regarding registrants that file electronically with the SEC. Our annual report and some of the other information submitted by us to the SEC may be accessed through this website.

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

Our financial statements have been prepared in accordance with U.S. GAAP.

We will furnish our shareholders with annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP.

I. Subsidiary Information

Not applicable.

ITEM 11. 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. dollars between July 2005 and July 2008. Between July 2008 and June 2010, the exchange rate between the Renminbi and the U.S. dollars 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. dollars and persistent capital outflows from China. This depreciation halted in 2017, and the Renminbi appreciated approximately 7% against the U.S. dollars during this one-year period. Starting from the beginning of 2019, the Renminbi has depreciated significantly against the U.S. dollars 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. dollars 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. dollars 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. dollars 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. dollars 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. dollars against the Renminbi would have a negative effect on the U.S. dollars amounts available to us.

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 our initial public 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.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

The Bank of New York Mellon, as depositary, registered and delivered American Depositary Shares, also referred to as ADSs. Each ADS will represent 15 Class A ordinary shares (or a right to receive 15 Class A ordinary shares) deposited with The Hong Kong 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.

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
	Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
\$.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	Depository 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 depository 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.

Payments by Depositary

In 2022, we did not receive payments from The Bank of New York Mellon, the depositary bank for our ADR program.

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

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

See “Item 10. Additional Information—B. Memorandum and Articles of Association” for a description of the rights of securities holders, which remain unchanged.

The following “Use of Proceeds” information relates to the registration statement on Form F-1, as amended (File No. 333-234356) in relation to our initial public offering, which was declared effective by the SEC on November 20, 2019. In November 2019, we completed our initial public offering in which we issued and sold an aggregate of 10,000,000 ADSs, representing 150,000,000 Class A ordinary shares, resulting in net proceeds to us of approximately US\$78.5 million.

For the period from November 20, 2019 to December 31, 2022, we fully applied these net proceeds as follows:

- approximately US\$73.7 million for supply chain optimization, research and development improvements, expansion of our business and repayment of debts;
- the remainder for general corporate purposes.

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the specified time periods and accumulated and communicated to our management, including our principal executive officer and principal accounting officer, as appropriate, to allow timely decisions regarding required disclosure.

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

Based upon that evaluation, our management has concluded that, as of December 31, 2022, our disclosure controls and procedures are effective in ensuring that material information required to be disclosed in this annual report is recorded, processed, summarized and reported to them for assessment, and required disclosure is made within the time period specified in the rules and forms of the SEC.

Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such item is defined in Rules 13a-15(f) under the Exchange Act, for our company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with generally accepted accounting principles and includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of a company’s assets, (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that a company’s receipts and expenditures are being made only in accordance with authorizations of a company’s management and directors, and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of a company’s assets that could have a material effect on the consolidated financial statements.

As required by Rule 13a-15(c) of the Exchange Act, our management conducted an evaluation of our company's internal control over financial reporting as of December 31, 2022 based on the framework in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that as of December 31, 2022, our internal control over financial reporting was effective.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Remediation of the Material Weaknesses in Internal Control over Financial Reporting

As of December 31, 2022, based on our management's assessment on the performance of certain remediation measures (specified below), we determined that the material weaknesses in our internal control over financial reporting previously identified by us and our independent registered public accounting firms in connection with the audits of our consolidated financial statements as of and for the years ended December 31, 2020 and 2021 had been remediated.

The material weaknesses identified relate 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.

To remedy the identified material weaknesses, we have adopted a number of measures to improve our internal control over financial reporting, including, among others: (i) hiring an additional financial reporting manager who is experienced with U.S. GAAP, (ii) hiring a senior internal control manager with extensive experience on construction of enterprise's internal control systems and building a dedicated internal audit department, (iii) upgrading our financial system to enhance its effectiveness and enhance control of accounting and financial analysis, and (iv) establishing effective oversight and clarifying reporting requirements for non-recurring and complex transactions to ensure consolidated financial statements and related disclosures are accurate, complete and in compliance with U.S. GAAP and SEC reporting requirements. We will continue to take continuous measures to correct our internal control deficiencies and ensure that the company's internal controls meet SOX404 compliance requirements.

Attestation Report of the Independent Registered Public Accounting Firm

Our independent registered public accounting firm, KPMG Huazhen LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2022, as stated in its report, which appears on page F-2 of this annual report.

Changes in Internal Control over Financial Reporting

Other than as described above, there were no changes in our internal controls over financial reporting that occurred during the period covered by this annual report on Form 20-F that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board of Directors has determined that Yaping Zhang, who is an independent director, qualifies as an audit committee financial expert as defined in Item 16A of the instruction to Form 20-F.

ITEM 16B. CODE OF ETHICS

We have adopted a code of business conduct and ethics, which applies to our directors, officers and employees. No changes have been made to the code of business conduct and ethics since its adoption and no waivers have been granted therefrom to our directors or employees. We have filed our code of business conduct as an exhibit to our registration statement on Form F-1, initially filed with the Securities and Exchange Commission on October 28, 2019 (File No. 333-234356), and a copy is available to any shareholder upon request. This code of business conduct and ethics is also available on our website at <http://investor.canaan-creative.com>.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

KPMG Huazhen LLP, an independent registered public accounting firm, has audited our annual financial statements acting as our independent auditor for the fiscal year ended December 31, 2021 and 2022.

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PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm, has audited our annual financial statements acting as our independent auditor for the fiscal years ended December 31, 2020.

The chart below sets forth the amount billed and accrued for KPMG Huazhen LLP and PricewaterhouseCoopers Zhong Tian LLP for services performed in 2021 and 2022, respectively, and breaks down these amounts by the category of service. The fees paid to our principal accountant were approved in accordance with the pre-approval policies and procedures described below.

	For the Years Ended December 31,	
	2021	2022
	(In thousands of RMB)	
Audit Fees ⁽¹⁾		
PricewaterhouseCoopers Zhong Tian LLP	1,946	1,074
KPMG Huazhen LLP ⁽²⁾	7,160	13,500
Audit-Related Fees ⁽³⁾	—	965
Tax Fees ⁽⁴⁾	657	330
All Other Fees ⁽⁵⁾	—	—
Total	9,763	15,869

- (1) “Audit Fees” represents the aggregate fees billed for each of the fiscal years listed for professional services rendered by our principal accountant for the audit of our annual financial statements and assistance with and review of documents filed with the SEC and other statutory and regulatory filings.
- (2) On September 9, 2021, we dismissed PricewaterhouseCoopers Zhong Tian LLP (“PwC”) as our independent registered public accounting firm, and engaged KPMG Huazhen LLP as our independent registered public accounting firm, effective on September 13, 2021. See also “Item 16F. Change in Registrant’s Certifying Accountant.”
- (3) “Audit-Related Fees” represents the aggregate fees billed for each of the fiscal years listed for professional services rendered by our principal accountant reasonably related to the performance of the audit or review of our financial statements and are not included under Audit Fees.
- (4) “Tax Fees” represents the aggregate fees billed for each of the fiscal years listed for professional services rendered by our principal accountant for tax compliance, tax advice and tax planning.
- (5) “All Other Fees” represents the aggregate fees billed for each of the fiscal years listed for products or professional services rendered by our principal accountant not included in Audit Fees, Audit-Related Fees or Tax Fees.

Pre-Approval Policies and Procedures

Our audit committee is responsible for the oversight of our independent accountants’ work. The policy of our audit committee is to pre-approve all audit and non-audit services provided by PricewaterhouseCoopers Zhong Tian LLP and KPMG Huazhen LLP, including audit services as described above, other than those for de minimis services which are approved by the audit committee prior to the completion of the audit.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

None.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

The following table sets forth information about our purchases of outstanding ADSs from September 22, 2020 to March 31, 2023:

Period	Total Number of ADSs Purchased	Average Price Paid per ADS ⁽¹⁾	Total Number of ADSs Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	Approximate Dollar Value of ADSs that May Yet Be Purchased Under the Program ⁽²⁾
September 8, 2020 through September 21, 2020	—	—	—	US\$ 10.0 million
September 22, 2020 through September 30, 2020	99,983	US\$ 1.9382	99,983	US\$ 9.8 million
October 2020	1,059,960	US\$ 1.9506	1,159,943	US\$ 7.7 million
November 2020 through March 31, 2021	560,003	US\$ 2.3369	1,719,946	US\$ 6.4 million
March 31, 2021 through September 30, 2021	875,868	US\$ 7.3322	2,595,814	US\$ 20.0 million
September 30, 2021 through March 31, 2022	3,578,877	US\$ 5.5864	6,174,691	US\$ 100.0 million
March 31, 2022 through September 30, 2022	4,679,620	US\$ 3.5451	10,854,311	US\$ 83.4 million
September 30, 2022 through March 31, 2023	3,485,515	US\$ 3.0068	14,339,826	US\$ 72.9 million
Total	14,339,826	US\$ 3.9788	14,339,826	US\$ 72.9 million

(1) Each of our ADSs represents 15 Class A ordinary shares.

(2) We announced a share repurchase program approved by our board of directors on September 8, 2020, under which we may repurchase up to US\$10 million worth of our outstanding ADSs and/or Class A ordinary shares over a period of twelve months. In addition, we announced a new share repurchase program approved by our board of directors on September 20, 2021, under which we may repurchase up to US\$20 million worth of our outstanding ADSs and/or Class A ordinary shares over a period of twelve months. On March 16, 2022, we announced another share repurchase program approved by our board of directors, under which we may repurchase up to US\$100 million worth of our outstanding ADSs and/or Class A ordinary shares over a period of twenty-four months. The repurchases have been through various means, including open market transactions at prevailing market prices, privately negotiated transactions, block trades or any combination thereof. The repurchases have been, and will be, effected in compliance with Rule 10b5-1 and/or Rule 10b-18 under the Exchange Act, and our insider trading policy. The number of ADSs repurchased and the timing of repurchases depends on a number of factors, including, but not limited to, price, trading volume and general market conditions, along with our working capital requirements and general business conditions. As of the date of this annual report, we have completed the repurchase under the share repurchase programs approved in 2020 and 2021.

ITEM 16F. CHANGE IN REGISTRANT’S CERTIFYING ACCOUNTANT

On September 9, 2021, our audit committee and board of directors dismissed PricewaterhouseCoopers Zhong Tian LLP (“PwC”) as our independent registered public accounting firm. Our audit committee and board of directors approved the engagement of KPMG Huazhen LLP (“KPMG”), as our independent registered public accounting firm, to audit our consolidated financial statements for the fiscal year ended December 31, 2021, effective September 13, 2021.

The report of PwC on our consolidated financial statements as of and for the year ended December 31, 2020 did not contain an adverse opinion or a disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope, or accounting principle.

During the fiscal year ended December 31, 2020, and the subsequent interim period through September 9, 2021, there were (i) no disagreements, as defined in Item 16F(a)(1)(iv) of Form 20-F and the related instructions thereto, between us and PwC on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedures, which, if not resolved to PwC’s satisfaction, would have caused PwC to make reference thereto in their report on the financial statements for such year.

During the fiscal year ended December 31, 2020, and the subsequent interim period through September 9, 2021, there were no “reportable events,” as defined in Item 16F (a)(1)(v) of Form 20-F other than the material weaknesses reported by management in Item 15 of our Annual Report on Form 20-F for the year ended December 31, 2020. The material weaknesses disclosed in both annual reports 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 provided a copy of this disclosure to PwC and requested that PwC furnish us with a letter addressed to the SEC stating whether it agrees with the statements made above, and if not, stating the respects in which it does not agree. A copy of PwC's letter dated April 29, 2022 is attached herewith as Exhibit 15.1 to this Form 20-F.

ITEM 16G. CORPORATE GOVERNANCE

We are a "foreign private issuer" (as such term is defined in Rule 3b-4 under the Exchange Act), and our ADSs, each representing 15 Class A ordinary shares, are listed on the Nasdaq Global Market. Nasdaq Stock Market Rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq corporate governance listing standards. For instance, we are not required to:

- have the majority of our board of directors composed of independent directors (although all of the members of the audit committee must be independent under the Exchange Act);
- have a compensation committee or a nominations or corporate governance committee consisting entirely of independent directors;
- establish a nominating and corporate governance committee that is composed entirely of independent directors and have a written charter addressing the committee's purpose and responsibilities; and
- hold an annual meeting of shareholders no later than one year after the end of the issuer's fiscal year-end.

