

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

FORM 20-F

(Mark One)

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

OR

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

For the fiscal year ended December 31, 2022.

OR

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

OR

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

Date of event requiring this shell company report

For the transition period from _____ to _____

Commission file number: 001-34615

JinkoSolar Holding Co., Ltd.
(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Cayman Islands

(Jurisdiction of incorporation or organization)

1 Yingbin Road
Shangrao Economic Development Zone
Jiangxi Province, 334100
People's Republic of China
(86-793) 858-8188

(Address of principal executive offices)

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
American Depositary Shares, each representing four ordinary shares, par value US\$0.00002 per share Ordinary shares, par value US\$0.00002 per share*	JKS	New York Stock Exchange

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

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

None
(Title of Class)

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

None
(Title of Class)

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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.

201,189,189 ordinary shares, excluding 67,668 ADSs representing 270,672 ordinary shares reserved for future grants under our share incentive plans and conversion of our convertible notes and 2,945,840 ordinary shares as treasury stock, 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 definition of “large accelerated filer,” “accelerated filer” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐

Emerging growth company ☐

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

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

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

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

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

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

U.S. GAAP ☒

International Financial Reporting Standards as issued
by the International Accounting Standards Board ☐

Other ☐

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

Item 17 ☐ Item 18 ☐

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

Yes ☐ No ☒

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

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

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CONVENTIONS THAT APPLY TO THIS ANNUAL REPORT

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

- “Company” refers to JinkoSolar Holding Co., Ltd., a Cayman Islands holding company;
- “we,” “us,” “our company,” “our” or “JinkoSolar” refers to JinkoSolar Holding Co., Ltd. and its consolidated subsidiaries; in the context of describing activities, “we,” “us,” “our company,” “our” or “JinkoSolar” refers to the consolidated subsidiaries of JinkoSolar Holding Co., Ltd.;
- “2009 Long Term Incentive Plan” refers to the 2009 Long Term Incentive Plan adopted on July 10, 2009, which was subsequently amended and restated;
- “2014 Equity Incentive Plan” refers to the 2014 Equity Incentive Plan adopted on August 18, 2014;
- “2020”, “2021” and “2022” refers to our fiscal years ended December 31, 2020, 2021 and 2022, respectively;
- “2021 Equity Incentive Plan” refers to the 2021 Equity Incentive Plan adopted on March 5, 2021;
- “2022 Equity Incentive Plan” refers to the 2022 Equity Incentive Plan adopted on February 14, 2022;
- “2023 Equity Incentive Plan” refers to the 2023 Equity Incentive Plan adopted on January 5, 2023;
- “ADSs” refers to American depositary shares issued by JinkoSolar Holding Co., Ltd., and “ADRs” refers to the American depositary receipts evidencing the ADSs;
- “CE” refers to CE certification, a verification of electromagnetic compatibility (EMC) compliance issued by SGS Taiwan Ltd. certifying compliance with the principal protection requirement of Directive 2004/108/EC of the European Union and EN 61000-6-3:2001+A11:2004 and EN 61000-6-1:2001 standards;
- “CQC” refers to the certificate issued by China Quality Certification Centre certifying that our solar modules comply with IEC 61215:2005 and IEC 617302:2004 standards;
- “DG projects” refers to distributed generation solar power projects, including ground-mounted distributed generation projects and rooftop distributed generation projects;
- “EPC” refers to engineering, procurement and construction;
- “Euro,” “EUR” or “€” refers to the legal currency of the European Union;
- “FIT” refers to feed-in tariff(s), the government guaranteed and subsidized electricity sale price at which solar power projects can sell to the national power grids. FIT in China is set by the central government consisting of the applicable national government subsidies paid from the Renewable Energy Development Fund, as well as the desulfurized coal benchmark electricity price paid by State Grid;
- “ground-mounted projects” refers to solar power projects built on the ground, consisting of ground-mounted DG projects and utility-scale projects;
- “ground-mounted DG projects” refers to small-scale ground-mounted projects with capacity less than or equal to 20 MW and 35 kV or lower grid connection voltage grade (except in the northeastern regions, where connection voltage must be 66 kV or lower) and with a substantial portion of the electricity generated to be consumed within the substation area of the grid connection points;
- “Haining Jinko” refers to Jinko Power Technology (Haining) Co., Ltd, one of our majority-owned subsidiaries in the PRC;
- “JET” refers to the certificate issued by Japan Electrical Safety & Environment Technology Laboratories certifying that our modules comply with IEC 61215:2005, IEC 61730-1:2004 and IEC 61730-2:2004 standards;

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- “Jiangxi Desun” refers to Jiangxi Desun Energy Co., Ltd., an entity in which our founders and substantial shareholders, Xiande Li, Kangping Chen and Xianhua Li, each holds more than 10%, and collectively hold 73%, of the equity interest;
- “Jiangxi Jinko” refers to Jinko Solar Co., Ltd., our majority-owned principal operating subsidiary incorporated in the PRC, in which we own approximately 58.62% equity interest;
- “Jiangxi Materials” refers to Jiangxi Photovoltaic Materials Co., Ltd., our majority-owned operating subsidiary incorporated in the PRC by Jiangxi Jinko on December 1, 2010;
- “JinkoPower” refers to Jinko Power Technology Co., Ltd., formerly known as Jiangxi JinkoSolar Engineering Co., Ltd., previously one of our indirect subsidiaries, and its subsidiaries;
- “JinkoSolar Power” refers to JinkoSolar Power Engineering Group Limited;
- “JIS Q 8901” refers to the certificate for the Japanese market from TÜV that demonstrates that a company’s management system ensures the highest standards of reliability in their products;
- “JPY” refers to Japanese Yen;
- “kV” refers to kilovolts;
- “Leshan Jinko” refers to Jinko Solar (Leshan) Co., Ltd., our majority-owned principal operating subsidiary incorporated in the PRC;
- “local grid companies” refers to the subsidiaries of the State Grid in China;
- “long-term supply contracts” refers to our polysilicon supply contracts with terms of one year or above;
- “MCS” refers to MCS certificate of factory production control issued by British Approvals Board for Telecommunications certifying that the production management system of our certain types of solar panels complies with MCS005 Issue 2.3 and MCS010 Issue 1.5 standards;
- “NYSE” or “New York Stock Exchange” refers to the New York Stock Exchange Inc.;
- “OEM” refers to an original equipment manufacturer who manufactures products or components that are purchased by another company and retailed under that purchasing company’s brand name;
- “PRC” or “China” refers to the People’s Republic of China, excluding, for purposes of this annual report, Taiwan, Hong Kong and Macau;
- “PV” refers to photovoltaic;
- “RMB” or “Renminbi” refers to the legal currency of China;
- “shares” or “ordinary shares” refers to our ordinary shares, par value US\$0.00002 per share;
- “STAR Market” refer to Shanghai Stock Exchange’s Sci-Tech Innovation Board;
- “State Grid” refers to State Grid Corporation of China and the local grid companies;
- “TÜV” refers to TÜV certificates, issued by TÜV Rheinland Product Safety GmbH certifying that certain types of our solar modules comply with IEC 61215:2005, EN 61215:2005, IEC 61730-1:2004, IEC 61730-2:2004, EN 61730-1:2007 and EN 61730-2:2007 standards;
- “UL” refers to the certificate issued by Underwriters Laboratories Inc., to certify that certain types of our solar modules comply with its selected applicable standards;
- “US\$,” “dollars” or “U.S. dollars” refers to the legal currency of the United States;

- “utility-scale projects” refers to ground-mounted projects that are not ground-mounted DG projects;
- “watt” or “W” refers to the measurement of electrical power, where “kilowatt” or “kW” means one thousand watts, “megawatts” or “MW” means one million watts and “gigawatt” or “GW” means one billion watts;
- “Xinjiang Jinko” refers to Xinjiang Jinko Solar Co., Ltd., one of our majority-owned subsidiaries in the PRC;
- “Yuhuan Jinko” refers to Yuhuan Jinko Solar Co., Ltd., one of our majority-owned subsidiaries in the PRC; and
- “Zhejiang Jinko” refers to Zhejiang Jinko Solar Co., Ltd., formerly Zhejiang Sun Valley Energy Application Technology Co., Ltd., a solar cell supplier incorporated in the PRC, one of our majority-owned subsidiaries.

Names of certain companies provided in this annual report are translated or transliterated from their original Chinese legal names.

Discrepancies in any table between the amounts identified as total amounts and the sum of the amounts listed therein are due to rounding.

This annual report on Form 20-F includes our audited consolidated financial statements for 2020, 2021 and 2022 and as of December 31, 2021 and 2022.

Exchange Rate Information

We publish our consolidated financial statements in Renminbi. The conversion of Renminbi into U.S. dollars in this annual report is solely for the convenience of readers. The exchange rate refers to the exchange rate as set forth in the H.10 statistical release of the Federal Reserve Board. Unless otherwise noted, all 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 noon buying rate in effect as of December 30, 2022. The Renminbi is not freely convertible into foreign currency. We make no representation that any Renminbi or U.S. dollar amounts could have been, or could be, converted into U.S. dollars or Renminbi, as the case may be, at any particular rate, the rates stated below, or at all. On April 21, 2023, the exchange rate, as set forth in the H.10 statistical release of the Federal Reserve Board, was RMB6.8920 to US\$1.00.

Safe Harbor

We make “forward-looking statements” throughout this annual report. Whenever you read a statement that is not simply a statement of historical fact (such as when we describe what we “believe,” “expect” or “anticipate” will occur, what “will” or “could” happen, and other similar statements), you must remember that our expectations may not be correct, even though we believe that they are reasonable. We do not guarantee that the transactions and events described in this annual report will happen as described or that they will happen at all. You should read this annual report completely and with the understanding that actual future results may be materially different from what we expect. The forward-looking statements made in this annual report relate only to events as of the date on which the statements are made. We undertake no obligation, beyond that required by law, to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made, even though our situation will change in the future.

Whether actual results will conform to our expectations and predictions is subject to a number of risks and uncertainties, many of which are beyond our control, and reflect future business decisions that are subject to change. Some of the assumptions, future results and levels of performance expressed or implied in the forward-looking statements we make inevitably will not materialize, and unanticipated events may occur which will affect our results. “Item 3. Key Information—D. Risk Factors” describes the principal contingencies and uncertainties to which we believe we are subject. You should not place undue reliance on these forward-looking statements.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not Applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Applicable.

ITEM 3. KEY INFORMATION

Our Holding Company Structure

The Company is not a Chinese operating company but a Cayman Islands holding company with operations primarily conducted by its subsidiaries based in China. Investors in the ADSs are purchasing equity interest in the Cayman Islands holding company. See “—D. Risk Factors—Risks Related to Our Business and Industry—We rely principally on dividends and other distributions on equity paid by our principal operating subsidiary, and limitations on their ability to pay dividends to us could have a material adverse effect on our business and results of operations.” In addition, we face various legal and operational risks and uncertainties related to doing business in mainland China. A significant part of our business operations in China are conducted through our subsidiaries in the PRC, and we and our subsidiaries are subject to complex and evolving PRC laws and regulations. For example, we and our subsidiaries in the PRC face risks associated with regulatory approvals on offshore offerings, which may impact our ability to conduct certain businesses, accept foreign investments, or list on a United States or other foreign exchange. These risks could result in a material adverse change in our operations and the value of the ADSs, significantly limit or completely hinder our ability to offer or continue to offer securities to investors, or cause such securities to significantly decline in value. In addition, we are subject to risks arising from China’s legal system, including the uncertainty in the interpretation and the enforcement of the PRC laws and regulations. See “—Implications of Being a Foreign Private Issuer and a China-based Company” and “—The Holding Foreign Companies Accountable Act.” Recently, Chinese regulators have announced regulatory actions targeting certain sectors of China’s economy, including the for-profit education sector and technology platforms that have a quantitatively significant number of users located in China. Although the solar energy industry does not appear to be the focus of these regulatory actions, we cannot guarantee that the Chinese government will not in the future take regulatory actions that materially and adversely affect the business environment and financial markets in China as they relate to us, our ability to operate our business, our liquidity and our access to capital. For a detailed description of risks related to doing business in China, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China.”

The PRC government’s significant authority in regulating our operations and its oversight and control over offerings conducted overseas by, and foreign investment in, China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors. Recently, the PRC government initiated a series of regulatory actions and statements to regulate business operations in China with little advance notice, including cracking down on illegal activities in the securities market, enhancing supervision over China-based companies listed overseas, adopting new measures to extend the scope of cybersecurity reviews, adopting new laws and regulations related to data security, expanding the efforts in anti-monopoly enforcement, and adopting new rules to request China-based companies to fulfill relevant filing procedure and report relevant information to the CSRC for overseas offerings. While we do not believe that these regulatory changes would have any material impact on us, we cannot assure you that the regulators will agree with us or will not in the future adopt regulations that restrict our business operations or access to capital. Further, implementation of industry-wide regulations, including data security or anti-monopoly related regulations, in this nature may cause the value of such securities to significantly decline. For more details, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China— PRC regulations relating to overseas investment by PRC residents may restrict our overseas and cross-border investment activities and adversely affect the implementation of our strategy as well as our business and prospects.” and “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The approval, filing or other requirements of the CSRC or other PRC regulatory authorities is required under PRC law in connection with our future issuance of securities overseas, which could impose uncertainty on our capital raising activities.”

Risks and uncertainties arising from the legal system in China, including risks and uncertainties regarding the enforcement of laws and quickly evolving rules and regulations in China, could result in a material adverse change in our operations and the value of the ADSs. For more details, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Uncertainties and limitations with respect to the PRC legal system, including the interpretation and enforcement of PRC laws and regulations, could have a material adverse effect on us.”



Implications of Being a Foreign Private Issuer and a China-based Company

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 of the securities rules and regulations in the United States that are applicable to U.S. domestic issuers. Moreover, the information we are required to file with or furnish to the Securities and Exchange Commission, or SEC, will be less extensive and less timely compared to that required to be filed with the SEC by U.S. domestic issuers. In addition, as a company incorporated in the Cayman Islands, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from the NYSE listing standards. These practices may afford less protection to shareholders than they would enjoy if we complied fully with the NYSE listing standards.

Our operations in China are governed by PRC laws and regulations. As of the date of this annual report, our PRC subsidiaries have obtained the requisite licenses and permits from the PRC government authorities that are material for their business operations in China. We are exposed to legal and operational risks associated with being based in and having the majority of our operations in China. We are subject to risks arising from China's legal system, including uncertainties in the interpretation and the enforcement of the PRC laws and regulations. In addition, rules and regulations in China can change quickly. Recent regulatory actions and statements made by Chinese government, such as those related to data security or anti-monopoly concerns, may impact our ability to conduct business, accept foreign investments, or continue to list on a U.S. or other foreign exchange. Although the solar power industry does not appear to be the focus of these regulatory actions, we cannot guarantee that the Chinese government will not in the future take regulatory actions that materially and adversely affect the business environment and financial markets in China as they relate to us, our ability to operate our business, our liquidity and our access to capital.

The PRC government may also intervene or influence our operations at any time, or may exert more control over offerings conducted overseas and/or foreign investment in China-based issuers, including us, at any time, substantial intervention and influence over the manner of our operations, which could result in a material change in our operations or the value of the ADSs. Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas or foreign investment in China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of such securities to significantly decline or be worthless. Recently, the PRC government initiated a series of regulatory actions and statements to regulate business operations in China with little advance notice, including cracking down on illegal activities in the securities market, enhancing supervision over China-based companies listed overseas, adopting new measures to extend the scope of cybersecurity reviews, adopting new laws and regulations related to data security, expanding the efforts in anti-monopoly enforcement, and adopting new rules to request China-based companies to fulfill relevant filing procedure and report relevant information to the CSRC for overseas offerings. While we do not believe that these regulatory changes would have any material impact on us, we cannot assure you that the regulators will agree with us or will not in the future adopt regulations that restrict our business operations or access to capital.

With the trend of strengthening anti-monopoly supervision around the world, the PRC government issued a series of anti-monopoly laws and regulations in 2021, paying more attention to corporate compliance. On February 7, 2021, the Anti-monopoly Commission of the State Council of the PRC promulgated the Guidelines for Anti-monopoly in the field of Platform Economy. On November 15, 2021, the State Administration for Market Regulation of the PRC promulgated the Guidelines for the Overseas Anti-monopoly Compliance of Enterprises. We believe that these regulations currently have little impact on us, but we cannot guarantee that regulators will agree with us or that these regulations will not affect our business operations in the future.

Cybersecurity and data privacy and security issues are subject to increasing legislative and regulatory focus in China. For example, the State Council of the PRC promulgated the Regulation on the Protection of the Security of Critical Information Infrastructure on July 30, 2021, which took effect on September 1, 2021. This regulation requires, among others, certain competent authorities to identify critical information infrastructures. In November 2021, the Cybersecurity Administration of China, or CAC, promulgated the Draft Administrative Regulations on Cyber Data Security, or the Draft Cyber Data Security Regulations, for public comment. These draft regulations set forth different scenarios under which data processors would be required to apply for cybersecurity review. However, there is no definite timetable as to when these draft regulations will be enacted. In addition, the CAC and a number of other departments under the State Council promulgated the Measures for Cybersecurity Review on December 28, 2021, which became effective on February 15, 2022. According to this regulation, critical information infrastructure operators purchasing network products and services and data processors carrying out data processing activities, which affect or may affect national security, are required to conduct cybersecurity review. On July 7, 2022, the CAC issued the Measures for the Security Assessment of Data Cross-border Transfer, or the Security Assessment Measures, which became effective on September 1, 2022. In accordance with the Security Assessment Measures, a data processor should apply to the CAC for a security assessment under certain circumstances. We believe that these regulations have little impact on us, because we are neither a critical information infrastructure operator nor a data processor within the meanings of these regulations.

On September 1, 2021, the PRC Data Security Law became effective, which imposes data security and privacy obligations on entities and individuals conducting data-related activities, and introduces a data classification and hierarchical protection system. In addition, the Standing Committee of the PRC National People's Congress promulgated the Personal Information Protection Law (the "PIPL") on August 20, 2021, which took effect on November 1, 2021. The PIPL further emphasizes processors' obligations and responsibilities for personal information protection and sets out the basic rules for processing personal information and the rules for cross-border transfer of personal information. We do not expect to have significant data security or privacy issues given that the nature of our business does not involve collecting and use of vast personal data. Under the current PRC laws, regulations and regulatory rules, as of the date of this annual report, we and our PRC subsidiaries, (i) are not required to obtain permissions from the China Securities Regulatory Commission, or the CSRC, (ii) are not required to go through cybersecurity review by the CAC, and (iii) have not received or were denied such permissions by the CSRC or the CAC. While we do not believe that these regulatory changes would have any material impact on us, we cannot assure you that the regulators will agree with us or will not in the future adopt regulations that restrict our business operations or access to capital.