We currently rely on home country practice exemption with respect to the requirement of (i) having a nominating committee composed entirely of independent directors, (ii) having a compensation committee composed entirely of independent directors and (iii) holding an annual meeting of shareholders no later than one year after the end of the issuer's fiscal year-end.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

On May 4, 2022, the Company was conclusively identified by the U.S. Securities and Exchange Commission (the "SEC") as a Commission-Identified Issuer pursuant to the HFCAA because it filed an annual report on Form 20-F for the year ended December 31, 2021 with the SEC on April 29, 2022 with an audit report issued by KPMG Huazhen LLP, a registered public accounting firm retained by the Company, and an audit report issued by PricewaterhouseCoopers Zhong Tian LLP, a registered public accounting firm formerly retained by the Company, for the preparation of the audit reports on the Company's financial statements included therein. Each of KPMG Huazhen LLP and PricewaterhouseCoopers Zhong Tian LLP is a registered public accounting firm headquartered in mainland China, a jurisdiction where the Public Company Accounting Oversight Board (the "PCAOB") determined that it had been unable to inspect or investigate completely registered public accounting firms headquartered there until December 2022 when the PCAOB vacated its previous determination.

As of the date of this annual report, to our knowledge, (i) no governmental entities in the Cayman Islands or in China own shares of Canaan Inc., (ii) the governmental entities in China do not have a controlling financial interest in Canaan Inc., (iii) none of the members of the board of directors of Canaan Inc. or our operating entities is an official of the Chinese Communist Party, and (iv) none of the currently effective memorandum and articles of association (or equivalent organizing document) of Canaan Inc. contains any charter of the Chinese Communist Party.

ITEM 16J. INSIDER TRADING POLICIES

Not applicable.

PART II

ITEM 17. FINANCIAL STATEMENTS

The Registrant has elected to provide the financial statements and related information specified in Item 18.

ITEM 18. FINANCIAL STATEMENTS

The consolidated financial statements of Canaan Inc. are included at the end of this annual report.

ITEM 19. EXHIBITS

Exhibit Number	Description of Exhibits
1.1	Amended and Restated Memorandum and Articles of Association of the Registrant (incorporated by reference to Exhibit 3.2 to our Registration Statement on Form F-1 (File No. 333-234356), initially filed with the Securities and Exchange Commission on October 28, 2019)
2.1	Deposit Agreement between the Registrant and The Bank of New York Mellon, as depositary (incorporated by reference to Exhibit 2.1 to our annual report on Form 20-F for the year ended December 31, 2019 (File No. 001-39127), filed with the Securities and Exchange Commission on April 15, 2020)
2.2	Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934 (the "Exchange Act") (incorporated by reference to Exhibit 2.2 to the annual report on Form 20-F (File No. 001-39127), filed with the Securities and Exchange Commission on April 15, 2020)
4.1	Amended and Restated 2018 Share Incentive Plan (incorporated by reference to Exhibit 4.1 of our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 21, 2021)
4.2	Form of Indemnification Agreement between the Registrant and its directors and executive officers (incorporated herein by reference to Exhibit 10.2 to the registration statement on Form F-1 (File No. 333-234356), as amended, initially filed with the Securities and Exchange Commission on October 28, 2019)
4.3	Form of Executive Employment Agreement between the Registrant and its executive officers (incorporated herein by reference to Exhibit 10.3 to the registration statement on Form F-1 (File No. 333-234356), as amended, initially filed with the Securities and Exchange Commission on October 28, 2019)
4.4	Form of Securities Purchase Agreement dated April 29, 2021 by and between the Company and the purchasers identified on the signature pages thereto (incorporated by reference to Exhibit 10.2 to Canaan Inc.'s Current Report on Form 6-K (Reg. No. 001-39127) furnished on April 30, 2021)
4.5	Form of Warrant to be issued to the purchasers under the Securities Purchase Agreement (incorporated by reference to Exhibit 4.5 to Canaan Inc.'s Current Report on Form 6-K (Reg. No. 001-39127) furnished on April 30, 2021)
*8.1	List of Principal Subsidiaries
11.1	Code of Business Conduct of the Registrant (incorporated by reference to Exhibit 99.1 to our Registration Statement on Form F-1 (File No. 333-234356), initially filed with the Securities and Exchange Commission on October 28, 2019)
*12.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*12.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
**13.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**13.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1	Letter of PricewaterhouseCoopers Zhong Tian LLP, dated April 29, 2022, regarding change in independent registered public accounting firm, (incorporated herein by reference to Exhibit 15.1 to the annual report on Form 20-F (File No. 001-39127), filed with the Securities and Exchange Commission on April 29, 2022)
*15.2	Consent of Commerce & Finance Law Offices
*15.3	Consent of KPMG Huazhen LLP
*15.4	Consent of PricewaterhouseCoopers Zhong Tian LLP
*101.INS	Inline XBRL Instance Document—this instance document does not appear on the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
*101.SCH	Inline XBRL Taxonomy Extension Schema Document
*101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
*101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
*101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith

** Furnished herewith

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Canaan Inc.

By: /s/ Nangeng Zhang

Name: Nangeng Zhang

Title: Chairman and Chief Executive Officer

Date: April 19, 2023

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Canaan Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Canaan Inc. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of comprehensive income (loss), changes in stockholders' equity, and cash flows for the years then ended, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Huazhen LLP

We have served as the Company's auditor since 2021.

Beijing, China
April 19, 2023

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 statements of comprehensive income/(loss), of changes in shareholders' equity and of cash flows of Canaan Inc. and its subsidiaries (the "Company") for the year ended December 31, 2020, 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 results of operations and cash flows of the Company for the year ended December 31, 2020 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 audit of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit 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 audit 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

April 21, 2021

We served as the Company's auditor from 2018 to 2021.

CANAAN INC.
CONSOLIDATED BALANCE SHEETS
As of December 31, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	Note	As of December 31,		
		2021	2022	
		RMB	RMB	US\$ (Note 2(e))
ASSETS				
Current assets:				
Cash	2(h)	2,684,342	707,261	102,543
Restricted cash	4	47,362	—	—
Accounts receivable, net		367	—	—
Inventories	5	812,363	1,473,990	213,708
Prepayments and other current assets	6	1,729,027	1,689,079	244,893
Total current assets		<u>5,273,461</u>	<u>3,870,330</u>	<u>561,144</u>
Non-current assets:				
Cryptocurrency	7	20,310	87,273	12,653
Property, equipment and software, net	8	185,566	597,988	86,700
Right-of-use assets	9	30,920	29,600	4,292
Deferred tax assets	15	99,044	151,410	21,952
Other non-current assets	6	2,956	17,437	2,528
Non-current financial investment		20,000	20,000	2,900
Total non-current assets		<u>358,796</u>	<u>903,708</u>	<u>131,025</u>
Total assets		<u>5,632,257</u>	<u>4,774,038</u>	<u>692,169</u>
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities:				
Accounts payable		143,441	116,333	16,867
Contract liabilities	2(r)	1,340,731	4,613	669
Income tax payable		148,719	50,340	7,299
Accrued liabilities and other current liabilities	10	437,394	336,705	48,814
Lease liabilities, current	9	14,819	16,118	2,337
Total current liabilities		<u>2,085,104</u>	<u>524,109</u>	<u>75,986</u>
Non-current liabilities:				
Lease liabilities, non-current	9	16,292	10,039	1,456
Warrant liability	11	66,347	—	—
Other non-current liabilities	10	5,824	4,163	604
Total liabilities		<u>2,173,567</u>	<u>538,311</u>	<u>78,046</u>
Contingencies (Note 18)				

CANAAN INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
As of December 31, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	Note	As of December 31,		
		2021	2022	US\$ (Note 2(e))
		RMB	RMB	
Shareholders' equity:				
Ordinary shares (US\$0.00000005 par value; 1,000,000,000,000 shares authorized; 2,804,138,492 shares issued, 2,577,386,552 and 2,496,001,757 shares outstanding as of December 31, 2021 and 2022, respectively)	12	1	1	—
Subscriptions receivable from shareholders		(1)	(1)	—
Treasury stocks (US\$0.00000005 par value; 226,751,940 and 308,136,735 shares as of December 31, 2021 and 2022, respectively)	13	(231,281)	(380,538)	(55,173)
Additional paid-in capital		2,891,134	3,298,531	478,242
Statutory reserves		97,420	102,586	14,874
Accumulated other comprehensive loss		(101,925)	(4,844)	(702)
Retained earnings		803,342	1,219,992	176,882
Total shareholders' equity		<u>3,458,690</u>	<u>4,235,727</u>	<u>614,123</u>
Total liabilities and shareholders' equity		<u>5,632,257</u>	<u>4,774,038</u>	<u>692,169</u>

The accompanying notes are an integral part of these consolidated financial statements.

CANAAN INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
For the Years Ended December 31, 2020, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	Note	For the years ended December 31,			US\$ (Note 2(e))
		2020	2021	2022	
		RMB	RMB	RMB	
Revenues					
Products revenue		427,522	4,956,891	4,159,563	603,080
Mining revenue		—	21,688	218,639	31,700
Leases revenue		18,963	7,556	—	—
Maintenance service revenue		300	224	—	—
Other revenues		901	347	705	102
Total Revenues		447,686	4,986,706	4,378,907	634,882
Cost of revenues		(409,922)	(2,135,961)	(2,831,107)	(410,472)
Gross profit		37,764	2,850,745	1,547,800	224,410
Operating expenses:					
Research and development expenses		(140,041)	(332,846)	(546,642)	(79,256)
Sales and marketing expenses		(19,980)	(100,467)	(62,966)	(9,129)
General and administrative expenses		(131,624)	(589,107)	(580,523)	(84,168)
Impairment on cryptocurrency	7	—	—	(52,959)	(7,678)
Total operating expenses		(291,645)	(1,022,420)	(1,243,090)	(180,231)
Income (loss) from operations		(253,881)	1,828,325	304,710	44,179
Interest income		3,153	7,310	15,938	2,311
Change in fair value of warrant liability	11	—	190,178	24,598	3,566
Investment income		5,844	277	—	—
Interest expense		(3,587)	—	—	—
Foreign exchange gains, net		2,419	17,890	242,957	35,225
Other income, net		30,958	6,410	22,156	3,212
Income (loss) before income tax expense		(215,094)	2,050,390	610,359	88,493
Income tax expense	15	—	(50,108)	(124,002)	(17,979)
Net income (loss)		(215,094)	2,000,282	486,357	70,514
Foreign currency translation adjustment, net of nil tax		(24,238)	(22,145)	97,081	14,075
Total comprehensive income (loss)		(239,332)	1,978,137	583,438	84,589
Weighted average number of shares used in per					
Class A and Class B ordinary share calculation:					
— Basic	17	2,345,703,779	2,521,667,815	2,560,106,403	2,560,106,403
— Diluted	17	2,345,703,779	2,576,157,247	2,577,892,069	2,577,892,069
Net earnings (loss) per Class A and Class B ordinary share (cent per share)					
— Basic	17	(9.17)	79.32	19.00	2.75
— Diluted	17	(9.17)	77.65	18.87	2.74
Share-based compensation expenses were included in:					
Cost of revenues		—	269	990	144
Research and development expenses		652	99,173	66,065	9,579
Sales and marketing expenses		41	8,240	16,263	2,358
General and administrative expenses		2,257	383,779	324,079	46,987

The accompanying notes are an integral part of these consolidated financial statements.

CANAAN INC.
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
For the Years Ended December 31, 2020, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	Note	Ordinary shares		Subscription receivables from shareholders	Treasury stocks		Additional paid-in capital	Statutory reserves	Accumulated other comprehensive loss	Retained earnings (accumulated deficit)	Total shareholders' equity
		Number of Shares	Amount		Number of Shares	Amount					
Balance as of January 1, 2020		<u>2,350,123,270</u>	<u>1</u>	<u>(1)</u>	<u>22,098,952</u>	<u>(23,915)</u>	<u>1,631,609</u>	<u>97,307</u>	<u>(55,542)</u>	<u>(980,579)</u>	<u>692,795</u>
Share Repurchase	13	(25,799,190)	—	—	25,799,190	(23,915)	—	—	—	—	(23,915)
Share-based compensation expense	14	—	—	—	—	—	2,950	—	—	—	2,950
Foreign currency translation		—	—	—	—	—	—	(24,238)	—	—	(24,238)
Vesting of restricted share units	13	4,002,052	—	—	(4,002,052)	—	60	—	—	—	60
Net loss		—	—	—	—	—	—	—	—	(215,094)	(215,094)
Balance as of December 31, 2020		<u>2,328,326,132</u>	<u>1</u>	<u>(1)</u>	<u>43,896,090</u>	<u>(23,915)</u>	<u>1,634,619</u>	<u>97,307</u>	<u>(79,780)</u>	<u>(1,195,673)</u>	<u>432,558</u>
Share Repurchase	13	(34,683,225)	—	—	34,683,225	(103,543)	—	—	—	—	(103,543)
Repurchase of vested employee restricted share units for tax withholding	13	(33,255,495)	—	—	33,255,495	(150,705)	—	—	—	—	(150,705)
Resale of vested employee restricted share units for tax withholding	13	13,043,895	—	—	(13,043,895)	46,882	—	—	—	(1,154)	45,728
Share-based compensation expense	14	—	—	—	—	—	491,461	—	—	—	491,461
Vesting of restricted share units	13	101,574,270	—	—	(101,574,270)	—	86	—	—	—	86
New issuance of ordinary shares and warrants	12	202,380,975	—	—	70,833,345	—	764,968	—	—	—	764,968
Issuance of ordinary shares as a reserve for share-based compensation awards	14	—	—	—	158,701,950	—	—	—	—	—	—
Profit appropriations to statutory reserves		—	—	—	—	—	—	113	—	(113)	—
Foreign currency translation		—	—	—	—	—	—	—	(22,145)	—	(22,145)
Net income		—	—	—	—	—	—	—	—	2,000,282	2,000,282
Balance as of December 31, 2021		<u>2,577,386,552</u>	<u>1</u>	<u>(1)</u>	<u>226,751,940</u>	<u>(231,281)</u>	<u>2,891,134</u>	<u>97,420</u>	<u>(101,925)</u>	<u>803,342</u>	<u>3,458,690</u>
Share Repurchase	13	(154,614,975)	—	—	154,614,975	(253,079)	—	—	—	—	(253,079)
Repurchase of vested employee restricted share units for tax withholding	13	(17,102,175)	—	—	17,102,175	(31,097)	—	—	—	—	(31,097)
Resale of vested employee restricted share units for tax withholding	13	37,313,775	—	—	(37,313,775)	134,919	—	—	—	(64,541)	70,378
Share-based compensation expense	14	—	—	—	—	—	407,397	—	—	—	407,397
Vesting of restricted share units	13	53,018,580	—	—	(53,018,580)	—	—	—	—	—	—
Profit appropriations to statutory reserves		—	—	—	—	—	—	5,166	—	(5,166)	—
Foreign currency translation		—	—	—	—	—	—	—	97,081	—	97,081
Net income		—	—	—	—	—	—	—	—	486,357	486,357
Balance as of December 31, 2022		<u>2,496,001,757</u>	<u>1</u>	<u>(1)</u>	<u>308,136,735</u>	<u>(380,538)</u>	<u>3,298,531</u>	<u>102,586</u>	<u>(4,844)</u>	<u>1,219,992</u>	<u>4,235,727</u>

CANAAN INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
For Years Ended December 31, 2020, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	For the Years Ended December 31,			US\$ (Note 2(e))
	2020	2021	2022	
	RMB	RMB	RMB	
Cash flows from operating activities				
Net income (loss)	(215,094)	2,000,282	486,357	70,514
Adjustments for:				
Revenue recognized on acceptance of cryptocurrency	—	(21,688)	(238,596)	(34,593)
Cost recognized on payment of cryptocurrency	—	—	56,877	8,246
Realised gain on sale of cryptocurrency	—	—	1,167	169
Depreciation and amortization of property, equipment and software	11,852	11,009	226,419	32,828
Depreciation of operating lease assets	19,389	3,118	—	—
Foreign exchange gain	(14,094)	(9,668)	(13,490)	(1,956)
Provision of allowance for doubtful receivables	4,849	911	90	13
Deferred income tax benefits	—	(99,044)	(52,366)	(7,592)
Loss on disposal of property, equipment and software	96	47	272	39
Share-based compensation expense	2,950	491,461	407,397	59,067
Change in fair value of warrant liability	—	(190,178)	(24,598)	(3,566)
Investment income	(5,844)	(277)	—	—
Reduction in the carrying amount of the right-of-use assets	13,432	17,584	15,701	2,276
Interest of lease liabilities	1,938	1,613	1,342	195
Impairment charge to non-current financial investment	2,475	25	—	—
Impairment loss of cryptocurrency	—	1,061	52,959	7,678
Write-down of inventories	44,916	50,714	467,271	67,748
Write-downs of prepayments	—	—	86,216	12,500
Provision for reserve for inventory purchase commitments	—	—	75,847	10,997
Changes in assets and liabilities:				
Accounts receivable	(4,499)	6,761	367	53
Inventories	(93,760)	(787,554)	(1,559,148)	(226,055)
Prepayments and other current assets	(99,127)	(1,413,497)	26,647	3,863
Other non-current assets	2,720	(426)	(14,090)	(2,043)
Prepaid interest expense	(149)	246	—	—
Accounts payable	(61,643)	106,034	(95,181)	(13,800)
Notes payable	(13,499)	(13,963)	—	—
Contract liabilities	422,100	910,343	(1,386,068)	(200,961)
Income tax payable	—	148,719	(98,482)	(14,279)
Accrued liabilities and other current liabilities	29,591	247,940	(97,270)	(14,102)
Other non-current liabilities	8,020	(2,196)	(1,661)	(241)
Lease liabilities	(14,322)	(20,527)	(20,677)	(2,998)
Net cash provided by (used in) operating activities	<u>42,297</u>	<u>1,438,850</u>	<u>(1,696,698)</u>	<u>(246,000)</u>
Cash flows from investing activities:				
Payment for short-term investments	(1,334,077)	—	—	—
Proceeds from disposal of short-term investments	1,288,540	62,663	—	—
Purchase of property, equipment and software	(2,176)	(37,708)	(95,129)	(13,792)
Proceeds from disposal of property, equipment and software	637	160	—	—
Proceeds from disposal of cryptocurrency	—	—	64,806	9,396
Payment for non-current financial investments	(2,500)	(20,000)	—	—
Net cash provided by (used in) investing activities	<u>(49,576)</u>	<u>5,115</u>	<u>(30,323)</u>	<u>(4,396)</u>

CANAAN INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2020, 2021 and 2022
(all amounts in thousands, except share and per share data, or as otherwise noted)

	For the Years Ended December 31,			US\$ (Note 2(e))
	2020	2021	2022	
	RMB	RMB	RMB	
Cash flows from financing activities:				
Payment for repurchase of ordinary shares	(23,915)	(103,543)	(234,307)	(33,971)
Prepayment under share repurchase agreement	(16,146)	(573)	—	—
Repurchase of warrants	—	—	(44,282)	(6,420)
Payment for cost of issuance	(6,879)	(5,705)	—	—
Proceeds from borrowings	152,000	—	—	—
Repayment of borrowings	(217,000)	(35,000)	—	—
Proceeds from resale of treasury stock	—	45,728	70,378	10,204
Repurchase for tax withholdings on vesting of restricted share units	—	(24,508)	(157,295)	(22,804)
Proceeds from issuance of ordinary shares and warrants	—	1,029,455	—	—
Net cash provided by (used in) financing activities	<u>(111,940)</u>	<u>905,854</u>	<u>(365,506)</u>	<u>(52,991)</u>
Net increase (decrease) in cash and restricted cash	(119,219)	2,349,819	(2,092,527)	(303,387)
Effect of exchange rate changes on cash and restricted cash	(9,823)	(13,919)	68,084	9,870
Cash and restricted cash at the beginning of year	524,846	395,804	2,731,704	396,060
Cash and restricted cash at the end of year	<u>395,804</u>	<u>2,731,704</u>	<u>707,261</u>	<u>102,543</u>
Cash	391,310	2,684,342	707,261	102,543
Restricted cash	4,494	47,362	—	—
Total cash and restricted cash shown in the statement of cash flows	<u>395,804</u>	<u>2,731,704</u>	<u>707,261</u>	<u>102,543</u>
Supplemental disclosure of cash flow information:				
Cash paid for interest	3,736	246	—	—
Cash paid for income tax	—	433	316,338	45,865
Supplemental disclosure of non-cash investing and financing activities:				
Transfer from inventory to operating lease assets	135,276	15,169	—	—
Transfer from operating lease assets to inventory	115,887	12,051	—	—
Mining equipment transfer from inventory to property, equipment and software	—	146,881	485,514	70,393
Purchases of property, plant and equipment in accrued liabilities and other current liabilities	—	—	44,310	6,424
Accrued tax withholdings on vesting of restricted share units	—	126,198	(31,097)	(4,509)
Revenue recognized on acceptance of cryptocurrency	—	21,688	238,596	34,593
Cost recognized on payment of cryptocurrency	—	—	56,877	8,246

Cryptocurrencies are mainly collected from mining pools and paid to mining farms by the Company for the Company's mining activities, which are reported as non-cash transactions in the Company's consolidated statements of cash flows.

The accompanying notes are an integral part of these consolidated financial statements.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

1. Organization and principal activities

Canaan Inc., an exempted company with limited liability incorporated in the Cayman Islands, through wholly-owned subsidiaries (collectively referred to as the “Company”), is principally engaged in integrated circuit (the “IC”) design and sale and lease of final mining equipment by integrating its IC products for Bitcoin mining and related components in the People’s Republic of China (the “PRC”), Singapore and other countries and regions.

As of December 31, 2022, the Company’s principal subsidiaries are as follows:

<u>Name of subsidiaries</u>	<u>Date of incorporation</u>	<u>Place of incorporation</u>	<u>Equity interest held</u>	<u>Principal activities</u>
Canaan Creative (HK) Holdings Limited	February 22, 2018	Hong Kong Special Administrative Region	100 %	Research and development of ICs
Hangzhou Canaan Intelligence 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 mining equipment and spare parts
Canaan Convey Co., Ltd.	November 2, 2017	Beijing, China	100 %	International distribution of mining equipment and spare parts
Zhejiang Avalon Technology Co., Ltd.	December 5, 2017	Hangzhou, China	100 %	Distribution of mining equipment and spare parts
Canaan Bright Sight Co., Ltd.	December 24, 2018	Beijing, China	100 %	International distribution of AI products
Canaan Creative (SH) Co., Ltd.	January 27, 2021	Shanghai, China	100 %	Research and development of ICs
Canaan Creative International PTE. Ltd	March 9, 2021	Singapore	100 %	Mining business
	September 18, 2021	Singapore	100 %	International headquarters, research and development of ICs, international distribution of mining equipments and spare parts
Canaan Creative Global Pte. Ltd.				
Canaan U.S. Inc.	February 1, 2022	United States	100 %	International distribution of mining equipments and spare parts, mining business

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

2. Summary of significant 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 Company in the preparation of the accompanying consolidated financial statements are summarized below.

(b) Use of estimates

The preparation of the Company'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 accounting estimation of variable consideration for revenue recognition, warrant liability, valuation of deferred tax assets, write-down for inventories and prepayments, provision for reserve for inventory purchase commitments, valuation and recognition of share-based compensation 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 Company's consolidated financial statements include the financial statements of Canaan Inc. and its subsidiaries. All transactions and balances among Canaan Inc. and its subsidiaries have been eliminated upon consolidation.