On July 6, 2021, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council jointly issued Opinions on Strictly Cracking Down Illegal Securities Activities in Accordance with the Law. These opinions emphasized the need to strengthen the administration over illegal securities activities and the supervision on overseas listings by China-based companies. These opinions proposed to take effective measures, such as promoting the construction of relevant regulatory systems, to deal with the risks and incidents facing China-based overseas-listed companies and the demand for cybersecurity and data privacy protection. These opinions and any related implementation rules to be enacted may subject us to additional compliance requirement. On February 17, 2023, the CSRC released a set of regulations consisting of six documents, including the Trial Administrative Measures of Overseas Securities Offering and Listing by Domestic Companies and five supporting guidelines, collectively, the Overseas Listing Filing Rules, which came into effective on March 31, 2023. According to the Overseas Listing Filing Rules, China-based companies that have already offered shares or been listed overseas prior to the implementation of such new regulations qualify as "Stock Enterprises", and Stock Enterprises are not required to apply for the filing immediately until a subsequent re-financing event occurs. However, the Overseas Listing Filing Rules, among others, require the issuer or its main operational entity in the PRC to file with the CSRC for its follow-on securities offerings in the same offshore market within three business days after the completion of such offerings, and file with the CSRC for its offerings or listing in offshore stock market other than the stock market of its initial public offering or listing within three business days after the submission of offering application outside mainland China.

We had been listed on the New York Stock Exchange prior to the implementation of the Overseas Listing Filing Rules. Therefore, we are qualified as a "Stock Enterprise" and are not required to apply for the filing immediately until a subsequent re-financing event occurs according to the Overseas Listing Filing Rules. However, we are required to file with the CSRC for its follow-on securities offerings in the same offshore market within three business days after the completion of such offerings, and file with the CSRC for our offerings or listing in offshore stock market other than the stock market of our initial public offering or listing within three business days after the submission of offering application outside mainland China. Failure to comply with the filing requirements for any offering, listing or any other capital raising activities, may result in administrative penalties, such as order to rectify, warnings, fines and other penalties, on the companies, the controlling shareholders, the actual controllers, the person directly in charge and other directly liable persons. As of the date of this annual report, we have not received any inquiry, notice, warning, sanctions or regulatory objection from the CSRC. Given the uncertainties surrounding the CSRC filing requirements at this stage, we cannot assure you that we will be able to complete the filings and fully comply with the relevant new rules on a timely basis, or at all, if we conduct listing in other offshore stock markets or follow-on offerings, issuance of convertible corporate bonds, exchangeable bonds, and other equivalent offering activities in the future.

Since these regulatory actions are relatively new, it is uncertain how soon legislative or administrative regulation making bodies will respond and what existing or new laws or regulations or detailed implementations and interpretations will be modified or promulgated, if any, or the potential impact such modified or new laws and regulations will have on our daily business operation, or our ability to accept foreign investments and listing on a U.S. or other foreign exchanges. PRC laws and their interpretations and enforcement continue to develop and are subject to change, and the PRC government may adopt other rules and restrictions in the future. Uncertainties in the PRC legal system and the interpretation and enforcement of PRC laws and regulations could limit the legal protection available to you and us, hinder our ability to continue to offer the ADSs, result in a material adverse effect on our business operations, and damage our reputation, which might further cause the ADSs to significantly decline in value or become worthless. See "—D. Risk Factors—Risks Related to Doing Business in China—Recent regulatory developments in China may subject us to additional regulatory review and disclosure requirements, expose us to government interference, or otherwise restrict or completely hinder our ability to offer securities and raise capital outside China, which could adversely affect our business operations and cause the value of our securities to significantly decline or become worthless."

The Holding Foreign Companies Accountable Act

Pursuant to the Holding Foreign Companies Accountable Act, or the HFCAA, if the SEC determines that we 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, the SEC will prohibit our shares or the ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the United States. 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 or Hong Kong, including our auditor. On May 26, 2022, the SEC conclusively listed us as a “Commission-Identified Issuer” under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB announced its determination that it has been able to inspect and investigate audit firms in mainland China and Hong Kong completely for purposes of the HFCAA, and the PCAOB vacated its December 16, 2021 determinations. However, the PCAOB stated that should PRC authorities obstruct the PCAOB’s ability to inspect or investigate completely in any way and at any point in the future, the PCAOB Board will act immediately to consider the need to issue new determinations consistent with the HFCAA. 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 continue to 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. There can be no assurance that we would not be identified as a “Commission-Identified Issuer” for any future fiscal year, and if we were so identified for two consecutive years, we would become subject to the prohibition on trading under the HFCAA.

While we currently do not expect the HFCAA to prevent us from maintaining the trading of the ADSs in the U.S., uncertainties exist with respect to future determinations of the PCAOB in this respect and any further legislative or regulatory actions to be taken by the U.S. or Chinese governments that could affect our listing status in the U.S. If the 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. Such a prohibition would substantially impair your ability to sell or purchase the ADSs when you wish to do so, and the risk and uncertainty associated with delisting would have a negative impact on the price of the ADSs, and materially and adversely affect the value of your investment. 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. For a detailed description of risks related to the HFCAA, see “—D. Risk Factors—Risks Relating to Doing Business in China—The ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.”

Cash Flows through Our Organization

The cash transfers within our organization are generally made in the following manners: (i) the Company transfers cash to its subsidiaries by way of providing loans, making capital contributions and providing operating cash, and (ii) the Company’s subsidiaries transfer cash to the Company by way of repayment of loans and repayment of operating cash due to the Company. Other than cash transfers, no transfer of other assets has occurred between the Company and its subsidiaries. The following table presents cash transfers between the Company and its subsidiaries for 2020, 2021 and 2022:

	2020	2021	2022
	(RMB in thousands)		
Cash transfers from the Company to its subsidiaries			
- loans to subsidiaries	—	1,262,124	289,620
- providing operating cash to subsidiaries	65,681	—	—
Cash transfers from subsidiaries to the Company			
- repayment of operating cash due to Company	—	5,971	20,595
- repayment of loans due to Company	—	—	735,673

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For 2020, 2021 and 2022 and up to the date of this annual report, the Company's subsidiaries did not make any dividend or distribution to the Company. Pursuant to the PRC Enterprise Income Tax Law and Implementation Regulations for the Corporate Income Tax Law (the "CIT Law"), a withholding tax rate of 10% would apply to any dividends paid by a PRC "resident enterprise" to a foreign enterprise investor, unless such non-resident enterprise's jurisdiction of incorporation has a tax treaty with China that provides for a reduced rate of withholding tax and such non-resident enterprise is the beneficial owner of the dividends. The Cayman Islands, where the holding company is incorporated, does not have such a tax treaty with China. The CIT Law provides that PRC resident enterprises are generally subject to the uniform 25% enterprise income tax rate on their worldwide income. Therefore, if we are treated as a PRC resident enterprise, we will be subject to PRC income tax on our worldwide income at the 25% uniform tax rate, which could have an impact on our effective tax rate and an adverse effect on our net income and results of operations, although we would be exempted from enterprise income tax on dividends distributed from our PRC subsidiaries to us, since such income received by PRC resident enterprise is tax exempted under the CIT Law.

In addition, we have not made any dividend or distribution to any U.S. investor as of the date of this annual report. As an offshore holding company, we may rely upon dividends paid to us by our subsidiaries in the PRC to pay dividends and to finance any debt we may incur. If our subsidiaries or any newly formed subsidiaries incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our subsidiaries are permitted to pay dividends to us only out of their accumulated profits, if any, as determined in accordance with PRC accounting standards and regulations. Under PRC laws and regulations, each of our Chinese subsidiaries are required to set aside a portion of their net profits each year to fund a statutory surplus reserve which are no less than 10% of their net profits each year until such reserve reaches 50% of its registered capital. This reserve is not distributable as dividends. As a result, our Chinese subsidiaries are restricted in their ability to transfer a portion of its net assets to us in the form of dividends, loans or advances. As an offshore holding company, we are permitted under PRC laws and regulations to provide funding from the proceeds of our offshore fund-raising activities to our subsidiaries in China only through loans or capital contributions, subject to the satisfaction of the applicable government registration and approval requirements. Before providing loans to our PRC subsidiaries, we will be required to make filings about details of the loans with the State Administration of Foreign Exchange of the PRC (the "SAFE") in accordance with relevant PRC laws and regulations. Our PRC subsidiaries that receive the loans are only allowed to use the loans for the purposes set forth in these laws and regulations. Under regulations of the SAFE, Renminbi is not convertible into foreign currencies for capital account items, such as loans, repatriation of investments and investments outside of China, unless the prior approval of the SAFE is obtained and prior registration with the SAFE is made. See "Item 4. Information on the Company—B. Business Overview—Regulation—Taxation" for more details.

- A. [Reserved]
- B. Capitalization and Indebtedness
Not Applicable.
- C. Reasons for the Offer and Use of Proceeds
Not Applicable.
- D. Risk Factors

Our business, financial condition and results of operations are subject to various changing business, competitive, economic, political and social conditions in China and worldwide. In addition to the factors discussed elsewhere in this annual report, the following are some of the important factors that could adversely affect our operating results, financial condition and business prospects, and cause our actual results to differ materially from those projected in any forward-looking statements.

Summary of Risk Factors

- Our future growth and profitability depend on the demand for and the prices of solar power products and the development of photovoltaic technologies.
- The reduction, modification, delay or elimination of government subsidies and other economic incentives in solar energy industry may reduce the profitability of our business and materially adversely affect our business.
- We require a significant amount of cash to fund our operations and future business developments. If we cannot obtain additional funding on terms satisfactory to us when we need it, our growth prospects and future profitability may be materially and adversely affected.



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- The oversupply of solar cells and modules in the solar industry may cause substantial downward pressure on the prices of our products and reduce our revenue and earnings.
- We face risks associated with the manufacturing, marketing, distribution and sale of our products internationally and the construction and operation of our overseas manufacturing facilities, and if we are unable to effectively manage these risks, our business and operations abroad may be adversely affected and our ability to maintain, develop and expand our business abroad may be restricted.
- We are subject to anti-dumping and countervailing duties imposed by the U.S. government. We are also subject to safeguard investigation and other foreign trade investigations initiated by the U.S. government and anti-dumping investigation and safeguard investigations initiated by governments in our other markets.
- Volatility in the prices of silicon raw materials makes our procurement planning challenging and could have a material adverse effect on our results of operations and financial condition.
- We may not be able to obtain sufficient raw materials in a timely manner or on commercially reasonable terms, which could have a material adverse effect on our results of operations and financial condition.
- The loss of, or a significant reduction in orders from, any of our customers could significantly reduce our revenue and harm our results of operations.
- We manufacture a majority of our products in several provinces in China, which exposes us to various risks relating to long-distance transportation of our silicon wafers and solar cells in the manufacturing process.
- Prepayment arrangements to our suppliers for the procurement of silicon raw materials expose us to the credit risks of such suppliers and may also significantly increase our costs and expenses, which could in turn have a material adverse effect on our financial condition, results of operations and liquidity.
- Decreases in the price of solar power products, including solar modules, may result in additional provisions for inventory losses.
- Shortage or disruption of electricity supply may adversely affect our business.
- Our long-term investment which accounted for using fair value option is subject to uncertainties in accounting estimates. Fluctuations in the changes in fair value of these assets would affect our financial results.
- Our substantial indebtedness could adversely affect our business, financial condition and results of operations.
- Although we completed the STAR Listing, we may not achieve the results contemplated by our business strategy (including with respect to use of proceeds from that offering) and therefore the price of the ADSs may not increase, or may even drop.
- Jiangxi Jinko's status as a publicly traded company that is controlled, but less than wholly owned, by our company could have an adverse effect on us.
- It is difficult to predict the effect of the STAR Listing on the market price of the ADSs.
- Our founders collectively have significant influence over our management and their interests may not be aligned with our interests or the interests of our other shareholders.
- We face risks related to health epidemics and other outbreaks. In particular, we were, and could continue to be, adversely affected by the global outbreak of COVID-19.
- We may fail to comply with laws and regulations regarding PV production in China.
- The PCAOB had historically been unable to inspect our auditor in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditor in the past has deprived our investors with the benefits of such inspections.

- The ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.
- Adverse changes in political and economic policies of the PRC government could have a material adverse effect on the overall economic growth of the PRC, which could reduce the demand for our products and materially adversely affect our competitive position.
- Uncertainties and limitations with respect to the PRC legal system, including the interpretation and enforcement of PRC laws and regulations, could have a material adverse effect on us.
- Recent regulatory developments in China may subject us to additional regulatory review and disclosure requirements, expose us to government interference, or otherwise restrict or completely hinder our ability to offer securities and raise capital outside China, which could adversely affect our business operations and cause the value of our securities to significantly decline or become worthless.
- The approval, filing or other requirements of the CSRC or other PRC regulatory authorities is required under PRC law in connection with our future issuance of securities overseas, which could impose uncertainty on our capital raising activities.
- Conversion of the convertible notes we offered may dilute the ownership interest of existing shareholders, including holders who had previously converted their convertible notes.
- You may not receive dividends or other distributions on our ordinary shares and you may not receive any value for them, if it is illegal or impractical to make them available to you.
- Holders of ADSs have fewer rights than shareholders and must act through the depositary to exercise those rights.
- You may be subject to limitations on transfers of your ADSs.

Risks Related to Our Business and Industry

Our future growth and profitability depend on the demand for and the prices of solar power products and the development of photovoltaic technologies.

The rate and extent of market acceptance for solar power depends on the availability of government subsidies and the cost-effectiveness, performance and reliability of solar power relative to conventional and other renewable energy sources. Changes in government policies towards solar power and advancements in PV, technologies could significantly affect the demand for solar power products.

Demand for solar power products is also affected by macroeconomic factors, such as energy supply, demand and prices, as well as regulations and policies governing renewable energies and related industries. For example, in June 2016, the FIT in China for utility-scale projects was significantly reduced. As a result, subsequent to a strong demand in the first half of 2016, the domestic market was almost frozen and the competition in the global market also intensified in the second half of 2016. In 2022, the energy intensity exacerbates the supply shortage and rising price of silicon materials in the industry, which affected the demand and price of solar modules. The current international political environment, including existing and potential changes to United States and China trade and tariffs policies, have resulted in uncertainty surrounding the future of the global economy. Due to the transition to renewable energy in most regions of the world, the increase in electricity prices, financing support and other favorable policies, clients are more willing to accept higher prices of solar modules. Consequently, the average selling price of our solar modules, which represented 96.5% of our total revenue in 2022, increased from 2021 to 2022.

However, any reduction in the price of solar modules will have a negative impact on our business and results of operations, including our margins. As a result, we may not continue to be profitable on a quarterly or annual basis. In addition, if demand for solar power products weakens in the future, our business and results of operations may be materially and adversely affected.

The reduction, modification, delay or elimination of government subsidies and other economic incentives in solar energy industry may reduce the profitability of our business and materially adversely affect our business.

We believe that market demand for solar power and solar power products in the near term will continue to substantially depend on the availability of government incentives because the cost of solar energy currently exceeds, and we believe will continue to exceed in the near term, the cost of conventional fossil fuel energy and certain non-solar renewable energy, particularly in light of the low level of oil prices in recent years. Examples of government sponsored financial incentives to promote solar energy include subsidies from the central and local governments, preferential tax rates and other incentives. The availability and size of such subsidies and incentives depend, to a large extent, on political and policy developments relating to environmental concerns and other macro-economic factors. Moreover, government incentive programs are expected to gradually decrease in scope or be discontinued as solar power technology improves and becomes more affordable relative to other types of energy. Negative public or community response to solar energy projects could adversely affect the government support and approval of our solar energy business. Adverse changes in government regulations and policies relating to solar energy industry and their implementation, especially those relating to economic subsidies and incentives, could significantly reduce the profitability of our business and materially adversely affect the state of the industry.

We received government grants totaling RMB192.0 million, RMB465.7 million and RMB1.09 billion (US\$158.0 million) for 2020, 2021 and 2022, respectively, which included government grants for our production scale expansion, technology upgrades and export market development. We cannot assure you that we will continue to receive government grants and subsidies in future periods at a similar level or at all.

As a substantial part of our operations are in the PRC, the policies and regulations adopted by the PRC government towards the solar energy industry are important to the continuing success of our business. Although there has been regulatory support for solar power generation such as subsidies, preferential tax treatment and other economic incentives in recent years, future government policies may not be as supportive. The PRC central government may reduce or eliminate existing incentive programs for economic, political, financial or other reasons. In addition, the provincial or local governments may delay the implementation or fail to fully implement central government regulations, policies or initiatives. Until the solar energy industry becomes commercially profitable without subsidies, a significant reduction in the scope or the discontinuation of government incentive programs in the PRC or other jurisdictions could materially and adversely affect market demand for our products and negatively impact our revenue and profitability.

Besides the PRC, various foreign governments have used policy initiatives to encourage or accelerate the development and adoption of solar power and other renewable energy sources, including certain countries in Europe, notably Italy, Germany, France, Belgium and Spain; certain countries in Asia, including Japan, India and South Korea; countries in North America, such as the United States and Canada; as well as Australia. Examples of government-sponsored financial incentives to promote solar power include capital cost rebates, FIT, tax credits, net metering and other incentives to end-users, distributors, project developers, system integrators and manufacturers of solar power products.

Governments may reduce or eliminate existing incentive programs for political, financial or other reasons, which will be difficult for us to predict. Reductions in FIT programs may result in a significant fall in the price of and demand for solar power and solar power products. For example, subsidies have been reduced or eliminated in some countries such as China, Germany, Italy, Spain and Canada. In May 2018, the National Development and Reform Commission of China (the “NDRC”), the Ministry of Finance and the National Energy Administration in China (the “NEA”) issued a joint notice temporarily halting subsidies for utility-scale solar projects, slashing the quota on distributed solar projects which are eligible for subsidies in 2018 and greatly reducing FIT. The German market represents a major portion of the European solar market for ground-mounted systems and a stable residential and commercial rooftop market. The first subsidy-free grid parity projects of the industry were connected to the grid in 2020, which act as a driver for the additional market growth. Starting from 2011, major export markets for solar power and solar power products such as Japan, Germany, Italy, Spain and the United Kingdom continued to reduce their FIT as well as other incentive measures. For example, from 2012 to 2022, the Japanese government cut down its FIT from JPY40 to JPY17 for projects below 10 KW, from JPY42 to JPY11 for certain projects of 10 KW to 50 KW, and to JPY10 for projects above 50 KW. In 2023, the Japanese government further cut down its FIT to JPY16 for projects below 10 KW and to JPY10 for certain projects of 10 KW or above.