Subsidiaries are those entities in which Canaan Inc. 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 Company uses Renminbi ("RMB") as its reporting currency. The functional currency of Canaan Inc. and its subsidiaries incorporated outside of the PRC is the United States dollar ("US\$"), while the functional currency of the PRC entities in the Company is RMB as determined based on the criteria of Accounting Standards Codification ("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 (loss) as foreign exchange related gains or loss.

The financial statements of the Company are translated from the functional currency to the reporting currency, RMB. Assets and liabilities of Canaan Inc. and its subsidiaries incorporated outside of PRC are translated into RMB using the applicable exchange rates at the balance sheet date, income and expense items are translated at average exchange rates prevailing during the fiscal year. 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.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

(e) Convenience translation

The 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=RMB6.8972 on December 30, 2022, 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 December 31, 2022, or at any other rate.

(f) Warrant Liability

The freestanding warrants to purchase American Depositary Share (“ADSs”) at a future date were determined to be freestanding instruments that were accounted for as a liability. At initial recognition, the Company recorded the warrant liability on the consolidated balance sheets at its estimated fair value. The proceeds from issuance of ordinary shares and warrants are firstly allocated to warrant liability based on its fair value. The residual method is used to allocate the proceeds to shareholders’ equity. The warrant liability is subject to remeasurement at each reporting period and the Company adjusted the carrying value of the warrant liability to fair value at the end of each reporting period utilizing the binomial option pricing model, with changes in estimated fair value included in the change in fair value of warrant liability on the consolidated statement of comprehensive income (loss).

(g) 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 Company 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, for the assets or liabilities either directly or indirectly.

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 Company’s financial instruments consist principally of cash and restricted cash, short-term investments, non-current financial investments, accounts receivable, accounts payable, short-term debts, notes payable and other liabilities.

As of December 31, 2021 and 2022, the carrying values of cash and restricted cash, 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.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

On a recurring basis, the Company measures its warrant liability at fair value.

The following table sets forth the Company's assets and liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy:

<u>As of December 31, 2021</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Balance at fair value</u>
Liabilities				
Warrant liability	—	—	66,347	66,347

The Company 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 Company classifies the valuation techniques that use these inputs as Level 2.

The warrants are accounted for as a liability and remeasured to fair value at the end of each reporting period utilizing the binomial option pricing model, which involves significant assumptions including the risk-free interest rate, the expected volatility, expected dividend yield and expected term (Note 11).

(h) Cash

Cash includes cash on hand and demand deposits placed with banks or other financial institutions, which are unrestricted as to withdrawal or use.

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
RMB denominated bank deposits with financial institutions in the PRC	1,167,445	77,373
US dollar denominated bank deposits with financial institutions in the PRC	1,447,336	430,006
US dollar denominated bank deposits with overseas financial institutions	29,498	183,409
Others denominated bank deposits with overseas financial institutions	317	16,406
RMB denominated bank deposits with overseas financial institutions	—	56
Others denominated bank deposits with financial institutions in the PRC	39,746	11
Total	2,684,342	707,261

The bank deposits, including restricted cash, with financial institutions in the mainland of the PRC, Hong Kong, United States, Singapore and Kazakhstan are insured by the government authorities up to RMB500, HKD500, USD250, SGD75 and KZT15,000 per bank, respectively. The bank deposits including term deposits and restricted cash are insured by the government authorities with amounts up to RMB11,579 and RMB20,248 as of December 31, 2021 and 2022, respectively. The Company has not experienced any losses in uninsured bank deposits and does not believe that it is exposed to any significant risks on cash held in bank accounts. To limit exposure to credit risk, the Company primarily places bank deposits with large financial institutions in the PRC mainland, Hong Kong, United States, Singapore and Kazakhstan with acceptable credit rating.

On March 10, 2023, Signature bank was closed by the California Department of Financial Protection and Innovation. On March 12, 2023, New York State Department of Financial Services took possession of Signature Bank and appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. As of December 31, 2022, the Company held cash deposits US\$1.1 million at Signature Bank. All these cash deposits have been transferred to another bank subsequent to the receivership by the end of March 2023.

(i) Restricted cash

Restricted cash includes cash that are not readily available for the Company's normal disbursements. Restricted cash are primarily related to cash deposits with banks and financial institutions subject to legal restrictions (note 4).

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

(j) 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 in the amount of RMB5,844, RMB277 and nil in the consolidated statements of comprehensive income (loss) for the years ended December 31, 2020, 2021 and 2022, respectively.

(k) Accounts receivable

Accounts receivable are presented net of allowance for doubtful accounts. The Company 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. There is a time lag between when the Company estimates a portion of or the entire account balances to be uncollectible and when a write off of the account balances is taken. The Company takes a write off of the account balances when the Company can demonstrate all means of collection on the outstanding balances have been exhausted.

(l) Inventories

Inventories, consisting of finished goods, work in process, raw materials and goods in transit, which are purchased from contractual 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 Company takes ownership, risks and rewards of the products purchased.

The Company 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.

(m) Cryptocurrency

Cryptocurrency is, by its nature, identifiable non-monetary assets that lack physical substance. Future economic benefit attributable to cryptocurrency is expected to flow to the Company because cryptocurrency can be exchanged to standard currencies on public trading platforms. Furthermore, the cost of the Company's cryptocurrency assets can be measured reliably because cryptocurrency earned from mining activities can be measured with reference to the spot price to standard currencies on the date when they are earned.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

The Company accounts for the cryptocurrency received from mining as intangible assets with indefinite useful life in its consolidated balance sheets because, at the time of assessment, there is no foreseeable limit to the period over which such assets are expected to generate cash flows. The Company further adopts the cost model to account for its cryptocurrency and reviews its useful life and impairment at each reporting date in accordance with ASC 350 Intangibles—Goodwill and Other. The Company accounts for cryptocurrency at cost, instead of revaluing cryptocurrency at their fair value on each accounting reference date, because the latter model is subject to inherent and substantial volatility in the value of cryptocurrency from time to time.

The Company accounts for cryptocurrency return liability at fair value, whereas accounts for the corresponding cryptocurrency at cost subject to impairment because the Company is the accounting owner of those cryptocurrency. As of December 31, 2021 and 2022, cryptocurrency return liability of RMB2,500 and nil are recorded in accounts payable, respectively.

Cost is calculated using the weighted average cost method. Gains or losses arising from the disposal of cryptocurrency are determined as the difference between the net disposal proceeds and the carrying amount of the cryptocurrency and are recognized in profit or loss on the date of disposal.

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. The recoverable amount of cryptocurrencies is based on the fair value less costs of disposal. The fair value of the cryptocurrencies is determined by using the quoted price on the cryptocurrencies platform website well recognized by the block chain users.

During the year ended December 31, 2022, the Company recognized impairment loss of RMB52,959 on cryptocurrency.

(n) Operating lease assets

Operating lease assets consist of lease contracts for mining equipment for Bitcoin mining with customers, which are reclassified from inventories at the beginning of lease period. Operating lease assets are recorded at cost less accumulated depreciation and impairment losses. Depreciation is provided using a straight-line method over the estimated economic lives which is generally 18 months. Depreciation expenses are included in costs of revenues. The Company monitors accounting estimates relating to the depreciation period. Changes made to estimates are reflected in depreciation expense on a prospective basis. As of December 31, 2021 and 2022, the Company did not have any operating lease assets.

(o) 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
Mining equipment	1.5 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 (loss).

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.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

(p) Non-current financial investment

The Company's non-current financial investment include an equity investment without readily determinable fair value, and over which the Company has neither significant influence nor control through investments in common stock or in-substance common stock, and is measured and recorded using a measurement alternative that measures the non-current financial investment at cost minus impairment, if any, plus or minus changes resulting from qualifying observable price changes. The carrying value of the Company's non-current financial investment measured under cost minus impairment were RMB20,000 and RMB20,000 as of December 31, 2021 and 2022.

During the year ended December 31, 2021 and 2022, the Company recognized impairment charge of RMB25 and nil recorded in other income, net.

(q) Impairment of long-lived assets

For other long-lived assets including property, equipment and software, the Company evaluates for impairment whenever events or changes (triggering events) indicate that the carrying amount of an asset may no longer be recoverable. The Company 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.

(r) 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, 2021 and 2022 was RMB1,340,731 and RMB4,613, respectively. The revenue recognized during the years ended December 31, 2020, 2021 and 2022 for the beginning balance of contract liability was RMB8,008, RMB424,426 and RMB1,323,344, respectively.

(s) Revenue from contracts with customers (ASC 606)

The Company 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 Company generates revenue primarily from the sale of mining equipment directly to a customer, such as a business or individual engaged in Bitcoin mining activities. As the Bitcoin price fluctuates, the Company may adjust the selling price of mining equipment 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 Company's sales arrangements usually require a full prepayment before the delivery of products. The Company started to offer credit sales to certain significant, long-standing customers in the PRC from 2018 to September 2020. 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 for credit sales from 2018 to September 2020, the Company accepted 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 price of Bitcoin decreases in the post-sale period; hence providing implicit price concession to these customers and the ultimate amount of price concessions provided to these credit sales customers is highly dependent on the changes of Bitcoin prices.

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Revenues from product sales are recorded at the 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 Company will adjust these estimates, which would affect revenue and earnings in the period when 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 Company to its credit sales customers, the Company 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 Company has knowledge about the resolution of the uncertainty through payment by the customer. The Company uses all the subsequent information to the date of issuance of the 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 Company 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, 2020, 2021 and 2022, the Company recognized price concessions provided to its customers in the amounts of RMB11,455, nil and nil, respectively. During the year ended December 31, 2022, the adjustment to the previously estimated variable considerations was nil (years ended December 31, 2020 and 2021: RMB14,685 and nil). The Company did not provide price concessions to customers in 2022 and 2021.

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

The Company offers a standard product warranty of 360 days 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 RMB764, RMB28,826 and RMB12,742 for the years ended December 31, 2020, 2021 and 2022, respectively.

Mining revenue

The Company performs mining activities with its own mining equipment to earn cryptocurrency reward. The Company recognizes revenue when it earns the cryptocurrency as a result of its mining activity. The amount of revenue recognized is measured with reference to the spot price of the cryptocurrency to standard currencies on the date when it is earned.

Maintenance 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.

(t) Revenue from lease arrangements as lessor (ASC 842, Lease)

From July 2019, the Company started to generate revenue from the leases of mining equipment for Bitcoin mining to its customers. The leases cannot generally be extended or terminated at the customer's discretion. However, upon the mutual agreement of the parties, the leases can be early terminated after three months. Rental charges are computed based on a time rate of machine's type and rental period. The leases of mining equipment meet the classification of operating leases, and revenues from operating leases are recognized on a straight-line basis over the contract terms. The Company ceased leasing mining equipment in the second quarter of 2021.

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(u) Value-added-tax (“VAT”) recoverable and surcharges

Value added tax recoverable represent amounts paid by the Company for purchases. The surcharges (i.e., Urban construction and maintenance tax, educational surtax, local educational surtax), vary from 6% to 12% of the value-added-tax paid depending on the taxpayer’s location.

(v) Cost of revenues

Amounts recorded as cost of revenues relate to direct expenses incurred to generate revenue. Such costs are recorded as incurred. Cost of revenues primarily consists of product costs, including costs of raw material, contractual manufacturers for production, labor costs, shipping and handling costs, manufacturing and depreciation, warehousing costs, inventories write-downs, prepayments write-downs, provision for reserve for inventory purchase commitments and tax surcharges.

(w) 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 Company recognizes research and development expenses as expense when incurred.

(x) 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 is expensed as incurred and included in selling and marketing expenses. The advertising expenses were RMB3,701, RMB4,461 and RMB6,771 for the years ended December 31, 2020, 2021 and 2022, respectively.

(y) 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.

(z) Government grants

Government grants generally consist of financial subsidies received from local governments for operating a business in their jurisdictions and compliance with specific policies promoted by the local governments. The eligibility to receive such benefits and amount of financial subsidy to be granted are determined at the discretion of the relevant government authorities.

Government grants are recognized when there are reasonable assurances that the Group will comply with the conditions attach to them and the grants will be received. Government grants for the purpose of giving immediate financial support to the Group with no future related costs or obligation are recognized in the Group’s consolidated statements of comprehensive income when the grants become receivable.

RMB32,499, RMB5,699 and RMB19,226 were recognized in other income, net for the years ended December 31, 2020, 2021, and 2022, respectively. There were no significant commitment or contingencies for the government subsidies received for the years ended December 31, 2020, 2021 and 2022.

(aa) Lease arrangement as lessee

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.

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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 not to recognize right-of-use assets or lease liabilities for leases with an initial term of 12 months or less and the Company recognizes lease expense for these leases on a straight-line basis over the lease terms.

(ab) Employee social security and welfare benefits

Employees of the Company 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 defined contribution plan. The Company 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 Company'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 (loss) amounted to RMB14,919, RMB27,740 and RMB47,154 for the years ended December 31, 2020, 2021 and 2022, respectively.

(ac) Income taxes

The Company 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 deferred income tax asset will not be realized in the foreseeable future.

The Company 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 Company 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 Company's policy to recognize interest and penalties related to unrecognized tax benefits, if any, as a component of income tax expense.

(ad) 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*.

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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, over the vesting period; or c) for share-based awards with service conditions, using the graded vesting method, net of estimated pre-vesting forfeitures, over the vesting period. If the required vesting conditions are not met resulting in the forfeiture of the share-based awards, previously recognized compensation expense relating to those awards are reversed as occurred.

A change in any of the terms or conditions of share-based awards is accounted for as a modification of the awards. The Company 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 Company recognizes incremental compensation cost in the period when the modification occurs. For awards not being fully vested, the Company 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 Company's ordinary shares at the grant date of the award. Share-based compensation in relation to the share options is estimated using the Binomial Model. The determination of the fair value of share options is affected by the share price of the Company'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 share options was determined by management with the assistance from an independent valuation firm.

(ae) Statutory reserves

The Company'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 Company is not required to make appropriation to other reserve funds and the Company 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 Company 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 Canaan Inc. in terms of cash dividends, loans or advances.

The Company has made nil, RMB113 and RMB5,166 appropriations to statutory reserve for the years ended December 31, 2020, 2021 and 2022, respectively.

(af) Repurchase of share

The Company accounts for treasury stock using the cost method. Under the cost method, when the Company's shares are acquired for purposes other than retirement, the costs of the acquired stock will be shown separately as a deduction from the total of capital stock.

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(ag) Earnings (loss) per share

Basic earnings (loss) per share is computed by dividing net income (loss) attributable to holders of ordinary shares by the weighted average number of ordinary shares outstanding during the period.

Diluted earnings (loss) per share is calculated by dividing net income (loss) attributable to ordinary shareholders as adjusted for the effect of dilutive ordinary equivalent shares, if any, by the weighted average number of ordinary and dilutive ordinary equivalent shares outstanding during the period. Dilutive equivalent shares are excluded from the computation of diluted earnings (loss) per share if their effects would be anti-dilutive. ordinary share equivalents consist of the ordinary shares issuable in connection with the Company's ordinary shares issuable upon the conversion of the share-based awards, using the treasury stock method.

(ah) Comprehensive income (loss)

Comprehensive income (loss) 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 (loss) is reported in the consolidated statements of comprehensive income (loss). Accumulated other comprehensive loss of the Company include the foreign currency translation adjustments.

(ai) 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 Company's chief operating decision makers in deciding how to allocate resources and assess performance. The Company'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 Company does not distinguish between markets for the purpose of making decisions about resources allocation and performance assessment. Hence, the Company has only one operating segment and one reportable segment.

Long-lived assets consist of cryptocurrency, property, equipment and software, net, right-of-use assets and other non-current assets. As of December 31, 2022, the long-lived assets, net of RMB173,505 were located in Central Asia and RMB349,688 were located in the United States. The remaining long-lived assets were mainly located the in PRC. The Company's revenue segregated by geographic region is disclosed below.

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The geographical region of revenue generated is based on the location at which the goods delivered or the services were provided:

Geographic region	For the Years Ended December 31,		
	2020	2021	2022
Indonesia	—	—	1,446,347
Malaysia	—	—	802,063
United States of America	3,528	312,722	631,243
Australia	114	361,377	405,808
Kazakhstan	47,792	711,596	386,768
Cyprus	—	633,322	243,500
Hong Kong Special Administrative Region	12,301	87,971	149,488
Canada	162	402,489	122,799
Mainland China	379,418	1,779,923	122,770
Laos	—	—	32,660
Thailand	31	289,013	18,644
Sweden	8	152,127	6,285
Other countries or regions	4,332	256,166	10,532
Total	<u>447,686</u>	<u>4,986,706</u>	<u>4,378,907</u>

(aj) Recently issued accounting pronouncements

i. New and amended standards adopted by the Company:

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. The amendments in this update simplify the accounting for income taxes by removing certain exceptions and amending and clarify existing guidance. The guidance is effective for public business entities for annual reporting periods, and interim periods within those fiscal years, beginning after December 15, 2020. For all other entities, it is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The standard is effective for the Company for fiscal years beginning after 15 December 2021, and interim periods within fiscal years beginning after 15 December 2022. Early adoption is permitted. The Company adopted this guidance on January 1, 2022 and it did not have a material effect on the Company's consolidated financial statements.

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance. This update requires certain annual disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy. This update is effective for annual periods beginning after December 15, 2021, and early application is permitted. This guidance should be applied either prospectively to all transactions that are reflected in financial statements at the date of initial application and new transactions that are entered into after the date of initial application or retrospectively to those transactions. The Company adopted ASU 2021-10 during 2022 using the retrospective approach. See Note 2(z) for related disclosure.

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ii. *New and amended standards not yet adopted by the Company:*

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (“ASU 2016-13”). ASU 2016-13 was further amended in November 2018 by ASU 2018-19 and in November 2019 by ASU 2019-10. 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. The guidance is effective for public companies for annual reporting periods, and interim periods within those years beginning after December 15, 2019. For all other entities, it is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. As the Company is an “emerging growth company” and elects to apply for the new and revised accounting standards for the fiscal year beginning after December 15, 2022. The Company does not expect the adoption of ASU No. 2016-13 to have a material effect on its consolidated financial statements.

In August 2020, the FASB issued Accounting Standards Update 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity’s Own Equity (Subtopic 815-40) (“ASU 2020-06”) to simplify accounting for certain financial instruments. ASU 2020-06 eliminates the current models that require separation of beneficial conversion and cash conversion features from convertible instruments and simplifies the derivative scope exception guidance pertaining to equity classification of contracts in an entity’s own equity. The new standard also introduces additional disclosures for convertible debt and freestanding instruments that are indexed to and settled in an entity’s own equity. ASU 2020-06 amends the diluted earnings per share guidance, including the requirement to use the if-converted method for all convertible instruments. The amendments in this Update are effective for public business entities, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. ASU 2020-06 is effective for the Company for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years and should be applied on a full or modified retrospective basis, with early adoption permitted beginning on January 1, 2021. The Company adopted this guidance on January 1, 2023 and it did not have a material effect on the Company’s consolidated financial statements.

3. Risks and concentration

(a) Concentration of credit risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, restricted cash, and accounts receivable. The Company places its cash and restricted cash with financial institutions with high credit ratings and quality.

The Company conducts credit evaluations of customers, and generally does not require collateral or other security from its customers. The Company 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.

As of December 31, 2021 and 2022, accounts receivable were RMB367 and nil, respectively.

Accounts receivable concentration of credit risk is as below:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Customer A	52 %	—

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Customers which contributed more than 10% of total revenue are as below:

	<u>For the Years Ended December 31,</u>		
	<u>2020</u>	<u>2021</u>	<u>2022</u>
Customer B	*	*	33 %
Customer C	*	18 %	22 %
Customer D	*	*	16 %

* Less than 10%

(b) Supplier concentration

For the year ended December 31, 2020, the Company's purchases of its integrated circuits mainly from two suppliers.

For the year ended December 31, 2021, the Company's purchases substantially all its integrated circuits from one supplier.

For the year ended December 31, 2022, the Company's purchases substantially all its integrated circuits from three suppliers.

Although only a limited number of manufacturers for such integrated circuits are available, management believes that they could change their suppliers within these manufacturers which provided 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. Restricted cash

In December 2021, cash balance of RMB47,362 was temporarily restricted by a bank from access to the bank account during the restriction period. The restriction was subsequently released in April 2022. No cash balance was restricted as of December 31, 2022.

5. Inventories

Inventories consist of the following:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2022</u>
Raw materials	429,208	789,134
Work in process	78,354	261,436
Finished goods	304,801	423,420
Total	<u>812,363</u>	<u>1,473,990</u>

During the year ended December 31, 2021 and 2022, the Company recognized inventories write-down of RMB50,714 and RMB467,271 in cost of revenues, respectively.

For the years ended December 31, 2020, 2021 and 2022, at the beginning of lease period, the inventories reclassified to operating lease assets were RMB135,276, RMB15,169 and nil, respectively. At the end of lease period, the operating lease assets with net book value of RMB115,887, RMB12,051 and nil were reclassified to inventories for the years ended December 31, 2020, 2021 and 2022, respectively. Depreciation expense of operating lease assets of RMB19,389, RMB3,118 and nil was recorded in the cost of revenues for the year ended December 31, 2020, 2021 and 2022, respectively. The Company ceased the asset lease business in 2021 as a result of the restriction of mining activities in the PRC.

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6. Prepayments and other assets

The current and non-current portions of prepayments and other assets consist of the following:

	As of December 31,	
	2021	2022
Prepayments and other current assets		
Prepayments to vendors (Note a)	1,427,820	1,105,194
VAT recoverable	260,571	396,701
Prepayment for repurchase of ordinary shares	15,901	24
VAT refund for export sales (Note b)	14,041	107,549
Deferred charges	—	42,943
Deposits	1,494	23,183
Others (Note c)	9,200	13,485
	<u>1,729,027</u>	<u>1,689,079</u>
Other non-current assets		
Long-term rental and other deposits	2,956	17,046
Prepayments for purchase of software	—	391
	<u>2,956</u>	<u>17,437</u>

Note a: Prepayments to vendors mainly represent prepayments made to third-party suppliers for foundry services. The Company also records a write-down for the prepayment to third-party suppliers when the Company 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. For the years ended December 31, 2021 and 2022, the Company recorded write-downs of nil and RMB86,216 for the prepayment to third-party suppliers in cost of revenues. As of December 31, 2021 and 2022, the Company's purchase obligation to third-party suppliers for foundry service was RMB917,346 and RMB465,709, respectively (Note 10 (a)).

Note b: Canaan Convey Co., Ltd. is entitled to VAT refund for its export sales.

Note c: During the years ended December 31, 2020, 2021 and 2022, the Company recorded provision of allowance for other receivables of RMB4,849, RMB911 and RMB90, respectively.

7. Cryptocurrency

	As of December 31	
	2021	2022
Gross carrying amount	21,371	104,997
Less: Impairment of cryptocurrency	(1,061)	(17,724)
Net	<u>20,310</u>	<u>87,273</u>

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Additional information about cryptocurrency consists of the following:

	For the years ended December 31,	
	2021	2022
Beginning balance	—	20,310
Revenue recognized on acceptance of cryptocurrency	21,688	238,596
Cost of revenues recognized on payment of cryptocurrency	—	(56,877)
Proceeds from disposal of cryptocurrency	—	(64,806)
Realized loss on disposal of cryptocurrency	—	(1,167)
Impairment of cryptocurrency	(1,061)	(52,959)
Foreign currency translation adjustment	(317)	4,176
Ending balance	20,310	87,273

8. Property, equipment and software

Property, equipment and software consist of the following:

	As of December 31,	
	2021	2022
Cost:		
Mining equipment	146,881	720,666
Computers and electronic equipment	27,492	69,698
Leasehold improvements	21,412	33,466
Mechanical equipment	7,694	855
Software	5,438	16,437
Construction in progress	665	—
Motor vehicles	470	541
Total cost	210,052	841,663
Less: Accumulated depreciation and amortization	(24,486)	(243,675)
Property, equipment and software, net	185,566	597,988

Depreciation and amortization expenses recognized for the years ended December 31, 2020, 2021 and 2022 are summarized as follows:

	For the Years Ended December 31,		
	2020	2021	2022
General and administrative expenses	7,680	6,439	11,954
Research and development expenses	3,874	2,826	6,047
Cost of revenues	217	1,715	208,362
Sales and marketing expenses	81	29	56
Total	11,852	11,009	226,419

9. Leases

The Company leases facilities under non-cancellable operating leases expiring on different dates. The terms of substantially all these leases are three 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 the Company's leases qualify as operating leases. Variable lease cost and short-term leases (lease terms less than 12 months) are recognized as incurred.