In 2022, we generated 58.1% of our total revenue from overseas markets, and North America, Asia Pacific (except China which includes Hong Kong and Taiwan) and Europe represented 4.5%, 13.6% and 23.6% of our total revenue, respectively. As a result, any significant reduction in the scope or discontinuation of government incentive programs in the overseas markets, especially where our major customers are located, could cause demand for our products and our revenue to decline and have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, the announcement of a significant reduction in incentives in any major market may have an adverse effect on the trading price of the ADSs.

We require a significant amount of cash to fund our operations and future business developments. If we cannot obtain additional funding on terms satisfactory to us when we need it, our growth prospects and future profitability may be materially and adversely affected.

We require a significant amount of cash to fund our operations, including payments to suppliers for our polysilicon feedstock. We may also require additional cash due to changing business conditions or other future developments, including any investments or acquisitions we may decide to pursue, as well as our research and development activities in order to remain competitive.

Our working capital was RMB3.39 billion (US\$491.7 million) as of December 31, 2022. Our management believes that our cash position as of December 31, 2022, the cash expected to be generated from operations, and funds available from borrowings under our credit facilities will be sufficient to meet our working capital and capital expenditure requirements for at least the next 12 months from the date of this annual report.

Our ability to obtain external financing is subject to a number of uncertainties, including:

- our future financial condition, results of operations and cash flow;
- the general condition of the global equity and debt capital markets;
- regulatory and government support, such as subsidies, tax credits and other incentives;
- the continued confidence of banks and other financial institutions in our company and the solar power industry;
- economic, political and other conditions in the PRC and elsewhere; and
- our ability to comply with any financial covenants under the debt financing.

Any additional equity financing may be dilutive to our shareholders and any debt financing may require restrictive covenants. Additional funds may not be available on terms commercially acceptable to us. Failure to manage discretionary spending and raise additional capital or debt financing as required may adversely impact our ability to achieve our intended business objectives. See “—Our substantial indebtedness could adversely affect our business, financial condition and results of operations.”

Uncertainty about the future of LIBOR and certain other interest “benchmarks” may adversely affect our business.

LIBOR, the London Interbank Offered Rate, is widely used as a reference for setting interest rates on loans globally. LIBOR and certain other interest “benchmarks” may be subject to regulatory guidance and/or reform that could cause interest rates under our current or future debt agreements to perform differently than in the past or cause other unanticipated consequences.

On July 27, 2017, the United Kingdom Financial Conduct Authority (“FCA”), which regulates the LIBOR, announced that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the administrator of LIBOR after 2021. In June 2019, the FCA asked banks and markets to stop using the LIBOR as a basis for pricing contracts. These announcements indicate that the continuation of LIBOR on the current basis cannot and has not been guaranteed since 2021. It is impossible to predict whether and to what extent banks will continue to provide LIBOR submissions to the administrator of LIBOR or whether any additional reforms to LIBOR may be enacted in the United Kingdom or elsewhere. At this time, no consensus exists as to what rate or rates may become accepted alternatives to LIBOR and it is impossible to predict the effect of any such alternatives on the value of LIBOR-based securities and variable rate loans or other financial arrangements, given LIBOR’s role in determining market interest rates globally. On March 25, 2020, the FCA stated that although the central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed, the outbreak of COVID-19 has impacted the timing of many firms’ transition planning, and the FCA will continue to assess the impact of the COVID-19 pandemic on transition timelines and update the marketplace as soon as possible. It is unclear if after 2021 LIBOR will cease to exist or if new methods calculating LIBOR will be established such that it continues to exist after 2021.

Moreover, on July 12, 2019, the Staff of the SEC’s Division of Corporate Finance, Division of Investment Management, Division of Trading and Markets, and Office of the Chief Accountant issued a statement about the potentially significant effects on financial markets and market participants when LIBOR was discontinued in 2021 and no longer available as a reference benchmark rate. The Staff encouraged all market participants to identify contracts that reference LIBOR and begin transitions to alternative rates. On December 30, 2019, the SEC’s Chairman, Division of Corporate Finance and Office of the Chief Accountant issued a statement to encourage audit committees in particular to understand management’s plans to identify and address the risks associated with the elimination of LIBOR, and, specifically, the impact on accounting and financial reporting and any related issues associated with financial products and contracts that reference LIBOR, as the risks associated with the discontinuation of LIBOR and transition to an alternative reference rate will be exacerbated if the work is not completed in a timely manner.

Uncertainty as to the nature of alternative reference rates and as to potential changes or other reforms to LIBOR may adversely affect LIBOR rates and other interest rates. In the event that a published LIBOR rate was unavailable after 2021, the value of such securities, loans or other financial arrangements may be adversely affected, and, to the extent that we are the issuer of or obligor under any such instruments or arrangements, our cost thereunder may increase. Currently, the manner and impact of this transition and related developments, as well as the effect of these developments on our funding costs, investment and trading securities portfolios and business, is uncertain, which may adversely affect our business, prospects, liquidity, capital resources, financial performance or financial condition.

The oversupply of solar cells and modules in the solar industry may cause substantial downward pressure on the prices of our products and reduce our revenue and earnings.

If the solar industry experience oversupply across the value chain in the future, and continued increases in solar module production in excess of market demand may result in further downward pressure on the price of solar cells and modules, including our products. Increasing competition could also result in us losing sales or market share. If we are unable, on an ongoing basis, to procure silicon, solar wafers and solar cells at reasonable prices, or mark up the price of our solar modules to cover our manufacturing and operating costs, our revenue and gross margin will be adversely impacted, either due to higher costs compared to our competitors or due to inventory write-downs, or both. In addition, our market share may decline if our competitors are able to price their products more competitively.

We face risks associated with the manufacturing, marketing, distribution and sale of our products internationally and the construction and operation of our overseas manufacturing facilities, and if we are unable to effectively manage these risks, our business and operations abroad may be adversely affected and our ability to maintain, develop and expand our business abroad may be restricted.

In 2020, 2021 and 2022, we generated 81.9%, 75.2% and 58.1%, respectively, of our total revenue from sales outside China. We also have manufacturing facilities in the United States and Malaysia, and our monocrystalline silicon wafer factory in Vietnam completed construction and reached full production capacity in 2022. In January 2018, we entered into a master solar module supply agreement (the “Master Agreement”) with NextEra Energy, Inc., or NextEra. Under the Master Agreement, as amended in March 2018, we will supply NextEra up to 2,750 MW of high-efficiency solar modules over four years. In conjunction with the Master Agreement, we established our first U.S. factory in Jacksonville, Florida, which commenced production in the third quarter of 2018 and reached full production capacity of 400 MW in the first half of 2019. Our 7GW monocrystalline silicon wafer plant in Vietnam commenced production in the first quarter of 2022 and reached full production capacity in the third quarter of 2022. Thus, we currently have approximately 7 GW of integrated mono wafer-cell-module manufacturing capacity overseas.

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The manufacturing, marketing, distribution and sale of our products internationally, as well as the construction and operation of our manufacturing facilities outside of China may expose us to a number of risks, including those associated with:

- fluctuations in currency exchange rates;
- costs associated with understanding local markets and trends;
- costs associated with establishment of overseas manufacturing facilities;
- marketing and distribution costs;
- customer services and support costs;
- risk management and internal control structures for our overseas operations;
- compliance with the different commercial, operational, environmental and legal requirements;
- obtaining or maintaining certifications for production, marketing, distribution and sales of our products or, if applicable, services;
- maintaining our reputation as an environmentally friendly enterprise for our products or services;
- obtaining, maintaining or enforcing intellectual property rights;
- changes in prevailing economic conditions and regulatory requirements;
- transportation and freight costs;
- employing and retaining manufacturing, technology, sales and other personnel who are knowledgeable about, and can function effectively in, overseas markets;
- trade barriers such as trade remedies, which could increase the prices of the raw materials for our solar products, and export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make us less competitive in some countries;
- challenges due to our unfamiliarity with local laws, regulation and policies, our absence of significant operating experience in local market, increased cost associated with establishment of overseas operations and maintaining a multinational organizational structure; and
- other various risks that are beyond our control.

Our manufacturing capacity outside China requires us to comply with different laws and regulations, including national and local regulations relating to production, environmental protection, employment and the other related matters. Due to our limited experience in doing business in the overseas markets, we are unfamiliar with local laws, regulation and policies. Our failure to obtain the required approvals, permits, licenses, filings or to comply with the conditions associated therewith could result in fines, sanctions, suspension, revocation or non-renewal of approvals, permits or licenses, or even criminal penalties, which could have a material adverse effect on our business, financial condition and results of operations.

For example, the U.S. government has begun enforcing a long-existing ban on U.S. importation of products produced with forced labor in ways that may adversely affect our business. Section 307 of the U.S. Tariff Act of 1930, as amended, or Section 307, prohibits U.S. importation of goods that are produced or manufactured, wholly or in part, in any non-U.S. country by forced or indentured labor. On June 24, 2021, U.S. Customs and Border Protection (CBP) issued a Withhold Release Order against Hoshine Silicon Industry Co. Ltd. (“Hoshine WRO”). As a result, personnel at all U.S. ports of entry have been instructed to immediately begin detaining shipments that contain silica-based products made by Hoshine or materials and goods derived from or produced using those silica-based products.

On December 23, 2021, President Biden signed the Uyghur Forced Labor Prevention Act (the “UFLPA”) into law. The UFLPA aims to strengthen the existing laws on forced labor by prohibiting the importation and entry of any goods made with forced labor in the Xinjiang Uyghur Autonomous Region (“XUAR”) of the PRC, and establishes several enforcement mechanisms and procedures to do so. Since June 21, 2022, CBP has begun applying the “Rebuttal Presumption” established in Section 3 of UFLPA and prohibits any “goods, wares, articles, or merchandise mined, produced, or manufactured wholly or in part in the XUAR” or produced by an entity on the list to be issued pursuant to the UFLPA, unless CBP determines that importer of record has (i) fully complied with the supply chain guidance described in Section 2 of the UFLPA and any accompanying regulations; and (ii) completely and substantively responded to inquiries for information by CBP. Pursuant to UFLPA, the U.S. government issued a list of entities involved in and products produced from forced labor, “guidance to importers” with respect to forced labor due diligence as well as a strategy report to prevent importation of goods produced with forced labor.

Under the impact of Hoshine WRO and UFLPA, our products imported into the United States are detained by CBP from time to time. We have been in continuous discussion with CBP and related United States authorities regarding related matters including but without limitation to CBP’s standards and requested documents regarding detained shipments. We have been submitting documents requested by CBP for the admissibility of the detained shipments. After reviewing our submissions, our detained shipments have been progressively released by CBP.

We do not tolerate any use of forced labor, whether in our own manufacturing facilities or, to the best of our knowledge, throughout our supply chain. We monitor our manufacturing facilities to ensure no forced labor is used. Our direct sales to the U.S. market accounted for 15.7% and 4.5% of our total revenues in 2021 and 2022, respectively. Given the fact that we have a manufacturing facility in Xinjiang, we cannot assure you that the relevant U.S. authorities will not decide that forced labor exists in the manufacturing of our products or in our supply chain and, put our facilities or their affiliate companies on the list of entities to be issued pursuant to UFLPA. Furthermore, under the impact of Hoshine WRO and UFLPA, importation of our products to the United States may be partially or entirely suspended or blocked. Either of these types of regulatory or legislative action would adversely affect our business, financial condition and results of operations.

In addition to the actions taken or being considered by the U.S. government as discussed above, there is a growing concern regarding the alleged used of forced labor issue in the XUAR in the European Union, Australia, Japan and certain other countries. For example, in June 2022, the European Parliament passed Resolution on the human rights situation in the XUAR, including the Xinjaing police files. European Commission issued, on September 14, 2022, a Proposal for a Regulation of the European Parliament and of the Council on prohibiting products made with forced labour on the European Union. If any new legislation or regulatory action with respect to these issues were to be enacted in those regions that impose additional restrictions or requirements on importation of goods that are produced or manufactured, wholly or in part, in the XUAR, our business and operation in these regions would be adversely affected.

As we enter into new markets in different jurisdictions, we will face different business environments and industry conditions, and we may spend substantial resources familiarizing ourselves with the new environment and conditions. To the extent that our business operations are affected by unexpected and adverse economic, regulatory, social and political conditions in the jurisdictions in which we have operations, we may experience project disruptions, loss of assets and personnel, and other indirect losses that could adversely affect our business, financial condition and results of operations. For instance, our manufacturing facility in the United States may expose us to various risks, including, among others, failure to obtain the required approvals, permits or licenses, or to comply with the conditions associated therewith, failure to procure economic incentives or financing on satisfactory terms, and failure to procure construction materials, production equipment and qualified personnel for the manufacturing facility in a timely and cost-effective manner. Any of these events may increase the related costs, or impair our ability to run our operations in the future on a cost effective basis, which could in turn have a material adverse effect on our business and results of operations.

We are subject to anti-dumping and countervailing duties imposed by the U.S. government. We are also subject to safeguard investigation and other foreign trade investigations initiated by the U.S. government and anti-dumping investigation and safeguard investigations initiated by governments in our other markets.

Our direct sales to the U.S. market accounted for 28.7%, 15.7% and 4.5% of our total revenues in 2020, 2021 and 2022, respectively. In 2011, SolarWorld Industries America Inc., a solar panel manufacturing company in the United States, filed anti-dumping and countervailing duty petitions with the United States Department of Commerce (the “U.S. Department of Commerce”) and United States International Trade Commission (the “U.S. International Trade Commission”) against the Chinese solar industry, accusing Chinese producers of crystalline silicon photovoltaic (“CSPV”) cells, whether or not assembled into modules, of selling their products (i.e., CSPV cells or modules incorporating these cells) in the United States at less than fair value, and of receiving financial assistance from the Chinese governments that benefited the production, manufacture, or exportation of such products. JinkoSolar was on the list of the solar companies subject to such investigations by the U.S. Department of Commerce. On November 9, 2011, the U.S. Department of Commerce announced that it launched the anti-dumping duty and countervailing duty investigation into the accusations. On December 7, 2012, the U.S. Department of Commerce issued the anti-dumping duty order and countervailing duty order. As a result, cash deposits were required to pay on import into the United States of the CSPV cells, whether or not assembled into modules from China. The announced cash deposit rates applicable to us were 13.94% (for anti-dumping) and 15.24% (for countervailing). The actual anti-dumping duty and countervailing duty rates at which entries of covered merchandise are finally assessed may differ from the announced deposit rates because they are subject to the subsequent administrative reviews by U.S. Department of Commerce.

In January 2014, the U.S. Department of Commerce initiated the first administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July 2015, the U.S. Department of Commerce issued the final results of this first administrative review, according to which the anti-dumping and countervailing rates applicable to us were 9.67% and 20.94%, respectively. Such rates apply as the final rates on the import into the United States of the CSPV cells, whether or not assembled into modules from China, from May 25, 2012 to November 30, 2013 for dumping, and from March 26, 2012 to December 31, 2012 for countervailing, respectively. Such rates were the cash deposit rates applicable to us from July 14, 2015. In February 2015 and February 2016, the U.S. Department of Commerce initiated the second administrative and the third administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China, respectively. The U.S. Department of Commerce issued the final results of the second administrative review in June and July of 2016 and the final results of the third administrative review in July 2017. As we were not included in the second and the third administrative review, the rates applicable to us remained at 9.67% (for anti-dumping) and 20.94% (for countervailing) after this review. In February 2017, the U.S. Department of Commerce initiated the fourth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July 2018, the U.S. Department of Commerce published the final results of the fourth administrative review. As we were not included in this anti-dumping administrative review, the anti-dumping deposit rates applicable to us remained at 9.67%. The countervailing deposit rates applicable to us were 13.20% after this review. On October 30, 2018, the U.S. Department of Commerce amended the final results of the fourth countervailing administrative review. As a result, the countervailing deposit rates applicable to us were 10.64% after this amendment. On October 29, 2020, the U.S. Department of Commerce amended the final results of the fourth countervailing administrative review pursuant to the final judgement of the United States Court of International Trade; the final subsidy rate applicable to us for the entries made during the period from January 1, 2015 through December 31, 2015 was changed to 4.22%. In November 2017, the U.S. Department of Commerce and the U.S. International Trade Commission initiated five-year reviews to determine whether revocation of the anti-dumping and countervailing duty orders with respect to CSPV cells, whether or not assembled into modules from China, would likely lead to continuation or recurrence of material injury. In March 2018, the U.S. Department of Commerce determined that revocation of the countervailing order would likely lead to continuation or recurrence of a net countervailable subsidy. In March 2019, the U.S. International Trade Commission determined that revocation of the countervailing order would likely lead to the continuation or recurrence of countervailable subsidies. In February 2018, the U.S. Department of Commerce initiated the fifth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July and August 2019, the U.S. Department of Commerce issued the final results of the fifth administrative review, according to which the anti-dumping and countervailing deposit rates applicable to us were 4.06% and 12.76%, respectively. In December 2019, the U.S. Department of Commerce amended the final results of the fifth countervailing administrative review. As a result, the countervailing deposit rate applicable to us was 12.7% after this amendment. In March 2019, the U.S. Department of Commerce initiated the sixth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In October 2020, the U.S. Department of Commerce issued the final result of the sixth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 68.93%. In December 2020, the U.S. Department of Commerce amended the final result of the sixth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 95.5% after such amendment. In December 2020, the U.S. Department of Commerce issued the final result of the sixth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 12.67%. In April 2021, the U.S. Department of Commerce amended the final result of the sixth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 11.97% after such amendment. In February 2020, the U.S. Department of Commerce initiated the seventh administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In August and October 2021, the U.S. Department of Commerce issued the final results of the seventh administrative review, according to which the anti-dumping and countervailing deposit rate applicable to us was 0% and 19.28%, respectively. In February 2021, the U.S. Department of Commerce initiated the eighth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In June 2022, the U.S. Department of Commerce issued the final result of the eighth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 15.71%. In August 2022, the U.S. Department of Commerce amended the final result of the eighth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 20.99% after such amendment. In June 2022, the U.S. Department of Commerce issued the final result of the eighth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 15.75%. In August 2022, the U.S. Department of Commerce amended the final result of the eighth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 15.87% after such amendment. In February 2022, the U.S. Department of Commerce initiated the ninth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. The ninth administrative review is pending as of the date of this annual report. In February 2023, the U.S. Department of Commerce initiated the tenth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. The tenth administrative review is pending as of the date of this annual report, and therefore, the final anti-dumping and countervailing rates applicable to us are subject to change.

On February 8, 2022, Auxin Solar Inc. (“Auxin”), a U.S. manufacturer of solar modules, requested that the U.S. Department of Commerce to open nationwide inquiries as to whether crystalline silicon photovoltaic cells and modules containing such cells (solar cells and modules) that are produced and/or assembled in Cambodia, Malaysia, Thailand or Vietnam using parts and components from China and exported to the United States, are circumventing the anti-dumping and countervailing orders on solar cells and modules from China. On March 25, 2022, the U.S. Department of Commerce determined to initiate the circumvention inquiries (the “Anti-Circumvention Case”). The Anti-Circumvention Case is pending as of the date of this annual report.

In 2013, SolarWorld Industries America Inc. filed a separate petition with the U.S. Department of Commerce and the U.S. International Trade Commission resulting in the institution of new anti-dumping and countervailing duty investigations against import of certain CSPV products from China. The petitions accused Chinese producers of such certain CSPV modules of dumping their products in the United States and receiving countervailable subsidies from the Chinese government. This action excluded from its scope the CSPV cells, whether or not assembled into modules, from China. In February 2015, following the affirmative injury determination made by U.S. International Trade Commission, the U.S. Department of Commerce issued the anti-dumping duty order and countervailing duty order. As a result, the final cash deposits were required to pay on import into the United States of the CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The announced cash deposit rates applicable to us were 65.36% (for anti-dumping) and 38.43% (for countervailing). The actual anti-dumping duty and countervailing duty rates at which entries of covered merchandise are finally assessed may differ from the announced deposit rates because they are subject to the administrative reviews by the U.S. Department of Commerce. In April 2016 and April 2017, the U.S. Department of Commerce initiated the first and the second administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China, respectively. In July and September 2017, the U.S. Department of Commerce issued the final results of this first administrative review. The second administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in August 2017 and November 2017, respectively. In April 2018, the U.S. Department of Commerce initiated the third administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final results of the third administrative reviews were 165.04% (for anti-dumping) and 94.83% (for countervailing). We were not included in this third administrative reviews, therefore, the cash deposit rates applicable to us remained at 65.36% (for anti-dumping) and 38.43% (for countervailing). In May 2019, the U.S. Department of Commerce initiated the fourth administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The fourth administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in September and October 2019, respectively. In April 2020, the U.S. Department of Commerce initiated the fifth administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The fifth administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in August 2020. In January 2020, the U.S. Department of Commerce and the U.S. International Trade Commission initiated five-year reviews to determine whether revocation of the anti-dumping and countervailing duty orders with respect to CSPV modules assembled in China, consisting of CSPV cells produced in a customs territory other than China, would likely lead to continuation or recurrence of material injury. In September 2020, the U.S. International Trade Commission determined that revocation of the countervailing and antidumping duty orders would likely lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time and as a result the U.S. Department of Commerce hereby ordered the continuation of the AD and CVD orders on crystalline silicon photovoltaic products from China. The U.S. Customs and Border Protection will continue to collect AD and CVD cash deposits at the rates in effect at the time of entry for all imports of subject merchandise. In February 2021, the U.S. Department of Commerce announced the opportunity for interested parties to request the sixth administrative review and the due date for such request was the last day of February 2021. The sixth administrative review has not yet been initiated as of the date of this annual report. In March 2021, the U.S. Department of Commerce revoked, in part, the antidumping duty and countervailing duty orders on CSPV products from China with respect to certain off-grid portable small panels. In April 2022, the U.S. Department of Commerce initiated the seventh administrative review (review period from February 1, 2021 to January 31, 2022) of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final result of the seventh administrative review is pending as of the date of this annual report. In April 2023, the U.S. Department of Commerce initiated the eighth administrative review (review period from February 1, 2022 to January 31, 2023) of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final result of the eighth administrative review is pending as of the date of this annual report.

In May 2017, U.S. International Trade Commission initiated global safeguard investigation to determine whether CSPV cells (whether or not partially or fully assembled into other products) were being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported articles ("Section 201 Investigation"). The Section 201 Investigation was not country specific. They involved imports of the products under investigation from all sources, including China. In September 2017, the U.S. International Trade Commission voted affirmatively in respect of whether imports of CSPV cells (whether or not partially or fully assembled into other products) were causing serious injury to domestic producers of CSPV products. On January 22, 2018, the U.S. President made the final decision to provide a remedy to the U.S. industry, and the CSPV cells/modules concerned were subject to the safeguard measures established in the U.S. President's final result, which included that the CSPV cells and modules imported would be subject to additional duties of 30%, 25%, 20% and 15% from the first year to the fourth year, respectively, except for the first 2.5 GW of all imported CSPV cells concerned in each of those four years, which are excluded from the additional tariff. On October 10, 2020, the U.S. President issued a proclamation and determined that the section 201 duty of the fourth year beginning in February 2021 would be 18%, instead of 15%. In August 2021, a joint petition seeking an extension of the safeguard measure was filed. On December 8, 2021, in response to petitions by representatives of the domestic industry, U.S. International Trade Commission issued its determination and report, finding that safeguard action on CSPV cells (whether or not partially or fully assembled into other products) continues to be necessary to prevent or remedy the serious injury to the domestic industry, and that there is evidence that the domestic industry is making a positive adjustment to import competition ("Section 201 Extension Investigation"). On February 4, 2022, the U.S. President determined an extension of this safeguard measure for another four year and made the final decision, which included that the CSPV cells and modules imported would be subject to additional duties of 14.75%, 14.5%, 14.25% and 14% through the first year to the fourth year, respectively, except for bifacial modules and the first 5 GW of all imported CSPV cells concerned in each of those four years, which are excluded from the additional tariff. It is believed that the costs of solar power projects in the United States may increase and the demand for solar PV products in the United States may be adversely impacted due to the decision of the White House under the Section 201 Investigation. Although we opened our manufacturing facility in the United States, and the products manufactured in such facility will not be subject to tariffs, we will still be subject to tariffs if we ship our products from our manufacturing facilities overseas into the United States. Our imports of solar cells and modules into the United States were subject to the duties imposed by Section 201 Investigation starting from February 2018. Accordingly, our business and profitability of these products may be materially and adversely impacted by the decision of the U.S. President under the Section 201 Investigation.

In August 2017, the United States Trade Representative initiated an investigation pursuant to the Trade Act of 1974, as amended (the “Trade Act”), to determine whether acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation were actionable under the Trade Act (“Section 301 Investigation”). The findings from the United States Trade Representative with the assistance of the interagency Section 301 committee showed that the acts, policies, and practices of the Chinese government related to technology transfer, intellectual property and innovation were unreasonable or discriminatory and burdened or restricted the U.S. commerce. On March 22, 2018, the U.S. President directed his administration to take a range of actions responding to China’s acts, policies, and practices involving the unfair and harmful acquisition of U.S. technology. These actions included imposing an additional duty of 25% on products from China in aerospace, information and communication technology, and machinery. On April 3, 2018, the United States Trade Representative proposed a list of products from China which would be subject to the additional duty. In June and July 2018, the United States Trade Representative proposed three lists of products from China which were worth approximately US\$250 billion (US\$34 billion for List 1, US\$16 billion for List 2 and US\$200 billion for List 3), among which, products on List 1 and List 2 would be imposed a 25% additional duty and products on List 3 would be imposed a 10% additional duty. Certain of our production equipment and raw materials exported from China to be used in our new manufacturing facility in the United States and our solar PV products exported from China were covered by these three lists. In July, August and September 2018, the United States Trade Representative published that the Customs and Border Protection would begin to collect additional duties on the products exported from China on List 1 on July 6, 2018, those on List 2 on August 23, 2018 and those on List 3 on September 24, 2018, respectively. On March 5, 2019, the United States Trade Representative determined that the rates of additional duty for the products on List 3 would remain at 10% until further notice. On May 9, 2019, the United States Trade Representative determined to increase the rates of additional duty for the products on List 3 from 10% to 25% with an effective date on May 10, 2019. In August 2019, the United States Trade Representative determined to impose an additional 10% duty on the fourth list of products of Chinese origin with an annual aggregate trade value of approximately US\$300 billion (“List 4”). Certain of our production equipment and raw materials of Chinese origin to be used in our new manufacturing facility in the United States were covered by List 4. The tariff subheadings under List 4 were separated into two lists with different effective dates: the list set forth in annex A of the notice issued by the United States Trade Representative became effective on September 1, 2019; and the list set forth in annex C of the notice became effective on December 15, 2019. On August 30, 2019, the United States Trade Representative determined to increase the rate of additional duty for the products covered by List 4 from 10% to 15%. On December 18, 2019, the United States Trade Representative determined to suspend indefinitely the imposition of additional 15% duty on products covered by annex C of List 4. On January 15, 2020, the United States Trade Representative determined to reduce the rate of the additional duty on products covered by annex A of List 4 from 15% to 7.5%, which became effective on February 14, 2020. The lists of products, which the United States Trade Representative may further revise, may affect the solar industry and the operation of our new manufacturing facility in the United States.

In December 2014, Canada initiated the anti-dumping and countervailing investigations on imports of CSPV modules from China. In June 2015, the Canada Border Services Agency (“CBSA”) found that the CSPV modules under investigation had been dumped and subsidized. In July 2015, the Canadian International Trade Tribunal found that the dumping and subsidizing of the above-mentioned goods had not caused injury, but were threatening to cause injury to the domestic industry. As a result, import into Canada of our CSPV modules under investigation from China was subject to the anti-dumping and countervailing duties. The countervailing duty rate (RMB per Watt) applicable to Jiangxi Jinko and Zhejiang Jinko are 0.028 and 0.046, respectively. For anti-dumping duties, CBSA had set normal value for the imported CSPV modules and the anti-dumping duty would be the difference between the export price and normal value if the export price is lower than the normal value. No anti-dumping duties would apply if the export price is equal or more than the normal value. In May 2020, the Canadian International Trade Tribunal (“CITT”) and CBSA initiated an expiry review investigation to determine whether the expiry of their above findings made in June and July 2015 respectively are likely to result in the continuation or resumption of dumping and/or subsidizing of the CSPV modules originating in or exported from China. In October 2020, the CBSA has determined that the expiry of its finding is likely to result in the continuation or resumption of dumping and subsidizing of CSPV modules originating in or exported from China. In March 2021, CITT had determined to continue its abovementioned finding made in July 2015 concerning the dumping and subsidizing of CSPV modules originating in or exported from China. The CBSA will therefore continue to impose anti-dumping and countervailing duties on the CSPV modules originating in or exported from China.

In July 2016, Turkish Ministry of Economy initiated anti-dumping investigation against photovoltaic panels and modules classified in Turkish Customs Tariff Code 8541.40.90.00.14, from China. In July 2017, Turkish Ministry of Economy made the final affirmative result of this investigation, pursuant to which import into Turkey of our CSPV panels and modules under investigation from China would be subject to the anti-dumping duty. The anti-dumping duty applicable to us was US\$20 per m².

In July 2017, the Department of Commerce of India initiated anti-dumping investigation concerning imports of solar cells whether or not assembled partially or fully in modules or panels or on glass or some other suitable substrates originating in or exported from mainland China, Taiwan and Malaysia. Such investigation was terminated in March 2018 by the Department of Commerce of India as requested by Indian Solar Manufacturers Association, representing applicants of the domestic industry.

In December 2017, the Directorate General of Safeguards of India initiated a safeguard investigations concerning imports of “solar cells whether or not assembled in modules or panels” (“PUC”) into India to protect the domestic producers of like and directly competitive articles (to the solar cells whether or not assembled in modules or panels) from serious injury/threat of serious injury caused by such increased imports (the “India Safeguard Investigations”). The India Safeguard Investigations were not country specific and involved imports for the products under investigation from all sources, including China. In January 2018, the Directorate General of Safeguards Customs and Central Excise recommended a provisional safeguard duty to be imposed at the rate of 70% *ad valorem* on the imports of PUC falling under Customs Tariff Item 85414011 of the Customs Tariff Act, 1975 from all countries, including PRC and Malaysia, except some developing countries. In May 2018, Indian central government overruled the Directorate General of Safeguards Customs and Central Excise’s recommendation of provisional safeguard duty at the rate of 70% *ad valorem* on the imports of PUC. On July 16, 2018, Directorate General of Trade Remedies published the final findings of Safeguard Investigations and recommended to impose the safeguard duty for a period of two years. As of July 30, 2018, Ministry of Finance of India issued a Notification No. 01/2018-Customs (SG) to impose safeguard duty at the following rate effective from July 30, 2018:

- 25% *ad valorem* minus anti-dumping duty payable, if any, when imported during the period from July 30, 2018 to July 29, 2019 (both days inclusive);
- 20% *ad valorem* minus anti-dumping duty payable, if any, when imported during the period from July 30, 2019 to January 29, 2020 (both days inclusive); and
- 15% *ad valorem* minus anti-dumping duty payable, if any, when imported during the period from January 30, 2020 to July 29, 2020 (both days inclusive).

Nothing contained in this notification shall apply to imports of PUC from countries notified as developing countries vide notification no.19/2016-custom (NT) dated February 5, 2016 except PRC and Malaysia.

In March 2020, the Directorate General of Trade Remedies of India initiated a review examining the need for continued imposition of safeguards duty on imports of solar cells whether or not assembled in modules or panels into India. On July 18, 2020, the Directorate General of Trade Remedies of India issued the final findings of review investigation for continued imposition of safeguards duty and recommended extension of safeguards duty for a period of another one year. On July 29, 2020, Ministry of Finance of India issued a Notification No.02/2020-Customs (SG) to impose safeguard duty at the following rate effective from July 30, 2020:

- 14.9% *ad valorem* minus anti-dumping duty payable, if any, when imported during the period from July 30, 2020 to January 29, 2021 (both days inclusive); and
- 14.5% *ad valorem* minus anti-dumping duty payable, if any, when imported during the period from January 30, 2021 to July 29, 2021 (both days inclusive).

Nothing contained in this notification shall apply to imports of PUC from countries notified as developing countries vide notification No. 19/2016-Customs (N.T.) dated the February 5, 2016, except the PRC, Thailand and Vietnam. Such safeguard duty was terminated on July 29, 2021 by the Department of Commerce of India.

In May 2021, the Department of Commerce of India initiated anti-dumping investigation concerning imports of solar cells whether or not assembled partially or fully in modules or panels or on glass or some other suitable substrates originating in or exported from mainland China, Thailand and Vietnam. In November, 2022, the Department of Commerce of India issued the notice to terminate such anti-dumping investigation without taking any anti-dumping safeguard measures.

Imposition of anti-dumping and countervailing orders in one or more markets may result in additional costs to us, our customers or both, which could materially adversely affect our business, financial condition, results of operations and future prospects.

Volatility in the prices of silicon raw materials makes our procurement planning challenging and could have a material adverse effect on our results of operations and financial condition.

The prices of polysilicon, the essential raw material for solar cell and module products and silicon wafers have been subject to significant volatility. Historically, increases in the price of polysilicon had increased our production costs. The price of polysilicon increased significantly in 2020 due to the supply shortage of polysilicon. In the first half of 2020, supply of polysilicon was negatively affected by the decreasing downstream demand due to the COVID-19 pandemic. In the second half of 2020, the production capacity of polysilicon of some key manufacturing facilities reduced due to the explosion accidents and maintenance activities, which further intensified the supply shortage. In 2021 and 2022, the price of polysilicon continued to increase due to power rationing and lockdowns as a result of the COVID-19 pandemic in certain regions of China. The price of the polysilicon began to decline in the first quarter of 2023, which stimulated the module demand globally.

We expect that the prices of virgin polysilicon feedstock may continue to be subject to volatility, making our procurement planning challenging. For example, if we refrain from entering into fixed-price, long-term supply contracts, we may miss the opportunities to secure long-term supplies of virgin polysilicon at favorable prices if the spot market price of virgin polysilicon increases significantly in the future. On the other hand, if we enter into more fixed-price, long-term supply contracts, we may not be able to renegotiate or otherwise adjust the purchase prices under such long-term supply contracts if the spot market price declines. As a result, our cost of silicon raw materials could be higher than that of our competitors who source their supply of silicon raw materials through floating-price arrangements or spot market purchases. To the extent we may not be able to fully pass on higher costs and expenses to our customers, our profit margins, results of operations and financial condition may be materially adversely affected.

We may not be able to obtain sufficient raw materials in a timely manner or on commercially reasonable terms, which could have a material adverse effect on our results of operations and financial condition.

In 2020, 2021 and 2022, our five largest group suppliers accounted for 70.0%, 78.7% and 77.4%, respectively, of our total silicon purchases by value. In 2020, four of our group suppliers individually accounted for more than 10%, and our largest group supplier accounted for 19.6% of our total silicon purchases by value. In 2021, three of our group suppliers individually accounted for more than 10%, and our largest group supplier accounted for 28.5% of our total silicon purchases by value. In 2022, two of our group suppliers individually accounted for more than 10%, and our largest group supplier accounted for 34.0% of our total silicon purchases by value. A “group supplier” refers to an aggregation of our suppliers that are within the same corporate group.

Although the global supply of polysilicon has increased significantly, we may experience interruption to our supply of silicon or other raw materials or late delivery in the future for the following reasons, among others:

- suppliers under our raw materials supply contracts may delay deliveries for a significant period of time without incurring penalties;
- our virgin polysilicon suppliers may not be able to meet our production needs consistently or on a timely basis;
- compared with us, some of our competitors who also purchase virgin polysilicon from our suppliers have longer and stronger relationships with and have greater buying power and bargaining leverage over some of our key suppliers; and
- our supply of silicon or other raw materials is subject to the business risk of our suppliers, some of whom have limited operating history and limited financial resources, and one or more of which could go out of business for reasons beyond our control in the current economic environment.

Our failure to obtain the required amounts of silicon raw materials and other raw materials, such as glass, in a timely manner and on commercially reasonable terms could increase our manufacturing costs and substantially limit our ability to meet our contractual obligations to our customers. Any failure by us to meet such obligations could have a material adverse effect on our reputation, ability to retain customers, market share, business and results of operations and may subject us to claims from our customers and other disputes. Furthermore, our failure to obtain sufficient silicon and other raw materials would result in under-utilization of our production facilities and an increase in our marginal production costs. Any of the above events could have a material adverse effect on our growth, profitability and results of operations.