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- (a) The components of lease expenses were as follows:

	For the Years Ended December 31,		
	2020	2021	2022
Lease cost:			
Reduction in the carrying amount of ROU assets	13,432	17,584	15,701
Interest of lease liabilities	1,938	1,613	1,342
Expenses for short-term lease within 12 months	505	443	1,506
Total lease cost	15,875	19,640	18,549

- (b) Supplemental cash flow information related to leases was as follows:

	For the Years Ended December 31,		
	2020	2021	2022
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	14,322	20,739	20,507
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	5,516	36,672	16,704
Lease liability settled through termination of lease:			
Operating leases	427	2,590	2,493

- (c) Supplemental balance sheet information related to leases was as follows:

	As of December 31,		
	2020	2021	2022
Weighted-average remaining lease term			
Operating leases	1.3 year	2.4 year	1.9 year
Weighted-average discount rate			
Operating lease	6.73% per annum	5.17% per annum	4.58% per annum

- (d) Maturities of lease liabilities were as follows:

Years Ending December 31,	As of December 31, 2022
2023	16,934
2024	8,762
2025 and thereafter	1,486
Total undiscounted lease payments	27,182
Less: imputed interest	(1,025)
Total lease liabilities	26,157
Amounts due within 12 months	16,118
Non-current lease liability	10,039

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10. Accrued liabilities and other liabilities

	As of December 31,	
	2021	2022
Accrued liabilities and other current liabilities		
Salary and welfare payable	118,712	144,473
Provision for reserve for inventory purchase commitments (Note a)	—	75,847
Other tax payables	19,128	56,116
Customer refund	10,738	29,432
Warranty reserve (Note b)	18,026	11,953
Refund from depository bank – current	2,013	2,199
VAT payable	128,939	748
VAT received from customers related to contract liabilities	2,427	135
Withholding tax payables due to restricted share units (Note c)	126,198	—
Rental deposits.	2,120	—
Others	9,093	15,802
Total	437,394	336,705
Other non-current liabilities		
Refund from depository bank – non-current	5,824	4,163

Note a: The Company entered into several contracts to purchase foundry service. These contracts represent firm purchase commitments which are evaluated for potential losses. As of December 31, 2021 and 2022, the Company's purchase obligation to third-party suppliers for foundry service was RMB917,346 and RMB465,709, respectively.

In connection with the preparation of the Company's consolidated financial statements for the year ended December 31, 2022, the Company assessed the loss contingency under the foundry service contracts taking into account the estimated selling price of mining equipment. The provision was determined by applying a methodology similar to that used in the lower of cost or net realizable value with respect to inventory, using estimates of the costs to convert raw materials into final products in order to determine net realizable value. For the year ended December 31, 2022, a provision of RMB75,847 has been recognized in cost of revenues for the Company's inventory purchase commitments under foundry service contracts as a result of the decline in the estimated selling price of mining equipment based on the most recent subsequent selling price. No such provision was made during the year ended December 31, 2021.

Note b: For mining equipment, the Company provides its customers for 360 days warranty, subject to certain conditions, such as normal use. The Company provides for the estimated costs of warranties at the time revenue is recognized. Factors that affect the Company's warranty obligation include product defect rates and costs of repair or replacement.

Movement of provision for warranty is as follows:

	For the year ended December 31,	
	2021	2022
Accrued warranty—beginning of year	—	18,026
Accrual for warranties issued during the year	28,826	12,742
Warranty claims paid	(10,800)	(7,843)
Warranty expired	—	(10,972)
Accrued warranty—end of year	18,026	11,953

Note c: Upon vesting of the restricted share units, the Company withholds the shares to cover the statutory withholding requirement. As of December 31 2021, RMB126,198 was withheld on behalf of the employee and was subsequently remitted to the tax authority in January 2022.

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11. Warrants

In connection with the issuance of ordinary shares (Note 12) in May 2021, the Company also issued warrants to the investors, which entitle the investors to purchase up to an aggregate of 4,047,620 ADS (representing 60,714,300 Class A ordinary Shares) at \$16.38 per ADS (representing \$1.09 Class A ordinary share). Also, the Company issued warrants to two placement agents, which entitle them to purchase up to an aggregate of 674,603 ADSs (representing 10,119,045 Class A ordinary shares) at \$15.75 per ADS (representing \$1.05 Class A ordinary share).

The warrants are accounted for as a liability and remeasured to fair value at the end of each reporting period utilizing the binomial option pricing model, which involves significant assumptions including the risk-free interest rate, the expected volatility, expected dividend yield and expected term, the Company classifies the valuation techniques that use these inputs as Level 3.

	Fair Value at December 31, 2021	Fair Value at June 23, 2022 (remeasurement date)
Risk Free Rate	0.37%-0.81 %	2.32%-2.63 %
Volatility	131.47%-127.93 %	126.66%-140.39 %
Expected dividend yield	0 %	0 %
Expected term	2.3 years-3 years	1.9 years-2.1 years

On June 23, 2022, the Company entered into separate warrant repurchase agreements with all warrant holders. The Company paid US\$6.6 million (equivalent to RMB44.3 million, US\$1.4 per ADS) to repurchase the outstanding warrants of 4,722,223 ADSs (representing 70,833,345 Class A ordinary shares), upon which the warrant liability was extinguished.

The Company recognized the change in fair value of the warrant liability in RMB190,178 and RMB24,598 for the years ended December 31, 2021 and 2022, respectively. The change in fair value of warrant liability was recognized in the consolidated statements of comprehensive income (loss) in respective periods.

Movement of warrant liability is as follows:

	For the years ended December 31,	
	2021	2022
Beginning balance	—	66,347
Issuance of warrant	258,782	—
Change in fair value of warrant liability	(190,178)	(24,598)
Repurchase of warrant liability	—	(44,282)
Foreign currency translation adjustment	(2,257)	2,533
Ending balance	66,347	—

12. Ordinary shares

The Company's authorized share capital is 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 fifteen votes. In addition, certain matters including those related to the change of control of the Company require an additional approval by the holders of a majority of Class A ordinary shares voting as a separate class. 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. Class B ordinary shares will be automatically converted into the same number of Class A ordinary shares under certain circumstances, including any transfer of Class B ordinary shares by the holder thereof to any person or entity which is not an affiliate of such holder.

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As of January 1, 2020, the authorized ordinary shares are 1,000,000,000,000, of which 2,372,222,222 shares were issued and 2,350,123,270 shares were outstanding. These outstanding shares consist of (1) 1,993,498,826 Class A ordinary shares and (2) 356,624,444 Class B ordinary shares, which were held by the Chairman and CEO of the Company.

Effective November 25, 2020, the Board of Directors approved conversion of 45,000,000 Class B ordinary shares into 45,000,000 Class A ordinary shares.

On May 3, 2021, the Company issued 13,492,065 ADSs (202,380,975 Class A ordinary shares) to certain institutional investors for RMB1,029,455, net of issuance cost. The Company also issued to the investors warrants to purchase up to an aggregate of 4,047,620 ADSs (60,714,300 Class A ordinary shares). Also, the Company issued warrants to two placement agents, which entitles them to purchase up to an aggregate of 674,603 ADSs (10,119,045 Class A ordinary shares). The Company classified the warrants as warrant liability and the fair value of the warrant liability was RMB258,782 as of the issuance date, the residual proceeds of RMB770,673 was allocated to the Company's ordinary shares. On June 23, 2022, the Company repurchased the warrants and the warrant liability was extinguished (Note 11).

As of December 31, 2022, the authorized ordinary shares are 1,000,000,000,000, of which 2,804,138,492 shares were issued and 2,496,001,757 shares were outstanding. These outstanding shares consist of (1) 2,184,377,313 Class A ordinary shares and (2) 311,624,444 Class B ordinary shares, which were held by the Chairman and CEO of the Company.

13. Treasury stocks

2018 Equity Incentive Plan

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 14).

The ordinary shares issued to the Trust are accounted for as treasury stocks of the Company and presented as such for all periods presented. The Trust does not hold any other assets or liabilities as of December 31, 2021 and 2022, nor earn any income nor incur any expenses for the years ended December 31, 2020, 2021 and 2022.

As of January 1, 2020, 22,098,952 issued ordinary shares are accounted as treasury stocks. In 2020, 4,002,052 restricted share units were transferred from treasury stock to ordinary shares. For the year ended December 31, 2021, 5,757,945 restricted share units that have been vested were transferred from treasury stock to ordinary shares under the 2018 Incentive Plan (Note 14).

As of December 31, 2021 and 2022, 12,338,955 and 12,338,955 issued ordinary shares are accounted as treasury stocks.

Amended 2018 Plan

In April 2021, the Board of Directors of the Company amended the 2018 Plan (the "Amended 2018 Plan") (Note 14). In May and September 2021, the Company issued 94,927,065 Class A ordinary shares and 63,774,885 Class A ordinary shares, which were then reserved under the Amended 2018 Plan. For the year ended December 31, 2021, 95,816,325 restricted share units that have been vested were transferred from treasury stock to ordinary shares under the Amended 2018 Plan. Under the Amended 2018 Plan, the Company withholds the shares issued to the employees to meet the income tax withholding requirement upon the vesting of the Restricted share units. For the year ended December 31, 2021, the Company withheld 33,255,495 Class A ordinary shares for RMB150,705 and sold 13,043,895 Class A ordinary shares for RMB45,728. For the year ended December 31, 2022, the Company withheld 17,102,175 Class A ordinary shares for RMB31,097 and sold 37,313,775 Class A ordinary shares for RMB134,919. The Company did not retire any of the repurchased Class A ordinary shares. As of December 31, 2022 and 2021, 9,867,045 and 83,097,225 issued ordinary shares are accounted as treasury stocks. For the year ended December 31, 2022, 53,018,580 restricted share units were transferred from treasury stock to ordinary shares upon vesting under the Amended 2018 Plan.

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Share Repurchase Program

Effective September 9, 2020, the Board of Directors approved a share repurchase program to repurchase in the open market up to US\$10 million worth of its outstanding (i) ADS each representing 15 Class A ordinary shares, and/or (ii) Class A ordinary shares over the next 12 months starting from September 22, 2020 depending on a number of factors, including, but not limited to, price, trading volume and general market conditions, along with Canaan's working capital requirements and general business conditions, the relevant rules under United States securities laws and regulations, and the relevant stock exchange rules. During the year ended December 31, 2020, total of 1,719,946 outstanding ADSs (25,799,190 shares) were repurchased but have not been retired with a total consideration of RMB23,915, which is shown as treasury stock (Note 2(af)).

Effective September 19, 2021, the Board of Directors approved a share repurchase program to repurchase in the open market up to US\$20 million worth of its outstanding (i) American Depositary Share ("ADS") each representing 15 Class A ordinary shares, and or (ii) Class A ordinary shares over the next 12 months starting from September 20, 2021 depending on a number of factors, including, but not limited to, price, trading volume and general market conditions, along with Canaan's working capital requirements and general business conditions, the relevant rules under United States securities laws and regulations, and the relevant stock exchange rules. During the year ended December 31, 2021, total of 2,312,215 outstanding ADSs (34,683,225 shares) were repurchased but have not been retired with a total consideration of RMB103,543, which is shown as treasury stock (Note 2(af)).