The loss of, or a significant reduction in orders from, any of our customers could significantly reduce our revenue and harm our results of operations.

In 2020, 2021 and 2022, sales to our top five group customers represented 19.7%, 14.9% and 15.3% of our total revenue, respectively. In 2020, 2021 and 2022, our largest group customer accounted for 5.3%, 4.6% and 5.4% of our total revenue, respectively. A “group customer” refers to an aggregation of our customers that are within the same corporate group. Our relationships with our key customers for solar modules have been developed over a relatively short period of time and are generally in nascent stages. Our key module customers include NextEra, Consolidated Edison Development, Trung Nam Construction Investment, Copenhagen Infrastructure Partners, Spower, LLC, Enel Group and Swinerton Builders. We cannot assure you that we will be able to continue to generate significant revenue from these customers or that we will be able to maintain these customer relationships. In addition, we purchase solar wafers and cells and silicon raw materials through toll manufacturing arrangements that require us to make significant capital commitments to support our estimated production output. In the event our customers cancel their orders, we may not be able to recoup prepayments made to suppliers, which could adversely influence our financial condition and results of operations. The loss of sales to any of these customers could also have a material adverse effect on our business, prospects and results of operations.

We manufacture a majority of our products in several provinces in China, which exposes us to various risks relating to long-distance transportation of our silicon wafers and solar cells in the manufacturing process.

The geographical separation of our manufacturing facilities in China necessitates constant long-distance transportation of substantial volumes of our silicon wafers and solar cells between Jiangxi, Zhejiang, Sichuan, Anhui, Gansu, Yunnan and Qinghai Provinces and the XUAR. We produce silicon wafers in Jiangxi, Sichuan, Gansu and Qinghai Provinces and the XUAR, solar cells in Zhejiang, Jiangxi, Anhui and Yunnan Provinces, and solar modules in Jiangxi, Zhejiang, and Anhui Provinces. As a result, we transport a substantial volume of our silicon wafers and solar cells within China.

The constant long-distance transportation of a large volume of our silicon wafers and solar cells may expose us to various risks, including (i) increases in transportation costs, (ii) loss of our silicon wafers or solar cells as a result of any accidents that may occur in the transportation process, (iii) delays in the transportation of our silicon wafers or solar cells as a result of any severe weather conditions, natural disasters or other conditions adversely affecting road traffic, and (iv) disruptions to our production of solar cells and solar modules as a result of delays in the transportation of our silicon wafers and solar cells. Any of these risks could have a material adverse effect on our business and results of operations.

Prepayment arrangements to our suppliers for the procurement of silicon raw materials expose us to the credit risks of such suppliers and may also significantly increase our costs and expenses, which could in turn have a material adverse effect on our financial condition, results of operations and liquidity.

Our supply contracts generally include prepayment obligations for the procurement of silicon raw materials. As of December 31, 2022, we had RMB3.58 billion (US\$519.3 million) of advances to our suppliers. We generally do not receive collateral to secure such payments for these contracts, and even if we do, the collateral we received is deeply subordinated and shared with all other customers and other senior lenders of the suppliers.

Our prepayments, secured or unsecured, expose us to the credit risks of our suppliers, and reduce our chances of obtaining the return of such prepayments in the event that our suppliers become insolvent or bankrupt. Moreover, we may have difficulty recovering such prepayments if any of our suppliers fails to fulfill its contractual delivery obligations to us. Accordingly, a default by our suppliers to whom we have made substantial prepayment may have a material adverse effect on our financial condition, results of operations and liquidity.

Decreases in the price of solar power products, including solar modules, may result in additional provisions for inventory losses.

We typically plan our production and inventory levels based on our forecasts of customer demand, which may be unpredictable and can fluctuate materially. Recent market volatility has made it increasingly difficult for us to accurately forecast future product demand trends and the prices of solar power products. We recorded inventory provisions of RMB270.9 million, RMB701.7 million and RMB1.82 billion (US\$263.8 million) in 2020, 2021 and 2022, respectively. If the prices of solar power products continue to decrease, the carrying value of our existing inventory may exceed its market price in future periods, thus requiring us to make additional provisions for inventory valuation, which may have a material adverse effect on our financial position and results of operations.

Shortage or disruption of electricity supply may adversely affect our business.

We consume a significant amount of electricity in our operations. With the rapid development of the PRC economy, demand for electricity has continued to increase. There have been shortages or disruptions in electricity supply in various regions across China, especially during peak seasons, such as the summer, or when there are severe weather conditions. For example, our manufacturing facilities in Sichuan Province encountered power shortage in August 2022 as the local government imposed province-wide power rationing measures to ease the power shortage in the region. As a result of these measures, the production capacity of our manufacturing facilities in Sichuan Province was temporarily affected in August and September 2022. We cannot assure you that there will not be disruptions or shortages in our electricity supply or that there will be sufficient electricity available to us to meet our future requirements. Shortages or disruptions in electricity supply and any increases in electricity costs may significantly disrupt our normal operations, cause us to incur additional costs and adversely affect our profitability.

Any failure or significant interruption in our IT systems including software and hardware could harm our business.

We implement the information management through almost every aspect of our business operations, covering design, production scheduling, raw material supply, equipment management, quality control, inventory management, transportation management and environment monitoring. Our IT systems including software and hardware may experience disruptions, outages, damage and other large-scale performance problems due to a number of factors, including technology infrastructure changes, human or software errors, hardware failure, computer viruses, physical or electronic break-ins, fraud and security attacks, whether these problems are caused by ourselves or by third-party service providers. These problems could lead to system interruptions, website slowdown or unavailability, delays in data processing, leak and loss of data, malfunctions of software or damage to hardware. We cannot assure you that we will not experience such unexpected interruptions or breakdown in IT systems including software and hardware, or that our current security mechanisms will be sufficient to protect our IT systems from any third-party intrusions, viruses or hacker attacks, information or data theft, human damage or other similar activities. Any occurrence of these events could interrupt our business operations and damage our reputation. In addition, because the vulnerabilities and techniques used by unauthorized individuals or entities to access, disrupt or sabotage hardware, devices, systems and networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques, and we may not become aware in a timely manner of such a security breach, which could exacerbate any damage we experience.

While we have taken reasonable measures to protect the security of, and prevent the damage to, our IT systems, as well as the security of confidential or proprietary information, it is possible that our security controls and other security practices we follow may not be adequate or effective. We also rely on our employees and contractors to appropriately handle confidential and sensitive data, and to deploy our IT resources in a safe and secure manner that does not expose our IT systems to security breaches or the loss of data. Any data security incidents, including internal malfeasance by our employees, unauthorized access or usage, virus or similar breach or disruption of us or our service providers could result in loss of confidential or proprietary information, damage to our reputation, litigation, regulatory investigations, fines, penalties and other liabilities. Accordingly, if our cybersecurity measures fail to protect against unauthorized access, attacks (which may include sophisticated cyberattacks), the compromise or mishandling of data, damage to hardware or other misconduct or malfeasance by computer hackers, employees or other third parties, as well as software bugs, human error or technical malfunctions, our reputation, business, operating results and financial condition could be adversely affected.

Cybersecurity threats and attacks that we may be subject to may take a variety of forms ranging from individuals or groups of hackers to sophisticated organizations, including state-sponsored actors. Cybersecurity risks range from viruses, worms, and other malicious software programs, including phishing attacks, to “mega breaches” targeted against cloud services and other hosted software, any of which can result in disclosure of confidential or proprietary information. As the techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these attacks or to implement adequate preventative measures. In addition, there has been an increase in the frequency and sophistication of cyber and other security threats we face, and we may incur additional costs to comply with such demand.

We face intense competition in solar power product markets. If we fail to adapt to changing market conditions and to compete successfully with existing or new competitors, our business prospects and results of operations would be materially adversely affected.

The markets for solar power products are intensely competitive. We compete with manufacturers of solar power products such as Longi Green Energy Technology Co., Ltd., Trina Solar Ltd., Canadian Solar Inc. and JA Solar Holdings Co., Ltd., in a continuously evolving market. Certain downstream manufacturers, some of which are also our customers and suppliers, have also built out or expanded their silicon wafer, solar cell, or solar module production operations.

Some of our current and potential competitors have a longer operating history, stronger brand recognition, more established relationships with customers, greater financial and other resources, a larger customer base, better access to raw materials and greater economies of scale than we do. Furthermore, some of our competitors are integrated players in the solar industry that engage in the production of virgin polysilicon. Their business models may give them competitive advantages as these integrated players place less reliance on the upstream suppliers, downstream customers or both.

The solar industry faces competition from other types of renewable and non-renewable power industries.

The solar industry faces competition from other renewable energy companies and non-renewable power industries, including nuclear energy and fossil fuels such as coal, petroleum and natural gas. Technological innovations in these other forms of energy may reduce their costs or increase their safety. Large-scale new deposits of fossil fuel may be discovered, which could reduce their costs. Local governments may decide to strengthen their support for other renewable energy sources, such as wind, hydro, biomass, geothermal and ocean power, and reduce their support for the solar industry. The inability to compete successfully against producers of other forms of power would reduce our market share and negatively affect our results of operations.

Technological changes in the solar power industry could render our products uncompetitive or obsolete, which could reduce our market share and cause our revenue and net income to decline.

The solar power industry is characterized by evolving technologies and standards. These technological evolutions and developments place increasing demands on the improvement of our products, such as solar cells with higher conversion efficiency and larger and thinner silicon wafers and solar cells. Other companies may develop production technologies that enable them to produce silicon wafers, solar cells and solar modules with higher conversion efficiencies at a lower cost than our products. Some of our competitors are developing alternative and competing solar technologies that may require significantly less silicon than crystalline silicon wafers and solar cells, or no silicon at all. Technologies developed or adopted by others may prove more advantageous than ours for commercialization of solar power products and may render our products obsolete. As a result, we may need to invest significant resources in research and development to maintain our market position, keep pace with technological advances in the solar power industry, and effectively compete in the future. Our failure to further refine and enhance our products and processes or to keep pace with evolving technologies and industry standards could cause our products to become uncompetitive or obsolete, which could materially adversely reduce our market share and affect our results of operations.

Existing regulations and policies and changes to these regulations and policies may present technical, regulatory and economic barriers to the purchase and use of solar power products, which may significantly reduce demand for our products.

The market for electricity generation products is heavily influenced by government regulations and policies concerning the electric utility industry, as well as by policies adopted by electric utility companies. These regulations and policies often relate to electricity pricing and technical interconnection requirements for customer-owned electricity generation. In a number of countries, these regulations and policies are being modified and may continue to be modified. Customer purchases of, or further investment in the research and development of, alternative energy sources, including solar power technology, could be deterred by these regulations and policies, which could result in a significant reduction in the demand for our products. For example, without a regulatory mandated exception for solar power systems, utility customers may be charged interconnection or standby fees for putting distributed power generation on the electric utility grid. These fees could increase the cost of and reduce the demand for solar power, thereby harming our business, prospects, results of operations and financial condition.

In addition, we anticipate that solar power products and their installation will be subject to oversight and regulation in accordance with national and local regulations relating to building codes, safety, environmental protection, utility interconnection, and metering and related matters. Any new government regulations or utility policies pertaining to solar power products may result in significant additional expenses to the users of solar power products and, as a result, could eventually cause a significant reduction in demand for our products.

We may face termination and late charges and risks relating to the termination and amendment of certain equipment purchases contracts.

We transact with a limited number of equipment suppliers for all our principal manufacturing equipment and spare parts, including our silicon ingot furnaces, squaring machines, wire saws, diffusion furnaces, firing furnaces and screen print machine. We may rely on certain major suppliers to provide a substantial portion of the principal manufacturing equipment and spare parts as part of our expansion plan in the future. If we fail to develop or maintain our relationships with these and other equipment suppliers, or should any of our major equipment suppliers encounter difficulties in the manufacturing or shipment of its equipment or spare parts to us, including due to natural disasters or otherwise fail to supply equipment or spare parts according to our requirements, it will be difficult for us to find alternative providers for such equipment on a timely basis and on commercially reasonable terms. As a result, our production and result of operation could be adversely affected.

Selling our products on credit terms may increase our working capital requirements and expose us to the credit risk of our customers.

To accommodate and retain customers in the negative market environment, many solar module manufacturers, including us, make credit sales and extend credit terms to customers, and this trend is expected to continue in the industry. Most of our sales are made on credit terms and we allow our customers to make payments after a certain period of time subsequent to the delivery of our products. Our accounts receivable turnover were 68 days, 69 days and 74 days in 2020, 2021 and 2022, respectively. Correspondingly, we recorded provisions for accounts receivable from third parties of RMB293.4 million, RMB323.1 million and RMB584.1 million (US\$84.7 million) as of December 31, 2020, 2021 and 2022, respectively. Based on our ongoing assessment of the recoverability of our outstanding accounts receivable, and the consideration of the historical credit loss experience, current economic conditions, supportable forecasts of future economic conditions, and any recoveries in assessing the lifetime expected credit losses, we may need to continue to provide for credit losses and write off overdue accounts receivable we determine as not collectible.

Selling our products on credit terms has increased, and may continue to increase our working capital requirements, which may negatively affect our liquidity. We may not be able to maintain adequate working capital primarily through cash generated from our operating activities and may need to secure additional financing for our working capital requirements, which may not be available to us on commercially acceptable terms or at all.

In addition, we are exposed to the credit risk of customers to which we have made credit sales in the event that any of such customers becomes insolvent or bankrupt or otherwise does not make timely payments. For example, we sell our products on credit to certain customers in emerging or promising markets in order to gain early access to such markets, increase our market share in existing key markets or enhance the prospects of future sales with rapidly growing customers. There are high credit risks in doing business with these customers because they are often small, young and high-growth companies with significant unfunded working capital, inadequate balance sheets and credit metrics and limited operating histories. If these customers are not able to obtain satisfactory working capital, maintain adequate cash flow, or obtain construction financing for the projects where our solar products are used, they may be unable to pay for products they have ordered from us or for which they have taken delivery. Our legal recourse under such circumstances may be limited if the customers' financial resources are already constrained or if we wish to continue to do business with these customers.

We are exposed to various risks related to legal or administrative proceedings or claims that could adversely affect our financial condition, results of operations and reputation, and may cause loss of business.

Litigation in general can be expensive, lengthy and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict. We and/or our directors and officers may be involved in allegations, litigation or legal or administrative proceedings from time to time.

In November 2018, one of our customers in Singapore (the “Singapore Customer”) filed two Notices of Arbitration (“NoAs”) in two arbitrations with Arbitration No. ARB374/18/PPD (“ARB 374”) and Arbitration No. ARB375/18/PPD (“ARB 375”), respectively, against Jinko Solar Import & Export Co., Ltd. (“Jinko IE”) at Singapore International Arbitration Centre. These NoAs were subsequently amended by the Singapore Customer, and Jinko IE received the amended Notices of Arbitration from the Singapore Customer on December 20, 2018. The Singapore Customer claimed respectively in ARB 374 and ARB 375 that the photovoltaic solar modules supplied by Jinko IE to the Singapore Customer under the purchase agreement dated December 25, 2012 (“2012 Contract”) and January 28, 2013 (“2013 Contract”) were defective. The Singapore Customer sought, inter alia, orders that Jinko IE replace the modules and/or that Jinko IE compensate the Singapore Customer for any and all losses sustained by the Singapore Customer as a result of the supply of allegedly defective modules. In January 2019, Jinko IE issued its responses to the NoAs in ARB 374 and ARB 375, disputing the Singapore Customer’s reliance on the arbitration clauses in the 2012 Contract and the 2013 Contract, denying all claims raised by the Singapore Customer, and disputing that the Singapore Customer was entitled to the reliefs claimed in the arbitrations. Arbitration tribunals in both ARB 374 and ARB 375 were constituted on September 5, 2019, which directed on January 14, 2020 that (i) the Singapore Customer shall submit its statement of claim in both ARB 374 and ARB 375 and Jinko IE shall submit its statement of defense no later than five months after Singapore Customer’s submission of statement of claim; and (ii) the hearing of the arbitrations shall be bifurcated with the liability issue to be first determined by the tribunals, and then depending on the outcome of the liability issue, the issue of remedies/damages payable to be determined in the subsequent proceedings in such manner as may be directed by the tribunals. On August 7, 2020, the Singapore Customer submitted its statement of claim in both ARB 374 and ARB 375. In the statement of claim, the Singapore Customer maintained its claim that the photovoltaic solar modules supplied by Jinko IE to them under the 2012 Contract and the 2013 Contract were defective, and that Jinko IE should be liable in respect of all the modules supplied under the 2012 Contract and the 2013 Contract. On December 16, 2020, following Jinko IE’s request, the tribunals in both ARB 374 and ARB 375 directed that Jinko IE’s statement of defense should be submitted by February 11, 2021. On February 11, 2021, Jinko IE submitted its statement of defense and relevant evidence. In the statement of defense, Jinko IE (i) requested the tribunal to declare that it lacks jurisdiction over the dispute; and (ii) denied all the Singapore Customer claims and requested the same be dismissed by the tribunal. On February 22, 2021, upon mutual agreement by Jinko IE and the Singapore Customer, the tribunal directed that ARB 374 and ARB 375 should be consolidated. On August 24, 2021, the tribunal decided Jinko IE and the Singapore Customer’s respective Redfern Schedules. On October 5, 2021, Jinko IE and the Singapore Customer exchanged documents pursuant to the tribunal’s decision on the Redfern Schedules. On February 19, 2022, the Singapore Customer filed its Reply Memorial accompanied by all evidence, including factual exhibits, written witness statements, expert reports and legal authorities relied upon. On July 17, 2022, Jinko IE submitted its Rejoinder Memorial with all evidence correspondingly in reply to Reply Memorial. From October 10 to 21, 2022, the hearing for liability issue was held in Singapore, during which the tribunal heard the parties’ oral opening statements, evidence from the parties’ factual and expert witnesses, and oral closing statements. According to the tribunal’s directions, the parties submitted Post-hearing Briefs on January 20, 2023 and the Reply Post-hearing Briefs on March 3, 2023. Furthermore, in the event that Jinko IE is found liable on the liability issue, the issue of remedies or damages to be paid will be determined in a subsequent phase in the proceedings, with a separate procedural timeline for the provision of evidence (including expert evidence) and memorials on the appropriate remedy to be awarded by the tribunal. Based on the limited information currently available to us, it is difficult to provide an in-depth assessment of the Singapore Customer’s claims. We believe that Jinko IE has reasonable grounds to challenge the Singapore Customer’s claims in the arbitrations on jurisdiction and merits and will vigorously defend against the claims made by the Singapore Customer. Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and we are also unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

In March 2019, Hanwha Q CELLS (defined below) filed patent infringement lawsuits against our company and a number of our subsidiaries.

(i) On March 4, 2019, Hanwha Q CELLS USA Inc. and Hanwha Solutions Corporation (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation (registration no. 110111-0360935) during the course of the proceedings because of restructuring undertaken by its affiliate(s) in relation to ownership of the patent in suit) (collectively, “Plaintiffs A”) filed suit against JinkoSolar Holding Co., Ltd and several of its subsidiary entities, i.e. JinkoSolar (U.S.) Inc, Jinko Solar (U.S.) Industries Inc, Jinko Solar Co., Ltd, Zhejiang Jinko Solar Co., Ltd and Jinko Solar Technology Sdn.Bhd (collectively “Respondents”) at the U.S. International Trade Commission (“ITC”). In the complaint, it was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 purportedly owned by Hanwha Q CELLS & Advanced Materials Corporation and Plaintiffs A requested a permanent limited exclusion order and a cease and desist order be issued against the Respondents’ allegedly infringing products. On March 5, 2019, Hanwha Q CELLS & Advanced Materials Corporation filed a suit against the Respondents before the U.S. District Court for the District of Delaware (“District Court”) alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 allegedly owned by Hanwha Q CELLS & Advanced Materials Corporation and sought reliefs including compensation for alleged infringement activities, enhanced damages and reasonable attorney fees. On April 9, 2019, the ITC published the Notice of Institution on Federal Register. On April 15, 2019, the District Court granted our motion to stay the court litigation pending final resolution of the ITC. On May 3, 2019, the Respondents submitted their response to the complaint of Plaintiffs A to the ITC requesting ITC among other things to deny all relief requested by Plaintiffs A. On September 13, 2019, the Respondents filed motion for summary determination of non-infringement with ITC. On April 10, 2020, the administrative law judge issued the initial determination granting the Respondents’ motion for summary determination of non-infringement. On June 3, 2020, the ITC determined to affirm the initial determination issued by the administrative law judge granting respondents’ motions for summary determination of non-infringement and terminate the investigation (the “Final Determination”). On July 31, 2020, Plaintiffs A filed its petition to review with the United States Court of Appeals for the Federal Circuit against the ITC’s Final Determination. On August 27, 2020, the Respondents filed the motion to intervene of such appeal. Plaintiffs A filed its opening appeal brief in November 2020. The Respondents filed the principal brief in February 2021. On July 12, 2021, the United States Court of Appeals for the Federal Circuit affirmed the ITC’s findings that Respondents’ products do not infringe U.S. Patent No. 9,893,215. On June 27, 2022, the District Court entered a joint motion to dismiss the said court litigation.

(ii) On March 4, 2019, Hanwha Q CELLS GmbH (“Plaintiff B”), filed a patent infringement claim against JinkoSolar GmbH before the Düsseldorf Regional Court in Germany alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by JinkoSolar GmbH infringed EP2 220 689 purportedly owned by Plaintiff B. On April 10, 2019, JinkoSolar GmbH filed the first brief with the court stating JinkoSolar GmbH would defend itself against the complaint. On September 9, 2019, JinkoSolar GmbH filed its statement of defense with the court (the “Statement of Defense”), requesting that the claim be dismissed and that Plaintiff B to bear the costs of the legal dispute. On March 3, 2020, Plaintiff B filed its reply to the Statement of Defense with the court. On April 20, 2020, JinkoSolar GmbH filed its rejoinder with the court commenting on Plaintiff B’s reply on March 3, 2020. On May 5, 2020, the oral hearing regarding the validity of the EP2 220 689, Plaintiff B’s entitlement to sue, and the infringement was held before the Düsseldorf Regional Court. On June 16, 2020, the Düsseldorf Regional Court sided with Plaintiff B and ordered that the third party cell technology contained in certain modules delivered by JinkoSolar GmbH infringes Plaintiff B’s patent (the “Judgment”). JinkoSolar GmbH filed its notice of appeal on July 14, 2020. On October 16, 2020, JinkoSolar GmbH submitted grounds of appeal to the Düsseldorf Higher Regional Court. On March 1, 2021, JinkoSolar GmbH submitted appeal joinder to the Düsseldorf Higher Regional Court. On September 28, 2020, Plaintiff B has submitted the request for penalty to Düsseldorf Regional Court, claiming that JinkoSolar GmbH violated the Judgment by continuing to promote infringing products and requesting imposition of penalty for such violation. Though not specified in Plaintiff B’s request, in general we do not expect the amount of such penalty to exceed €250,000. On November 30, 2020, JinkoSolar GmbH submitted its response to Plaintiff B’s request for penalty. On April 6, 2021, JinkoSolar GmbH submitted its second response to Plaintiff B’s request for penalty. On August 23, 2021, Düsseldorf Regional Court dismissed Plaintiff B’s request for penalty. The oral proceedings at the Düsseldorf Higher Regional Court was held on March 30, 2023. Following this hearing, the Düsseldorf Higher Regional Court decided on April 20, 2023 that evidence should be taken by firstly hearing a witness and subsequently obtaining a written technical opinion from a court appointed expert. The probability of winning the case on the appeal level is difficult to assess. In case the proceeding is lost, JinkoSolar GmbH would have to stop distributing the third-party cells, which was done already so that there would be no additional damage. Furthermore, the request for information and damages was withdrawn in the first instance and cannot be reinstalled in the second instance at the court of appeals level. Therefore, there is no danger for payment of damages.

(iii) On March 12, 2019, Hanwha Solutions Corporation (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation during the course of the proceedings) and Hanwha Q CELLS Australia Pty Ltd (“Plaintiffs C”, together with Plaintiffs A and Plaintiff B, “Hanwha Q CELLS Plaintiffs”) filed suit at Federal Court of Australia (“FCA”) against Jinko Solar Australia Holdings Co. Pty Ltd (“Jinko AUS”). It was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by Jinko AUS infringed Australian Patent No. 2008323025 purportedly owned by Plaintiffs C. The relief sought by Plaintiffs C includes a declaration of infringement, injunctions restraining future acts of commercial exploitation by way of importing, offering to supply and supplying the relevant products; ancillary relief by way of delivery up for destruction of allegedly infringing product and pecuniary remedies by way of damages (including additional damages) or, at Hanwha’s election, an account of profits; and declarations and injunctions based on the misleading or deceptive conduct claim. It is expected that issues relating to pecuniary relief and their quantum will be separated and deferred for determination after the liability hearing. The FCA served Jinko AUS as the Respondent and the first case management hearing was held on April 12, 2019. The FCA heard the application, and made orders for the conduct of the proceeding at the first case management hearing, following which Jinko AUS submitted its defense and cross-claim to Plaintiffs C’s statement of claim on July 22, 2019. Shortly before the second case management hearing which was held on October 2, 2019, Plaintiffs C requested an amendment to Australian Patent No. 2008323025 (“Amendment Application”) on the stated basis of overcoming prior art relevant to validity and it also appeared that one of the amendments sought by Plaintiffs C was with a view to improving its position in relation to Jinko AUS’s defense to infringement. Plaintiffs C’s Amendment Application was opposed by Jinko AUS and the other Australian respondents and FCA directed Plaintiffs C to give discovery and produce documents in respect to the Amendment Application. The third case management hearing was held on December 13, 2019, after which Jinko AUS submitted particulars of opposition to the Amendment Application and requested for further and better discovery in respect to the Amendment Application. As a result, Hanwha subsequently dropped the amendment in relation to Jinko AUS’s defense to infringement and opposition to the remaining Amendment Application continued for some time but was ultimately not pursued by Jinko AUS and the other Australian respondents. The FCA granted Plaintiffs C’s Amendment Application on August 28, 2020. Following the order directed by FCA at the case management hearing held on November 16, 2020, Plaintiffs C’s has filed its infringement statement at FCA on December 17, 2020 and refers to certain testing undertaken in South Korea in 2018 prior to the commencement of the proceeding, and Jinko AUS has filed a precise non-infringement statement identifying the reasons why certain photovoltaic solar cells and modules supplied by Jinko AUS do not infringe Australian Patent No. 2008323025 on March 9, 2021. Since then, the parties have taken multiple procedural steps required by the court’s directions in relation to infringement and validity claims and defences. The final hearing was held from September 23 to 30 and October 10 to 14, 2022. As of the date of the issuance of the financial statements, this Judge has reserved his decision and based on the information currently available, there presently remains no indication that it is probable the court will award any liability for infringement against Jinko AUS and we are unable to estimate an amount of reasonably possible loss or range of loss.

We believe that Hanwha Q CELLS Plaintiffs’ claims in all the above-mentioned cases are lacking legal merit, and will vigorously defend against the claims made by them. We are considering all legal avenues including challenging the validity of U.S. Patent No. 9,893,215 (“the ‘215 Patent”), EP 2 220 689 and Australian Patent No. 2008323025 (collectively, the “Asserted Patents”), and demonstrating our non-infringement of the Asserted Patents. On June 3, 2019, we filed a petition for inter partes review (“IPR”) of the ‘215 Patent with the U.S. Patent and Trademark Appeal Board (“PTAB”). IPR is a trial proceeding conducted at the PTAB to review the patentability of one or more claims in a patent. On December 10, 2019, the PTAB instituted the IPR proceedings of the patentability of claims 12-14 of the ‘215 patent claims in view of prior art. On September 9, 2020, we attended the oral hearing of IPR of the ‘215 patent. On December 9, 2020, the PTAB issued the final decision on our petition for IPR, finding that all challenged claims 12-14 of the ‘215 patent are unpatentable. On February 8, 2021, the patent owner of ‘215 Patent, Hanwha Solutions Corporation, appealed to the United States Court of Appeals for the Federal Circuit against such final decision issued by the PTAB (“‘215 IPR Appeal”). On February 24, 2021, we filed the certificate of interest to participate in ‘215 IPR Appeal. On May 28, 2021, Hanwha Solutions Corporation filed its opening appeal brief. On July 19, 2021, Hanwha Solutions Corporation filed a motion to remand the case to the United States Patent and Trademark Office. On October 4, 2021, the United States Court of Appeals for the Federal Circuit denied Hanwha Solutions Corporation’s motion to remand. On June 10, 2022, the United States Court of Appeals for the Federal Circuit affirmed the said final decision issued by PTAB that all challenged claims 12-14 of the ‘215 patent are unpatentable.

On June 24, 2019, Jinko filed with the European Patent Office a Notice of Intervention in the opposition proceeding regarding the validity of the EP 2 220 689. On March 25 and March 26, 2021, the opposition oral hearing regarding the validity of the EP2 220 689 was held before the European Patent Office. During the hearing, the European Patent Office held that the EP2 220 689 was maintained in amended form. An additional hearing was held on September 28 and 29, 2022, during which the opposition division finally decided to uphold the patent with the limited claims and an amended version of the patent description. Currently, the European Patent Office has not yet issued its decision including the grounds in writing.

On May 7, 2021, one of our Spanish customers (the “Spanish Customer”) submitted a Request for arbitration at International Chamber of Commerce (Case No. 26251/JPA) against Jiangxi Jinko in connection with dispute arising out of a PV Module Sales Contract entered into in August, 2020 (“Contract”). In the Request Spanish Customer’s claims are based on (1) Jiangxi Jinko’s alleged breaches of the Contract by being unable to deliver the goods at the initially agreed shipping dates and price; (2) the subsequent termination of the Contract by the Spanish Customer; (3) alleged replacement purchases the Spanish Customer has made to replace the goods originally ordered from Jiangxi Jinko; and (4) alleged further costs and other indirect damages purportedly incurred by the Spanish Customer as a consequence of Jiangxi Jinko’s alleged breaches and relating to the PV plant in Australia for which the goods had been intended. On July 21, 2021, Jiangxi Jinko submitted the Answer to the Request and Counterclaim, denying that the Spanish Customer is entitled to the relief it requests and raising a counterclaim for damages its loss of profit as well as wasted costs expended in reliance on the performance of the Contract. On January 28, 2022, the tribunal confirmed the Terms of Reference and Procedural Order No.1 signed by the Spanish Customer and Jiangxi Jinko, according to which, except any extension granted by the tribunal, (1) the Spanish Customer will submit Statement of Claim before April 6, 2022 and Jiangxi Jinko will submit Statement of Defense and Counterclaim before June 6, 2022, (2) the Spanish Customer will submit Statement of Reply and Defense to Counterclaim before September 6, 2022, Jiangxi Jinko will submit Statement of Rejoinder and Reply on Counterclaim before November 4, 2022 and the Spanish Customer will submit Rejoinder on Counterclaim before December 19 2022, (3) the hearing will be held during the week of April 17, 2023. On April 6, 2022, the Spanish Customer submitted Statement of Claim, which maintained the claims as the Request and additionally claimed the legal interest accrued on the amounts requested. On June 6, 2022, Jiangxi Jinko rejected the claims and brought the counterclaim for the wrongful termination in its submission of Statement of Defense and Counterclaim. On September 6, 2022, the Spanish Customer submitted Statement of Reply and Defense to Counterclaim to maintain its positions. On November 4, 2022, Jiangxi Jinko repeatedly denied the claims and claimed for the damages in its submission of Statement of Rejoinder and Reply on Counterclaim. On December 19, 2022, the Spanish Customer submitted Rejoinder on Counterclaim. The hearing took place from April 18 to 19, 2023 in Madrid. As of the date of the issuance of the financial statements, this case is still ongoing and based on the information currently available, the company does not believe that it is probable that Jiangxi Jinko has incurred a loss and the company is unable to estimate an amount of reasonably possible loss or range of loss.

On June 17, 2022, one of our Indian customers (the “Indian Customer”) submitted a Request for arbitration at International Chamber of Commerce (Case No. 27085/OSI) against Jiangxi Jinko in connection with dispute arising out of a project module supply agreement entered into in May 2017 (“Supply Agreement”). The Indian Customer further submitted Statement of Claim on December 9, 2022, in which the Indian Customer confirmed it does not pursue its claims requiring Jiangxi Jinko to repair or replace relevant modules under the warranty certificate and amended the amount of damages as follows: (i) delay Liquidated Damages in the amount of US\$363.3 million; (ii) costs arising from or in connection with the construction / installation of 32MW of additional capacity for the purpose of making up alleged shortfall in the performance of the plant due to allegedly deficient and/or defective modules in the amount of US\$14.1 million; and (iii) liquidated damages levied against the EPC Contractor by the owner of the plant in the amount of US\$14.6 million, together totalling US\$392.0 million. Jiangxi Jinko submitted Statement of Defence and Counterclaim on March 10, 2023, strongly defending itself and claiming that the Indian Customer failed to pay the invoices amounting to US\$5.3 million. According to the current schedule of the arbitration procedure, the International Chamber of Commerce is expected to render the final award by July 30, 2024. As of the date of this annual report, the hearing has not yet commenced. As this case is still ongoing and based on the information currently available to us, it is uncertain at this stage of the arbitration to conclude that whether Jiangxi Jinko will have be subject to any liability or to reasonably estimate the possible amount to be awarded.

Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and we are also unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

In addition, failure to maintain the integrity of internal or customer data could result in harm to our reputation or subject us to costs, liabilities, fines or lawsuits.

Regardless of the merits, responding to allegations, litigation or legal or administration proceedings and defending against litigation can be time-consuming and costly, and may result in us incurring substantial legal and administrative expenses, as well as divert the attention of our management. Any such allegations, lawsuits or proceedings could have a material adverse effect on our business operations. Further, unfavorable outcomes from these claims or lawsuits could adversely affect our business, financial condition and results of operations.

We may continue to undertake acquisitions, investments, joint ventures or other strategic alliances, and such undertakings may be unsuccessful.

We may continue to grow our operations through acquisitions, participation in joint ventures or other strategic alliances with suppliers or other companies in China and overseas along the solar power industry value chain in the future. Such acquisitions, participation in joint ventures and strategic alliances may expose us to new operational, regulatory, market and geographical risks as well as risks associated with additional capital requirements and diversion of management resources. Our acquisitions may expose us to the following risks:

- There may be unforeseen risks relating to the target's business and operations or liabilities of the target that were not discovered by us through our legal and business due diligence prior to such acquisition. Such undetected risks and liabilities could have a material adverse effect on our business and results of operations in the future.
- There is no assurance that we will be able to maintain relationships with previous customers of the target, or develop new customer relationships in the future. Loss of our existing customers or failure to establish relationships with new customers could have a material adverse effect on our business and results of operations.
- Acquisitions will generally divert a significant portion of our management and financial resources from our existing business and the integration of the target's operations with our existing operations has required, and will continue to require, significant management and financial resources, potentially straining our ability to finance and manage our existing operations.
- There is no assurance that the expected synergies or other benefits from any acquisition or joint venture investment will actually materialize. If we are not successful in the integration of a target's operations, or are otherwise not successful in the operation of a target's business, we may not be able to generate sufficient revenue from its operations to recover costs and expenses of the acquisition.
- Acquisition or participation in new joint venture or strategic alliance may involve us in the management of operation in which we do not possess extensive expertise.

The materialization of any of these risks could have a material adverse effect on our business, financial condition and results of operations.

Our long-term investment which accounted for using fair value option is subject to uncertainties in accounting estimates. Fluctuations in the changes in fair value of these assets would affect our financial results.

We have invested in, and intend to continue to selectively invest in, businesses that complement our existing business and may make other financial investments. We recorded long-term investment which accounted for using fair value option of nil, nil and RMB101.9 million (US\$14.8 million) for 2020, 2021 and 2022, respectively. The long-term investment which accounted for using fair value option mainly represented our equity investment in a private company, which is our PV material supplier. The fair value changes in our long-term investment which accounted for using fair value option may negatively affect our financial performance. The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. Factors beyond our control can cause adverse changes to the estimates we use and thus adversely affect the fair value of our unlisted investments. These factors include changes in general economic conditions, market liquidity, asset values, and performance of the companies we invested in. As a result, asset valuations in future periods, reflecting then-prevailing market conditions, may result in negative changes in the fair values of our unlisted investments. Moreover, the value ultimately realized by us on disposal of these investments may be lower than their current fair value. Any of the foregoing factors could have an adverse impact on our results of operations and financial condition.

We may be subject to non-competition or other similar restrictions or arrangements relating to our business.

We may from time to time enter into non-competition, exclusivity or other restrictions or arrangements of a similar nature as part of our sales agreements with our customers. Such restrictions or arrangements may significantly hinder our ability to sell additional products, or enter into sales agreements with new or existing customers that plan to sell our products, in certain markets. As a result, such restrictions or arrangements may have a material adverse effect on our business, financial condition and results of operations.