Effective March 16, 2022, the Board of Directors approved a share repurchase program to repurchase in the open market up to US\$100 million worth of its outstanding (i) American depositary shares, each representing 15 Class A ordinary shares, and/or (ii) Class A ordinary shares over the next 24 months starting from March 16, 2022 depending on a number of factors, including, but not limited to, price, trading volume and general market conditions, along with Canaan's working capital requirements and general business conditions, the relevant rules under United States securities laws and regulations, and the relevant stock exchange rules. During the year ended December 31, 2022, total of 10,307,665 outstanding ADSs (154,614,975 shares) were repurchased but have not been retired with a total consideration of RMB253,079, which is shown as treasury stock (Note 2(af)).

As of December 31, 2022, a total of 215,097,390 repurchased ordinary shares are accounted as treasury stocks.

14. Share-based compensation

In April 2021, the Board of Directors of the Company amended the 2018 Plan. Under the Amended 2018 Plan, in April 2021 and on every January 1 thereafter during which the 2018 Plan remains in effect, the maximum aggregate number of Class A ordinary shares which may be subject to awards under the 2018 Plan will be automatically increased by 15.0% of the total number of Class A ordinary shares issued and outstanding on December 31 of the preceding calendar year, if and whenever the unallocated Class A ordinary shares which may be issuable under the 2018 Plan account for less than 3% of the then total issued and outstanding Class A ordinary shares. In May and September 2021, the Company issued 94,927,065 Class A ordinary shares and 63,774,885 Class A ordinary shares, which were then reserved under the Amended 2018 Plan. In 2022, the Company granted 62,410,200 RSUs to Company's employees under the Amended 2018 Plan.

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(a) *Restricted share units*

The following table summarizes the RSUs activity for the years ended December 31, 2020, 2021 and 2022:

	Number of shares	Weighted average grant date fair value RMB
Outstanding as of December 31, 2019	15,733,334	1.51
Forfeited	(2,691,282)	1.51
Vested	(4,002,052)	1.51
Outstanding as of December 31, 2020	9,040,000	1.51
Granted	236,768,940	3.74
Forfeited	(6,991,000)	3.10
Vested	(101,574,270)	2.15
Outstanding as of December 31, 2021	137,243,670	4.81
Granted	62,410,200	1.63
Forfeited	(22,844,235)	2.11
Vested	(53,018,580)	4.36
Outstanding as of December 31, 2022	123,791,055	3.90

In 2022, the Company granted 62,410,200 RSUs to the Company's employees under the Amended 2018 Plan. The Company used closing price of ordinary share to determine the fair value of the RSUs. Compensation expense related to RSUs with service conditions is recognized over the requisite service period, which is generally the vesting term of up to five years.

As of December 31, 2022, there was RMB346,568 unrecognized compensation expense related to RSUs, which is expected to be recognized over a weighted-average period of 31.65 months.

(b) *Share options*

The following table summarizes the share options for the years ended December 31, 2020, 2021 and 2022:

	Number of shares	Weighted-Average per Share Exercise Price RMB	Weighted Average Remaining Contractual Term Years	Aggregate Intrinsic Value RMB
Outstanding as of December 31, 2019 and 2020	—	—	—	—
Granted	114,000,000	4.90	—	—
Outstanding as of December 31, 2021	114,000,000	4.90	9.10	—
Outstanding as of December 31, 2022	114,000,000	4.90	8.12	—
Expected to vest as of December 31, 2022	114,000,000	4.90	8.12	—
Exercisable as of December 31, 2022	42,000,000	4.90	8.12	—

The aggregate intrinsic value as of December 31, 2022 in the table above represents the difference between the fair value of the Company's ordinary share on December 31, 2022 and the exercise price.

The fair values of the share options granted by the Company to employees for the year ended December 31, 2021 are as follows:

	For the Year Ended December 31, 2021
Weighted average grant date fair value of option per share	6.63
Aggregate grant date fair value of options	465,553

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For the year ended December 31, 2022, no new share options were granted.

As of December 31, 2022, there was RMB145,063 unrecognized compensation expense related to share options, which is expected to be recognized over a weighted-average period of 23.32 months.

The assumptions used to estimate the fair values of the share options granted were as follows:

	<u>For the Year Ended December 31,</u> <u>2021</u>
Risk-free rate of return (1)	1.25% to 1.85 %
Dividend yield (2)	0 %
Expected volatility (3)	136.91% to 142.01 %
Expected term (4)	10 years
Exercise multiple (5)	2.80
Fair value of ordinary share	US\$ 3.78 to US\$17.51

- 1) The risk-free rate of return was estimated based on the yield of US Strip Bond with a maturity life equal to the remaining maturity life of the Company's options as of the valuation date.
- 2) Dividend yield is zero as the Company has never declared or paid any cash dividends on its shares, and the Company does not anticipate any dividend payments in the foreseeable future.
- 3) The expected volatility was estimated based on the historical volatility of comparable peer public companies and the Company with a time horizon close to the contract life of the Company's options.
- 4) Expected term is the contract life of the option.
- 5) The expected exercise multiple was estimated as the average ratio of the stock price to the exercise price of when employees would decide to voluntarily exercise their vested options. As the Company did not have sufficient information of past employee exercise history, it has considered the statistics by making reference to a widely-accepted academic research publication.

15. 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, Singapore and United States

The Company's subsidiaries incorporated in Hong Kong, Singapore and United States are subject to profits or income tax rates of 16.5%, 17.0% and 21.0%, respectively, on their estimated assessable profits for the years ended December 31, 2020, 2021 and 2022. Dividends income received from subsidiaries in mainland China are not subject to Hong Kong, Singapore and United States profits or income tax.

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(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 Co., Ltd. (“Canaan Creative”) obtained its High and New Technology Enterprises (“HNTE”) certificate with a valid period of three years in 2019. Therefore, Canaan Creative is eligible to enjoy a preferential tax rate of 15% from 2019 to 2021 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 October 2022, Canaan Creative received approval from the tax authority on the renewal of its HNTE status which entitled it to the preferential income tax rate of 15% effective retroactively from 2022 to 2024.

Hangzhou Canaan Intelligence Information Technology Co., Ltd. (“Hangzhou Canaan”) obtained its HNTE certificate with a valid period of three years in 2019, and therefore is eligible to enjoy a preferential tax rate of 15% from 2019 to 2021 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 addition, 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. Thereafter, Hangzhou Canaan did not renew its HNTE certificate or integrated circuit enterprise qualification.

Canaan Creative (SH) Co., Ltd. (“Canaan Creative (SH)”) obtained its High and New Technology Enterprises (“HNTE”) certificate with a valid period of three years in 2022. Therefore, Canaan Creative is eligible to enjoy a preferential tax rate of 15% from 2022 to 2024 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.

The Company’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, 2022, the aggregated amount of undistributed earnings of the Company entities located in the PRC that are available for distribution to the Company were RMB1,628,165. The Company plans to indefinitely reinvested undistributed earnings earned from its PRC subsidiaries in its operations in the PRC. Therefore, no withholding income tax for undistributed earnings of its subsidiaries were provided as of December 31, 2022.

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A reconciliation between the effective income tax rate and the PRC statutory income tax rate is as follows:

	For the Years Ended December 31,		
	2020	2021	2022
PRC statutory income tax rates	(25.0)%	25.0 %	25.0 %
Permanent book-tax difference	(4.5)%	1.4 %	(2.4)%
Share-based compensation	0.2 %	3.4 %	5.5 %
Super deduction of R&D expense	(5.7)%	(2.6)%	(14.0)%
Others	1.0 %	0.6 %	6.1 %
Different tax rates in other jurisdictions	2.0 %	(2.2)%	2.0 %
Effect of tax holiday	4.4 %	(7.8)%	(16.9)%
Change in valuation allowance	23.1 %	(14.0)%	12.6 %
Total	0.0 %	2.4 %	20.3 %
Effects of tax holidays entitled by the PRC subsidiaries	(9,553)	160,246	103,195
Effects of tax holidays entitled by the PRC subsidiaries on basic income (loss) per Class A and Class B ordinary share (RMB cent per share)	<u>(0.41)</u>	<u>6.35</u>	<u>4.03</u>

Composition of income tax expense

The current and deferred portions of income tax expense included in the consolidated statements of comprehensive income (loss) are as follows:

	For the Years Ended December 31,		
	2020	2021	2022
Current income tax expense	—	149,152	217,856
Deferred income tax benefits	—	(99,044)	(93,854)
Income tax expense	—	50,108	124,002

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, 2021 and 2022 are as follows:

	As of December 31,	
	2021	2022
Deferred tax assets		
Tax losses carried forward	102,239	71,668
Write-down of inventories	10,771	108,229
Property, equipment and software	—	34,905
Share-based compensation	—	30,835
Allowance for doubtful accounts	1,314	1,416
Warranty reserve	2,704	967
Subtotal	117,028	248,020
Less: Valuation allowance	(17,984)	(96,610)
Deferred tax assets	<u>99,044</u>	<u>151,410</u>

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As of December 31, 2021 and 2022, the Company had tax loss carry-forwards of approximately RMB437,187 and RMB373,683 which mainly arose from its offshore subsidiaries and to a less extent from its PRC subsidiaries. Most of the PRC subsidiaries are qualified as HNTE or technology small and medium enterprise (“SMEs”), the carryforwards period for net operating losses under the EIT Law is changed from five years to ten years. The net operating loss carryforwards by the PRC mainland companies will expire in varying amounts between 2030 and 2033. PRC mainland companies tax losses of RMB1,581, RMB17,173, nil and RMB3,804 will expire, if unused, by 2030, 2031, 2032 and 2033, respectively. Other than the expiration, there are no other limitations or restrictions upon the Company’s ability to use these operating loss carryforwards.

Valuation allowance is provided against deferred tax assets when the Company 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 Company 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 Company’s estimate of its future taxable income. If events occur in the future that allow the Company to realize part or all 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, 2021 and 2022, valuation allowances of RMB17,984 and RMB96,610 were provided because it was more likely than not that the Company will not be able to utilize certain tax loss carry-forwards and other deferred tax assets generated by its subsidiaries. If events occur in the future that allow the Company 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,		
	2020	2021	2022
Beginning balance	254,039	304,790	17,984
Additions (decreases) during the year	50,751	(286,806)	78,626
Ending balance	<u>304,790</u>	<u>17,984</u>	<u>96,610</u>

The Company 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, 2021 and 2022, the Company did not have any significant unrecognized uncertain tax positions.

16. Related party transactions

For the years ended December 31, 2020, 2021 and 2022, the related party transactions are as follows:

	For the Years Ended December 31,		
	2020	2021	2022
Transaction amount with related parties			
Disposal of motor vehicles	637	—	—
	<u>637</u>	<u>—</u>	<u>—</u>

As of December 31, 2021 and 2022, there are no related party balances.