In October 2016, we entered into a side agreement with JinkoPower and the investors of JinkoPower, pursuant to the non-compete provisions of which we undertake not to develop any downstream solar power project with a capacity of over 2 MW in China after the disposition of our equity interest in JinkoPower in the fourth quarter of 2016. This non-competition covenant may adversely affect our growth prospects in China.

In September 2017, we provided a non-compete commitment to JinkoPower where we undertake to cease developing new downstream solar projects. In addition, for our existing offshore downstream solar power projects that we are constructing and will connect to the grid, we undertake to endeavor to cause those projects to be transferred to JinkoPower, its subsidiaries or other qualified third parties, to the extent that such transfers will not contravene with applicable laws and regulations and that we are able to obtain written consent of the relevant contracting parties for those projects. This non-competition undertaking may adversely affect our operating results.

The NEA released a “Technology Top Runner” program in 2017, which has more stringent technology standards than other “Top Runner” programs, to promote solar projects using higher-efficiency modules (requiring a conversion efficiency rate of 18.9% or above for monocrystalline solar cells and 18.0% or above for multicrystalline solar cells) and most advanced technologies (especially breakthrough technologies that have not reached the stage of mass production). In order to promote our high-efficiency modules and cutting-edgy N-type cell technologies, (i) we and JinkoPower jointly established Poyang Luohong Power Co., Ltd. (“Poyang Luohong”), a PRC company, in the third quarter of 2018, in which we then held 51% equity interest and had made capital contribution of RMB98 million in cash as of December 31, 2018, and (ii) we formed a bidding consortium with JinkoPower to bid for “Technology Top Runner” solar projects, and had won a 250 MW “Technology Top Runner” solar project in Shangrao, Jiangxi Province (the “Technology Top Runner Project”). We supplied N-type monocrystalline modules to this project, whose conversion efficiency is even higher than our P-type monocrystalline passivated emitter rear cell (“PERC”) modules. The Technology Top Runner Project was developed by Poyang Luohong. We sold all of our equity interest in Poyang Luohong to an independent third party, and filed the change of ownership with Shangrao Market Supervision Administration on December 17, 2019. We currently do not have plans to develop solar projects in China or overseas. As of December 31, 2022, we did not own any solar project in China, and we had only one solar power project in operation and one project under construction outside China.

Our substantial indebtedness could adversely affect our business, financial condition and results of operations.

We typically require a significant amount of cash to meet our capital requirements, including the expansion of our production capacity, as well as to fund our operations. As of December 31, 2022, we had RMB12.42 billion (US\$1.80 billion) in outstanding short-term borrowings (including the current portion of long-term borrowings and failed sale-leaseback financing) and RMB13.02 billion (US\$1.89 billion) in outstanding long-term borrowings (excluding the current portion of long-term borrowings and failed sale-leaseback financing). For details regarding our borrowings, see “Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources” in this annual report.

We may not have sufficient funds available to meet our payment obligations in light of the amount of bank borrowings due in the near term future. This level of debt and the imminent repayment of our notes and other bank borrowings could have significant consequences on our operations, including:

- reducing the availability of our cash flow to fund working capital, capital expenditures, acquisitions and other general corporate purposes as a result of our debt service obligations, and limiting our ability to obtain additional financing;
- limiting our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industry in which we operate and the general economy; and
- potentially increasing the cost of any additional financing.

Any of these factors and other consequences that may result from our substantial indebtedness could have an adverse effect on our business, financial condition and results of operations as well as our ability to meet our payment obligations under our debt.

In addition, we are exposed to various types of market risk in the normal course of business, including the impact of interest rate changes. As of December 31, 2022, RMB270.5 million (US\$39.2 million) of our long-term borrowings bears interest at variable rates, generally linked to market benchmarks such as the benchmark interest rate issued by local banks. Any increase in interest rates would increase our finance expenses relating to our variable rate indebtedness and increase the costs of refinancing our existing indebtedness and issuing new debt. Furthermore, since the majority of our short-term borrowings came from Chinese banks, we are exposed to lending policy changes by the Chinese banks. If the Chinese government changes its macroeconomic policies and forces Chinese banks to tighten their lending practices, or if Chinese banks are no longer willing to provide financing to solar power companies, including us, we may not be able to extend our short-term borrowings or make additional borrowings in the future.

We may incur gain or loss in relation to our change in the fair value of our financial instruments. The change in fair value of financial instruments may fluctuate significantly from period to period due to factors that are largely beyond our control, and may result in us recording substantial gains or losses as a result of such changes. As a result of the foregoing, you may not be able to rely on period to period comparisons of our operating results as an indication of our future performance.

Our failure to maintain sufficient collateral under certain pledge contracts for our short-term loans may materially adversely affect our financial condition, liquidity and results of operations.

As of December 31, 2022, we had short-term borrowings, including the current portion of long-term borrowings and failed sale-leaseback financing, of RMB2.10 billion (US\$304.8 million), secured by certain of our inventory, land use rights, property, plant and equipment, bank deposit and accounts receivable. We cannot assure you that we will not be requested by the pledgees to provide additional collateral to bring the value of the collateral to the level required by the pledgees if our inventory depreciates in the future. If we fail to provide additional collateral upon request, the pledgees will be entitled to require the immediate repayment of the outstanding bank loans. In addition, the pledgees may auction or sell the inventory. Furthermore, we may be subject to liquidated damages pursuant to relevant pledge contracts. Although the pledgees have conducted regular site inspections on our inventory since the pledge contracts were executed, they have not requested us to provide additional collateral or take other remedial actions. However, we cannot assure you the pledgees will not require us to provide additional collateral in the future or take other remedial actions or otherwise enforce their rights under the pledge contracts and loan agreements. If any of the foregoing occurs, our financial condition, liquidity and results of operations may be materially adversely affected.

We rely principally on dividends and other distributions on equity paid by our principal operating subsidiary, and limitations on their ability to pay dividends to us could have a material adverse effect on our business and results of operations.

We are a holding company and rely principally on dividends paid by Jiangxi Jinko, our principal operating subsidiary, for cash requirements. Applicable PRC laws, rules and regulations permit payment of dividends by our PRC subsidiaries only out of their retained earnings, if any, determined in accordance with PRC accounting standards. Our PRC subsidiaries are required to set aside a certain percentage of their after-tax profit based on PRC accounting standards each year as reserve funds for future development and employee benefits, in accordance with the requirements of relevant laws and provisions in their respective articles of associations. The percentage should not be less than 10%, unless the reserve funds reach 50% of our registered capital. In addition, under PRC laws, our PRC subsidiaries are prohibited from distributing dividends if there is a loss in the current year. As a result, our PRC subsidiaries may be restricted in their ability to transfer any portion of their net income to us whether in the form of dividends, loans or advances. Any limitation on the ability of our subsidiaries to pay dividends to us could materially adversely limit our ability to grow, make investments or acquisitions that could be beneficial to our businesses, pay dividends or otherwise fund and conduct our business.

Although we completed the STAR Listing, we may not achieve the results contemplated by our business strategy (including with respect to use of proceeds from that offering) and therefore the price of the ADSs may not increase, or may even drop.

In January 2022, we completed the initial public offering of Jiangxi Jinko, on the Shanghai Stock Exchange's Sci-Tech innovation board (the "STAR Listing"). Jiangxi Jinko is our majority owned principal operating subsidiary. We conduct substantially all of our business through Jiangxi Jinko and its subsidiaries. Although the STAR Listing has been completed, we cannot assure you that we will realize any or all of our anticipated benefits of the STAR Listing. Our completion of the STAR Listing may not have the anticipated effects of strengthening our market position and operations in the PRC. Jiangxi Jinko has broad discretion in the use of the proceeds from the STAR Listing, and it may not spend or invest those proceeds in a manner that results in our operating success or with which holders of our shares and ADSs agree. Our failure to successfully leverage the completion of the STAR Listing to expand our production capacity in the PRC could result in a decrease in the price of the ADSs. In addition, we cannot assure you that the success of Jiangxi Jinko will have an attendant positive effect on the price of the ADSs.

Jiangxi Jinko's status as a publicly traded company that is controlled, but less than wholly owned, by our company could have an adverse effect on us.

As the result of actions that were taken in connection with the STAR Listing, including placement of shares by Jiangxi Jinko, our principal operating subsidiary, to certain PRC investors and our controlling shareholders, Jiangxi Jinko is no longer a wholly owned subsidiary of our company. This non-controlling interest in Jiangxi Jinko increased after completion of the STAR Listing, and the interests in Jiangxi Jinko of these minority shareholders may diverge from the interests of our company and our other subsidiaries in the future. We may face conflicts of interest in managing, financing or engaging in transactions with Jiangxi Jinko, or allocating business opportunities between our subsidiaries.

After the completion of the STAR Listing, we own approximately 58.62% of Jiangxi Jinko and retain majority ownership of Jiangxi Jinko, but Jiangxi Jinko is managed by a separate board of directors and officers and those directors and officers owe fiduciary duties to the various stakeholders of Jiangxi Jinko, including shareholders other than our wholly-owned subsidiary. In the operation of Jiangxi Jinko's business, there may be situations that arise whereby the directors and officers of Jiangxi Jinko, in the exercise of their fiduciary duties, take actions that may be contrary to the best interests of our company.

After the completion of the STAR Listing, given Jiangxi Jinko and our Company are public reporting companies listed on the Shanghai Stock Exchange and the NYSE, respectively, each of them are subject to separate and potentially inconsistent accounting standards (PRC GAAP for Jiangxi Jinko and U.S. GAAP for our Company) as well as disclosure and other regulatory requirements. As a result, Jiangxi Jinko and our Company will periodically disclose information simultaneously pursuant to different laws and regulations, and the information disclosed by these two listed companies may differ due to distinct and potentially inconsistent accounting standards applicable to these two companies and disclosure requirements by different securities regulatory authorities in the composition of investors in the United States and PRC, and in the capital markets of the United States and the PRC. Different disclosures may lead to confusion or uncertainty among investors in the publicly traded shares of one or both of these companies. In addition, there might be future requirements of the PRC law, including demands from the CSRC, the Shanghai Stock Exchange or other relevant authorities, that might have a bearing on holders of our ordinary shares and ADSs. For example, during the Star Listing process, in order to comply with the PRC law, some of our senior management resigned from our company, while retaining the same roles at Jiangxi Jinko. In the future, Jiangxi Jinko may issue options, restricted shares and other forms of share-based compensation to its directors, officers and employees, which could dilute our company's ownership in Jiangxi Jinko. In addition, Jiangxi Jinko may engage in capital raising activities in the future that could further dilute our company's ownership interest.

Our organizational structure has become and may in the future become more complex. We will need to continue to scale and adapt our operational, financial and management controls, as well as our reporting systems and procedures, at both our company and Jiangxi Jinko. The continued expansion of our infrastructure will require us to commit substantial financial, operational and management resources before our revenue increases and without any assurances that our revenue will increase.

It is difficult to predict the effect of the STAR Listing on the market price of the ADSs.

The China Securities Regulatory Commission, or the CSRC, initially launched the STAR Market in June 2019 and trading on the Market began in July 2019. No assurance can be given regarding the effect of the STAR Listing on the market price of the ADSs. The market price of the ADSs may be volatile or may decline, for reasons other than the risk and uncertainties described above, as the result of investor negativity or uncertainty with respect to the impact of the STAR Listing.

Investors may elect to invest in our business and operations by purchasing Jiangxi Jinko's shares in the STAR Listing or on the STAR Market rather than purchasing the ADSs, and that reduction in demand could lead to a decrease in the market price for the ADSs.

Any failure to maintain effective internal control could have a material adverse effect on our business, results of operations and the market price of the ADSs.

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

Our management and independent registered public accounting firm have concluded that our internal control over financial reporting as of December 31, 2022 was effective. However, we cannot assure you that in the future our management or our independent registered public accounting firm will not identify material weaknesses during the Section 404 of the Sarbanes-Oxley Act audit process or for other reasons. In addition, because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. As a result, if we fail to maintain effective internal control over financial reporting or should we be unable to prevent or detect material misstatements due to error or fraud on a timely basis, investors could lose confidence in the reliability of our financial statements, which in turn could harm our business, results of operations and negatively impact the market price of the ADSs, and harm our reputation. Furthermore, we have incurred and expected to continue to incur considerable costs and to use significant management time and other resources in an effort to comply with Section 404 and other requirements of the Sarbanes-Oxley Act.

Failure to achieve satisfactory production volumes of our products could result in higher unit production costs.

The production of silicon wafers, solar cells, solar modules and recovered silicon materials involves complex processes. Deviations in the manufacturing process can cause a substantial decrease in output and, in some cases, disrupt production significantly or result in no output. From time to time, we have experienced lower-than-anticipated manufacturing output during the ramp-up of production lines. This often occurs during the introduction of new products, the installation of new equipment or the implementation of new process technologies. As we bring additional lines or facilities into production, we may operate at less than intended capacity during the ramp-up period. In addition, the demand in global solar power product market may decrease, including the demand for solar modules, which may also cause us to operate at less than intended capacity. This would result in higher marginal production costs and lower output, which could have a material adverse effect on our business, financial condition and results of operations.

Demand for solar power products may be adversely affected by seasonality.

Demand for solar power products tends to be weaker during the winter months partly due to adverse weather conditions in certain regions, which complicate the installation of solar power systems, our operating results may fluctuate from period to period based on the seasonality of industry demand for solar power products. Our sales in the first quarter of any year may also be affected by the occurrence of the Chinese New Year holiday during which domestic industrial activity is normally lower than that at other times. Such fluctuations may result in the underutilization of our capacity and increase our average costs per unit. In addition, we may not be able to capture all of the available demand if our capacity is insufficient during the summer months. As a result, fluctuations in the demand for our products may have a material adverse effect on our business, financial condition and results of operations.

Unsatisfactory performance of or defects in our products may cause us to incur additional expenses and warranty costs, damage our reputation and cause our sales to decline.

Our products may contain defects that are not detected until after they are shipped or inspected by our customers.

Our silicon wafer sales contracts normally require our customers to conduct inspection before delivery. We may, from time to time, allow those of our silicon wafer customers with good credit to return our silicon wafers within a stipulated period, which normally ranges from 7 to 15 working days after delivery, if they find our silicon wafers do not meet the required specifications. Our standard solar cell sales contract requires our customer to notify us within 7 days of delivery if such customer finds our solar cells do not meet the specifications stipulated in the sales contract. If our customer notifies us of such defect within the specified time period and provides relevant proof, we will replace those defective solar cells with qualified ones after our confirmation of such defects.

Our solar modules are typically sold with a 10-year warranty for material and workmanship and a 25-year (30-year for dual glass module) linear power output warranty against the maximum degradation of the actual power output for each year after the warranty start date. If a solar module is defective during the relevant warranty period, we will either repair or replace the solar module. As we continue to increase our sales to the major export markets, we may be exposed to increased warranty claims.

In May 2011, we engaged PowerGuard Specialty Insurance Services (“PowerGuard”), a firm specialized in unique insurance and risk management solutions for the wind and solar energy industries, to provide insurance coverage for the product warranty services of our solar modules worldwide effective from May 1, 2011. We renewed the insurance policy provided by PowerGuard upon its expiration in every May from 2011 to 2019. The policy offered back-to-back coverage through a maximum of ten-year limited product defects warranty, as well as a 25-year (30-year for dual glass module) linear warranty against degradation of module power output from the time of delivery. In April 2020, our engagement with PowerGuard expired. In December 2018, we engaged Ariel Syndicate 1910 of Lloyd’s (“Ariel Re”), a firm specialized in unique insurance and risk management solutions for the wind and solar energy industries, to provide insurance coverage for the product warranty services of our solar modules worldwide effective from May 2019. We renewed the insurance policy provided by Ariel Re from 2021 to 2022. The policy offers back-to-back coverage through a maximum of ten-year limited product defects warranty, as well as a 25-year (30-year for dual glass module) linear warranty against degradation of module power output from the time of delivery. In January 2023, we engaged Munich Re to provide insurance coverage for the product warranty services of our solar modules worldwide effective from January 1, 2023. The policy offers back-to-back coverage through a maximum of 15-year limited product defects warranty, as well as a 30-year linear warranty against degradation of module power output from the time of delivery.

If we experience a significant increase in warranty claims, we may incur significant repair and replacement costs associated with such claims. In addition, product defects could cause significant damage to our market reputation and reduce our product sales and market share, and our failure to maintain the consistency and quality throughout our production process could result in substandard quality or performance of our products. If we deliver our products with defects, or if there is a perception that our products are of substandard quality, we may incur substantially increased costs associated with returns or replacements of our products, our credibility and market reputation could be harmed and our sales and market share may be materially adversely affected.

Fluctuations in exchange rates could adversely affect our results of operations.

We derive a substantial portion of our sales from international customers and a significant portion of our total revenue have been denominated in foreign currencies, particularly, Euros and U.S. dollars. Our sales outside China represented 81.9%, 75.2% and 58.1% of our total revenue in 2020, 2021 and 2022, respectively. As a result, we may face significant risks resulting from currency exchange rate fluctuations, particularly, among Renminbi, Euros and U.S. dollars. For example, we expect our revenue and gross margin to be adversely affected by the recent appreciation of Renminbi against U.S. dollars, as a substantial portion of our sales are denominated in U.S. dollars. Furthermore, we have outstanding debt obligations, and may continue to incur debts from time to time, denominated and repayable in foreign currencies. We incurred a foreign exchange loss of RMB336.5 million in 2020, a foreign exchange loss of RMB355.5 million in 2021 and a foreign exchange gain of RMB1.03 billion (US\$148.7 million) in 2022. We cannot predict the impact of future exchange rate fluctuations on our results of operations and may incur net foreign currency losses in the future.

Our consolidated financial statements are expressed in Renminbi. The functional currency of our principal operating subsidiary, Jiangxi Jinko, is also Renminbi. To the extent we hold assets denominated in Euros or U.S. dollars, any appreciation of Renminbi against the Euro or U.S. dollar could reduce the value of our Euro-or U.S. dollar-denominated consolidated assets. On the other hand, if we decide to convert our Renminbi amounts into Euros or U.S. dollars for business purposes, including foreign debt service, a decline in the value of Renminbi against the Euro or U.S. dollar would reduce the Euro or U.S. dollar equivalent amounts of the Renminbi we convert. In addition, a depreciation of Renminbi against the U.S. dollar could reduce the U.S. dollar equivalent amounts of our financial results and the dividends we may pay in the future, if any, all of which may have a material adverse effect on the price of the ADSs.