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17. Basic and diluted 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 years ended December 31, 2020, 2021 and 2022 as follows:

	For the Years Ended December 31,		
	2020	2021	2022
Basic earnings (loss) per share calculation			
Numerator:			
Net income (loss)	(215,094)	2,000,282	486,357
Denominator:			
Weighted-average ordinary shares outstanding	2,345,703,779	2,521,667,815	2,560,106,403
Basic earnings (loss) per Class A and Class B ordinary share (RMB cent per share)	<u>(9.17)</u>	<u>79.32</u>	<u>19.00</u>
For the Years Ended December 31,			
2020 2021 2022			
Diluted earnings (loss) per share calculation			
Numerator:			
Net income (loss)	(215,094)	2,000,282	486,357
Denominator:			
Weighted-average ordinary shares outstanding	2,345,703,779	2,521,667,815	2,560,106,403
Add: weighted-average RSUs	—	54,489,432	17,785,666
Weighted-average number of shares used in calculating diluted earnings (loss) per Class A and Class B ordinary share	<u>2,345,703,779</u>	<u>2,576,157,247</u>	<u>2,577,892,069</u>
Diluted earnings (loss) per Class A and Class B ordinary share (RMB cent per share)	<u>(9.17)</u>	<u>77.65</u>	<u>18.87</u>

The potentially dilutive securities that have not been included in the calculation of diluted net loss per share as their inclusion would be anti-dilutive are as follows:

	For the Year		
	Ended December 31,		
	2020	2021	2022
Weighted-average RSUs	10,710,636	—	—
Share options	—	114,000,000	114,000,000
Warrants	—	<u>70,833,345</u>	—

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(all amounts in thousands, except share and per share data, or as otherwise noted)

18. Contingencies

On March 4, 2020, a putative class action was filed in the United States District Court of Oregon (the “Federal Action”) against the Company, certain officers and directors of the Company, among others. The complaint alleges that the Form F-1 registration statement, initially filed with the Securities and Exchange Commission on October 28, 2019 (File No. 333-234356), contained material misstatements and omissions in violation of federal securities laws. On March 6, 2020, another putative class action, making substantially similar allegations, was filed in New York County Supreme Court (the “State Action”) against the Company and certain officers and directors of the Company. On June 1, 2020, the Company filed a motion to stay all proceedings in the State Action pending adjudication of the Federal Action, which was granted on July 21, 2020. Subsequently, the Federal Action was transferred to the U.S. District Court for the Southern District of New York (the “Court”) on September 2, 2020. On October 7, 2020, lead plaintiffs in the Federal Action filed an amended complaint asserting claims under Section 11 of the Securities Act and Sections 10(b) and 20(a) of the Exchange Act for that the registration statement failed to disclose three alleged related party transactions. On December 7, 2020, the Company filed a motion to dismiss the amended complaint in the Federal Action. On July 8, 2021, the Court dismissed the first amended complaint but allowed plaintiffs to file a second amended complaint by August 6, 2021. On August 6, 2021, plaintiffs filed a letter motion for leave to file a second amended complaint. On August 27, 2021, the Company filed a letter response to oppose plaintiffs’ August 6, 2021 letter motion and to seek a final judgment dismissing the Federal Action to be entered. On March 31, 2022, plaintiffs’ motion for leave to file a second amended complaint has been denied as futile, and plaintiffs’ claims were dismissed with prejudice, and the Court closed the motion.

On April 15, 2021, a new putative class action was filed in the United States District Court for the Southern District of New York against the Company and certain officers of the Company. The complaint alleges that the Company’s press release issued in February 2021 about increased visibility into revenue and the size and quality of orders the Company was receiving were materially false and misleading. Plaintiff claims that the truth about the Company’s revenue was revealed in April 2021, when the Company announced its latest financial results. On December 14, 2021, the Court so-ordered this stipulation. On February 7, 2022, lead plaintiffs filed an amended complaint asserting the same claims under Sections 10(b) and 20(a) of the Exchange Act against the same set of defendants. The amended complaint alleges the Company’s November 30, 2020 and February 10, 2021 press releases and the April 9, 2021 interview of the Company’s chief executive officer in an article published by Decrypt contained false and misleading statements regarding the pre-sale orders the Company had received and the Company’s ability to secure sufficient chip supply to meet the increasing demand for mining machines. On April 8, 2022, Canaan filed a motion to dismiss the amended complaint, which has been fully briefed as of July 7, 2022. As of the date of this annual report, the Court issued an order granting Canaan’s motion to dismiss the case in its entirety. The Court granted lead plaintiffs leave to further amend their amended complaint, the deadline of which is April 26, 2023.

The management of the Company believes that there are defenses to one or more of the claims asserted in the lawsuits. The management of the Company has engaged counsel with the intention to vigorously defend these lawsuits. At the date of issue of the consolidated financial statements, the Company is unable to predict the outcome of these lawsuits, or reasonably estimate a range of possible losses, if any, given the early stage of these lawsuits. Therefore, no contingent liabilities have been recorded by the Company as of December 31, 2022 in respect of these lawsuits.

Also, 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, 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.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

19. 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 income (loss) from its subsidiaries is reported as "share of income (loss) from subsidiaries" in the condensed financial statements.

The Parent Company is a Cayman Islands company and, therefore, is not subject 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, 2021 and 2022, 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.

For the purpose of the Company's stand-alone financial statements, its investments in subsidiaries were reported using the equity method of accounting. The Company's share of income (loss) from its subsidiaries was reported as a share of income (loss) of subsidiaries in the accompanying parent company only financial statements. Ordinarily, under the equity method, an investor in an equity method investee would cease to recognize its share of the losses of an investee once the carrying value of the investment has been reduced to nil absent an undertaking by the investor to provide continuing support and fund losses. For the purpose of the parent only financial information, the Company has continued to reflect its share, based on its proportionate interest, of the losses of its subsidiaries regardless of the carrying value of the investment even though the Company is not obligated to provide continuing support or fund losses.

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

Condensed Financial Information of the Parent Company

CONDENSED BALANCE SHEETS

	As of December 31,		
	2021	2022	
	RMB	RMB	US\$ (Note 2(e))
ASSETS			
Current assets:			
Cash	30,860	39,573	5,738
Prepayment for repurchase of ordinary shares	—	1,251	181
Total current assets	<u>30,860</u>	<u>40,824</u>	<u>5,919</u>
Non-current assets:			
Investments in and receivables from subsidiaries	3,502,014	4,201,822	609,208
Total assets	<u>3,532,874</u>	<u>4,242,646</u>	<u>615,127</u>
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities:			
Refund from depository bank – current	2,013	2,199	319
Other payable	—	557	81
Non-current liabilities:			
Refund from depository bank – non-current	5,824	4,163	604
Warrant liability	66,347	—	—
Total liabilities	<u>74,184</u>	<u>6,919</u>	<u>1,004</u>
Shareholders' equity:			
Ordinary shares	1	1	—
Subscriptions receivable from shareholders	(1)	(1)	—
Treasury stocks	(231,281)	(380,538)	(55,173)
Additional paid-in capital	2,891,134	3,298,531	478,242
Statutory reserves	97,420	102,586	14,874
Accumulated other comprehensive loss	(101,925)	(4,844)	(702)
Retained earnings	803,342	1,219,992	176,882
Total shareholders' equity	<u>3,458,690</u>	<u>4,235,727</u>	<u>614,123</u>
Total liabilities and shareholders' equity	<u>3,532,874</u>	<u>4,242,646</u>	<u>615,127</u>

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

CONDENSED STATEMENTS OF COMPREHENSIVE LOSS

	For the year ended December 31,			
	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>US\$</u> <u>(Note 2(e))</u>
	<u>RMB</u>	<u>RMB</u>	<u>RMB</u>	
Operating expenses:				
Research and development expenses	(652)	—	—	—
Sales and marketing expenses	(41)	—	—	—
General and administrative expenses	(2,277)	(6,668)	(20,968)	(3,040)
Loss from operations	<u>(2,970)</u>	<u>(6,668)</u>	<u>(20,968)</u>	<u>(3,040)</u>
Interest income	—	1	7	1
Other income, net	2,425	2,037	2,122	308
Change in fair value of warrant liability	—	190,178	24,598	3,566
Share of income (losses) from subsidiaries	(214,549)	2,306,195	416,058	60,323
Net income (loss)	<u>(215,094)</u>	<u>2,491,743</u>	<u>421,817</u>	<u>61,158</u>
Foreign currency translation adjustment, net of nil tax	(24,238)	(22,145)	97,081	14,075
Total comprehensive income (loss)	<u>(239,332)</u>	<u>2,469,598</u>	<u>518,898</u>	<u>75,233</u>

CANAAN INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(all amounts in thousands, except share and per share data, or as otherwise noted)

CONDENSED STATEMENTS OF CASH FLOWS

	For the year ended December 31,			
	2020	2021	2022	US\$ (Note 2(e))
	RMB	RMB	RMB	
Cash flows from operating activities				
Receipt of refund from depository bank	13,285	—	—	—
Other cash used in operating activities	(1)	(6,462)	(21,439)	(3,108)
Net cash provided by (used in) operating activities	<u>13,284</u>	<u>(6,462)</u>	<u>(21,439)</u>	<u>(3,108)</u>
Cash flows from investing activities				
Decrease (increase) in receivables from subsidiaries	28,451	(871,194)	305,529	44,298
Net cash provided by (used in) investing activities	<u>28,451</u>	<u>(871,194)</u>	<u>305,529</u>	<u>44,298</u>
Cash flows from financing activities				
Repurchase of warrants	—	—	(44,282)	(6,420)
Payment for repurchase of ordinary shares	(23,915)	(103,543)	(234,307)	(33,970)
Prepayment under share repurchase agreement	(16,146)	(573)	—	—
Payment for cost of issuance	—	(519)	—	—
Proceeds from issuance of ordinary shares and warrants	—	1,029,455	—	—
Net cash provided by (used in) financing activities	<u>(40,061)</u>	<u>924,820</u>	<u>(278,589)</u>	<u>(40,390)</u>
Net increase in cash	1,674	47,164	5,501	799
Effect of exchange rate changes on cash	(1,541)	(16,451)	3,212	466
Cash, beginning of year	14	147	30,860	4,474
Cash, end of year	<u>147</u>	<u>30,860</u>	<u>39,573</u>	<u>5,739</u>

Canaan Inc.**List of Principal Subsidiaries**

<u>Subsidiaries</u>	<u>Place of Incorporation</u>
Canaan Creative (HK) Holdings Limited	Hong Kong Special Administrative Region
Hangzhou Canaan Intelligence Information Technology Co., Ltd.	Hangzhou, China
Canaan Creative Co., Ltd.	Beijing, China
Langfang Creative Technology Co., Ltd.	Langfang, China
Canaan Convey Co., Ltd.	Beijing, China
Zhejiang Avalon Technology Co., Ltd.	Hangzhou, China
Canaan Bright Sight Co., Ltd.	Beijing, China
Canaan Creative (SH) Co., Ltd.	Shanghai, China
Canaan Creative International PTE. Ltd.	Singapore
Canaan Creative Global Pte. Ltd.	Singapore
Canaan U.S. Inc.	United States

**Certification by the Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Nangeng Zhang, certify that:

1. I have reviewed this annual report on Form 20-F of Canaan Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 19, 2023

By: /s/ Nangeng Zhang
Name: Nangeng Zhang
Chairman and Chief Executive
Title: Officer

**Certification by the Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, James Jin Cheng, certify that:

1. I have reviewed this annual report on Form 20-F of Canaan Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 19, 2023

By: /s/ James Jin Cheng
Name: James Jin Cheng
Title: Chief Financial Officer

**Certification by the Chief Executive Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the annual report of Canaan Inc. (the "Company") on Form 20-F for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Nangeng Zhang, Chairman and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 19, 2023

By: /s/ Nangeng Zhang

Name: Nangeng Zhang
Chairman and Chief Executive

Title: Officer

**Certification by the Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the annual report of Canaan Inc. (the "Company") on Form 20-F for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James Jin Cheng, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 19, 2023

By: /s/ James Jin Cheng

Name: James Jin Cheng

Title: Chief Financial Officer

通商律師事務所

COMMERCE & FINANCE LAW OFFICES

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电邮 Email: beijing@tongshang.com 网址 Web: www.tongshang.com

To : **Canaan Inc.**

28 Ayer Rajah Crescent #06-08, S139959
Singapore

April 19, 2023

Dear Sirs or Madam,

Re: Canaan Inc. (the “Company”)

We, Commerce & Finance Law Offices, consent to the reference to our firm under the captions of “Item 3.D — Risk Factors” in Canaan Inc.’s annual report on Form 20-F for the year ended December 31, 2022, which will be filed with the Securities and Exchange Commission in the month of April 2023.

In giving such consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, or under the Securities Exchange Act of 1934, in each case, as amended, or the regulations promulgated thereunder.

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Yours sincerely,

/s/ Commerce & Finance Law Offices

Commerce & Finance Law Offices

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-238717 and 333-255471) on Form S-8 and (No. 333-255470) on Form F-3 of our reports dated April 19, 2023, with respect to the consolidated financial statements of Canaan Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG Huazhen LLP

Beijing, China
April 19, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No.333-238717 and No. 333-255471) and Form F-3 (No.333-255470) of Canaan Inc. of our report dated April 21, 2021 relating to the financial statements, which appears in this Form 20-F.

/s/ PricewaterhouseCoopers Zhong Tian LLP
Shanghai, People's Republic of China
April 19, 2023