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 the regular five-year review of the basket of currencies that make up the Special Drawing Right (the “SDR”), and decided that with effect from October 1, 2016, Renminbi will 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 RMB has depreciated significantly in the backdrop of a surging U.S. dollar and persistent capital outflows of China. With the development of the foreign exchange market and progress towards interest rate liberalization and Renminbi internationalization, the PRC government may in the future announce further changes to the exchange rate system and we cannot assure you that the Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future. Any currency exchange losses we recognize may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currency.

Limited hedging transactions are available in China to reduce our exposure to exchange rate fluctuations. Although we have entered into a number of foreign-exchange forward contracts and foreign exchange options with local banks to manage our risks associated with foreign-exchange rates fluctuations, we cannot assure you that our hedging efforts will be effective. Our currency exchange losses may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currency. As a result, fluctuations in exchange rates may have a material adverse effect on our results of operations.

Our operating history may not be a reliable predictor of our prospects and future results of operations.

We commenced processing recoverable silicon materials in June 2006, and manufacturing silicon wafers in 2008. We commenced producing solar cells in July 2009 following our acquisition of Zhejiang Jinko, which has manufactured solar cells since June 2007, and we commenced producing solar modules in August 2009.

Although our revenue experienced significant growth in the past, we cannot assure you that our revenue will increase at previous rates or at all, or that we will be able to continue to operate profitably in future periods. We also experienced net losses in each quarter from the fourth quarter of 2011 to the first quarter of 2013. Our operating history may not be a reliable predictor of our future results of operations, and past revenue growth experienced by us should not be taken as indicative of the rate of revenue growth, if any, that can be expected in the future. We believe that period to period comparisons of our operating results and our results for any period should not be relied upon as an indication of future performance.

Our operations are subject to natural disasters, adverse weather conditions, operating hazards, environmental incidents and labor disputes.

We may experience force majeure events such as earthquakes, floods, mudslides, snowstorms, typhoon, power outages, labor disputes or similar events beyond our control that would affect our operations. Our manufacturing processes involve the use of hazardous equipment, such as furnaces, squaring machines and wire saws. We also use, store and generate volatile and otherwise dangerous chemicals and waste during our manufacturing processes, which are potentially destructive and dangerous if not properly handled or in the event of uncontrollable or catastrophic circumstances, including operating hazards, fires and explosions, natural disasters, adverse weather conditions and major equipment failures, for which we cannot obtain insurance at a reasonable cost or at all.

In addition, our ingot wafer, solar cell and solar module production and their respective storage facilities are located in close proximity to one another. The occurrence of any force majeure events such as natural disaster, unanticipated catastrophic event or unexpected accident in these sites could result in production curtailments, shutdowns or periods of reduced production, which could significantly disrupt our business operations, cause us to incur additional costs and affect our ability to deliver our products to our customers as scheduled, or prevent us from performing our contractual obligations, which may adversely affect our business, financial condition and results of operations. Moreover, such events could result in severe damage to property, personal injuries, fatalities, regulatory enforcement proceedings or our being named as a defendant in lawsuits asserting claims for large amounts of damages, which in turn could lead to significant liabilities.

For instance, our Haining facility suspended operation from September 17, 2011 to October 9, 2011 due to an environmental incident. Occurrences of natural disasters, pandemic incidents as well as accidents and incidents of adverse weather in or around Shangrao, Haining and Penang in the future may result in significant property damage, electricity shortages, disruption of our operations, work stoppages, civil unrest, personal injuries and, in severe cases, fatalities. Such incidents may result in damage to our reputation or cause us to lose all or a portion of our production capacity, and future revenue anticipated to be derived from the relevant facilities.

Our founders collectively have significant influence over our management and their interests may not be aligned with our interests or the interests of our other shareholders.

As of March 31, 2023, our founders, Xiande Li who is our chairman and chief executive officer, Kangping Chen, and Xianhua Li who is our director, beneficially owned 15.5%, 13.9% and 3.8%, respectively, or 33.3% in the aggregate, of our outstanding ordinary shares. If the founders act collectively, they will have a substantial influence over our business, including decisions regarding mergers, consolidations and the sale of all or substantially all of our assets, election of directors, dividend policy and other significant corporate actions. They may take actions that are not in the best interest of our company or our securities holders. For example, this concentration of ownership may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of the opportunity to receive a premium for their shares as part of a sale of our company and might reduce the price of the ADSs. On the other hand, if the founders are in favor of any of these actions, these actions may be taken even if they are opposed by a majority of our other shareholders, including you and those who invest in ADSs. In addition, under our current articles of association, the quorum required for the general meeting of our shareholders is two shareholders entitled to vote and present in person or by proxy or, if the shareholder is a corporation, by its duly authorized representative representing not less than one-third in nominal value of our total issued voting shares. As such, a shareholders resolution may be passed at our shareholders meetings with the presence of our founders only and without the presence of any of our other shareholders, which may not represent the interests of our other shareholders, including holders of ADSs.

We have limited insurance coverage and may incur losses resulting from product liability claims, business interruption or natural disasters.

We are exposed to risks associated with product liability claims in the event that the use of our products results in property damage or personal injury. Since our products are ultimately incorporated into electricity generating systems, it is possible that users could be injured or killed by devices that use our products, whether as a result of product malfunctions, defects, improper installations or other causes. Due to our limited operating history, we are unable to predict whether product liability claims will be brought against us in the future or to predict the impact of any resulting adverse publicity on our business. The successful assertion of product liability claims against us could result in potentially significant monetary damages and require us to make significant payments. Our product liability insurance coverage is limited and we may not have adequate resources to satisfy a judgment in the event of a successful claim against us. In addition, we do not carry any business interruption insurance. As the insurance industry in China is still in its relatively early stage of development, even if we decide to take out business interruption coverage, such insurance available in China offers limited coverage compared with that offered in many other countries. Any business interruption or natural disaster could result in substantial losses and diversion of our resources and materially adversely affect our business, financial condition and results of operations.

The grant of employee share options and other share-based compensation could adversely affect our net income.

As of the date of this annual report, share options with respect to 9,194,356 ordinary shares have been granted to our directors, officers and employees pursuant to our 2009 Long Term Incentive Plan; restricted shares with respect to 12,796,745 ordinary shares have been granted to our directors, officers and employees pursuant to our 2014 Equity Incentive Plan; 2,600,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2021 Equity Incentive Plan; 12,000,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2022 Equity Incentive Plan; and 20,800,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2023 Equity Incentive Plan. As of the date of this annual report, there were an aggregate of 26,220,108 ordinary shares issuable upon the exercise of outstanding restricted shares granted under our 2014 Equity Incentive Plan, 2021 Equity Incentive Plan, 2022 Equity Incentive Plan and 2023 Equity Incentive Plan.

U.S. GAAP requires us to recognize share-based compensation as compensation expense in the consolidated statement of operations based on the fair value of equity awards on the date of the grant, with the compensation expense recognized over the period in which the recipient is required to provide service in exchange for the equity award. If we grant more share options to attract and retain key personnel, the expenses associated with share-based compensation may adversely affect our net income. However, if we do not grant share options or reduce the number of share options that we grant, we may not be able to attract and retain key personnel.

Our lack of sufficient patent protection in and outside of China may undermine our competitive position and subject us to intellectual property disputes with third parties, both of which may have a material adverse effect on our business, results of operations and financial condition.

We have developed various production process related know-how and technologies in the production of our products. Such know-how and technologies play a critical role in our quality assurance and cost reduction. In addition, we have implemented a number of research and development programs with a view to developing techniques and processes that will improve production efficiency and product quality. Our intellectual property and proprietary rights from our research and development programs will be crucial in maintaining our competitive edge in the solar power industry. As of December 31, 2022, we have 1,461 patents and 496 pending patent applications. We plan to continue to seek to protect our intellectual property and proprietary knowledge by applying for patents for them. However, we cannot assure you that we will be successful in obtaining patents in China in a timely manner or at all. Moreover, even if we are successful, China currently affords less protection to a company's intellectual property than some other countries, including the United States. We also use contractual arrangements with employees and trade secret protections to protect our intellectual property and proprietary rights. Nevertheless, contractual arrangements afford only limited protection and the actions we may take to protect our intellectual property and proprietary rights may not be adequate.

In addition, others may obtain knowledge of our know-how and technologies through independent development. Our failure to protect our production process, related know-how and technologies, our intellectual property and proprietary rights or any combination of the above may undermine our competitive position. Third parties may infringe or misappropriate our proprietary technologies or other intellectual property and proprietary rights. Policing unauthorized use of proprietary technology can be difficult and expensive. Litigation, which can be costly and divert management attention and other resources away from our business, may be necessary to enforce our intellectual property rights, protect our trade secrets or determine the validity and scope of our proprietary rights. We cannot assure you that the outcome of such potential litigation will be in our favor. An adverse determination in any such litigation will impair our intellectual property and proprietary rights and may harm our business, prospects and reputation.

We may be exposed to intellectual property infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to pay significant damage awards and subject us to injunctions prohibiting sale of our products in certain markets.

Our success depends on our ability to use and develop our technology and know-how, and to manufacture and sell our recovered silicon materials, silicon wafers, solar cells and solar modules, develop solar power projects or otherwise operate our business in the solar industry without infringing the intellectual property or other rights of third parties. We may be subject to litigation involving claims of patent infringement or violation of intellectual property rights of third parties. The validity and scope of claims relating to solar power technology patents involve complex scientific, legal and factual questions and analyses and, therefore, may be highly uncertain. The defense and prosecution of intellectual property suits, patent opposition proceedings, trademark disputes and related legal and administrative proceedings can be both costly and time-consuming and may significantly divert our resources and the attention of our technical and management personnel. An adverse ruling in any such litigation or proceedings could subject us to significant liability to third parties, require us to seek licenses from third parties, to pay ongoing royalties, or to redesign our products or subject us to injunctions prohibiting the manufacture and sale of our products or the use of our technologies. Protracted litigation could also result in our customers or potential customers deferring or limiting their purchase or use of our products until resolution of such litigation.

Our business depends substantially on the continuing efforts of our founders, executive officers and key technical personnel, as well as our ability to maintain a skilled labor force. Our business may be materially adversely affected if we lose their services.

Our success depends on the continued services of our founders, Mr. Xiande Li and Mr. Xianhua Li, and other executive officers and key personnel. We do not maintain key-man life insurance on any of our founders, executive officers and key personnel. If one or more of our founders, executive officers and key personnel are unable or unwilling to continue in their present positions, we may not be able to readily replace them, if at all. As a result, our business may be severely disrupted and we may have to incur additional expenses in order to recruit and retain new personnel. In addition, if any of our executives joins a competitor or forms a competing company, we may lose some of our customers. Each of our founders, executive officers and key personnel has entered into an employment agreement with us that contains confidentiality and non-competition provisions. However, if any dispute arises between our founders, executive officers or key personnel and us, we cannot assure you, in light of uncertainties associated with the PRC legal system, that these agreements could be enforced in China where most of our founders, executive officers and key personnel reside and hold most of their assets. See “—Risks Related to Doing Business in China—Uncertainties and limitations with respect to the PRC legal system, including the interpretation and enforcement of PRC laws and regulations, could have a material adverse effect on us” in this annual report.

Furthermore, recruiting and retaining capable personnel, particularly experienced engineers and technicians familiar with our products and manufacturing processes, is vital to maintain the quality of our products and improve our production methods. There is substantial competition for qualified technical personnel, and we cannot assure you that we will be able to attract or retain qualified technical personnel. If we are unable to attract and retain qualified employees, key technical personnel and our executive officers, our business may be materially adversely affected.

Compliance with environmentally safe production and construction and renewable energy development regulations can be costly, while non-compliance with such regulations may result in adverse publicity and potentially significant monetary damages, fines and suspension of our business operations.

We are required to comply with all national and local environmental protection regulations for our operations, including in China, the United States, Vietnam and Malaysia. For example, some of our subsidiaries need to obtain and maintain pollution discharge permits or registrations, and some of our subsidiaries are in the process of application for such permits and registrations, which are subject to application, renewal or extension on an annual basis or within a longer period. We cannot assure you that we are or will be able to successfully obtain, renew or extend these permits in a timely manner or at all.

We use, store and generate volatile and otherwise dangerous chemicals and wastes during our manufacturing processes, and are subject to a variety of government regulations related to the use, storage and disposal of such hazardous chemicals and waste. In accordance with the requirements of the Regulations on the Safety Management of Hazardous Chemicals, which became effective on March 15, 2002 and were amended on December 1, 2011 and December 7, 2013, we are required to engage state-qualified institutions to conduct the safety evaluation on our storage instruments related to our use of hazardous chemicals and file the safety evaluation report with the competent safety supervision and administration authorities every three years. In compliance with Jiaying City environmental authority's requests, we commenced efforts to meet their targets for hazardous chemical and wastes in May 2012. Environmental authorities of Haining City and Jiaying City evaluated our efforts and confirmed that we satisfied their targets in September 2012. Moreover, we filed a report with the competent safety supervision and administration authorities and public security agencies concerning the actual storage situation of our hyper-toxic chemicals and other hazardous chemicals that constitute major of hazard sources.

Moreover, we are required to obtain construction permits before commencing constructing production facilities. We are also required to obtain the approvals from PRC environmental protection authorities before commencing commercial operations of our manufacturing facilities. We are also required to comply with renewable energy development regulations and directives for our operations in China. We commenced construction of a portion of our solar cell and solar module production facilities prior to obtaining the construction permits and commenced operations of certain of our production facilities prior to obtaining the environmental approvals for commencing commercial operation and completing the required safety evaluation procedure and we, through Poyang Luohong, a joint venture in which we then held 51% equity interest, had commenced the construction of the Technology Top Runner Project prior to obtaining the construction permits, land use certificates and certain other approvals. Although we have subsequently obtained all required environmental approvals covering all of existing production capacity except a portion of solar cell and solar module production capacity and we have disposed of all our equity interest in Poyang Luohong, we cannot assure you that we will not be penalized by the relevant government authorities for our non-compliance with the PRC environmental protection, safe production and construction regulations, including renewable energy development regulations and directives.

In late August 2011, our Haining facility experienced a suspected leakage of fluoride into a nearby small water channel due to extreme and unforeseen weather conditions. On September 15, 2011, residents of Hongxiao Village in proximity to the Haining facility gathered to protest the discharge. The Haining facility suspended production on September 17, 2011. We also took steps recommended by an environmental engineering firm licensed by the PRC government ("Licensed Engineers"). On September 28, 2011, a committee of experts (the "Experts Committee") established by the Haining government approved a set of recommendations developed by the Licensed Engineers with our assistance and the Haining government to be implemented by us. On October 6, 2011, the Experts Committee, the Environmental Bureau of the Haining government and representatives of Hongxiao Village reviewed the steps taken by us based on the recommendations of the Experts Committee and provided their comments to JinkoSolar's management. On October 9, 2011, the Experts Committee notified us that the Experts Committee was satisfied with the steps taken by us and we resumed production at the Haining facility. In 2012, we carried out a series of environmental protection efforts intended to ensure our compliance with relevant standards and requirements. See "Item 4. Information on the Company—B. Business Overview—Environmental Matters." In January 2013, Haining City environmental authority issued the "Environmental Management Compliance Certificate for 2012" to us, confirming our compliance with environmental requirements.

Although we will try to take measures to prevent similar incidents from occurring again in the future, we cannot assure you that our operations will not be disrupted by similar or other environmental incidents. In addition, the relevant authorities may issue more stringent environmental protection, safe production and construction regulations in the future that may impact our manufacturing facilities in China or abroad, and the costs of compliance with new regulations could be substantial. If we fail to comply with the future environmentally safe production and construction laws and regulations, we may be required to pay fines, suspend construction or production, or cease operations. Moreover, any failure by us to control the use of, or to adequately restrict the discharge of, dangerous substances could subject us to potentially significant monetary damages and fines or the suspension of our business operations.

We face risks related to health epidemics and other outbreaks. In particular, we were, and could continue to be, adversely affected by the global outbreak of COVID-19.

Our business could be adversely affected by the effects of novel coronavirus (“COVID-19”), monkey pox (mpox), Ebola virus disease, influenza A (“H1N1”), avian flu, severe acute respiratory syndrome (“SARS”), or other epidemic outbreak. In particular, the COVID-19 outbreak has become a global pandemic, which has already caused, and may continue to cause, an adverse and prolonged impact on both economic and social conditions globally, and the exacerbation, continuance or reoccurrence of the COVID-19 outbreak could interrupt our business operations.

In response to the COVID-19 pandemic, China and many other countries took restrictive measures to prevent its spread, such as quarantines, travel restrictions and home office policies. In particular, in the past three years until December 2022, the Chinese government implemented strict nationwide containment measures against COVID-19, which resulted in various travel restrictions and lock-downs in several cities across China from time to time. The global spread of the COVID-19 has created significant volatility and uncertainty, as well as economic disruption. In particular, global COVID-19 outbreaks adversely affected our production, supply of certain raw materials and logistics in the first half of 2020 and certain months of 2022, causing certain module shipments to be postponed. As a result, some of our customers delayed their payments, which temporarily affected our cash flow. In addition, our capacity utilization rate of certain overseas manufacturing facility has been temporarily affected as we have to limit the number of workers gathering at the facility pursuant to the instructions of the local authorities.

China modified its zero-COVID policy in late 2022, and most of the travel restrictions and quarantine requirements were lifted in December 2022. There were significant surges of COVID-19 cases in many cities in China subsequently. The rapid spread of COVID-19 virus in a relatively short period of time has compelled people to stay at home, which could adversely affect China’s economic recovery from the pandemic’s impact. Since early 2023, the pandemic situation has been improving in China with normal business activities resuming gradually. While western countries have largely reopened since early 2022 or earlier, they have reportedly experienced recent outbreaks of more infectious variants of the virus recently, and these or future variants of COVID-19 could prove to be more resistant to vaccines. As the pandemic continues, commercial activities throughout the world could continue to suffer from curtailed consumer spending, business operation disruptions, interrupted supply chain, difficulties in travel, and reduced workforce. In addition, the stock markets around the world have experienced extreme volatility, in reaction to the COVID-19 outbreak and governments’ responses to it. While many governments in the world are administering vaccinations to their populations and pharmaceutical companies have been developing new vaccines and drugs to treat the disease, it remains uncertain whether and when these efforts will successfully control the pandemic. The situation of the COVID-19 pandemic is very fluid and we are closely monitoring its impact on us. If the pandemic lasts for an extended period or worsens, it could materially and adversely impact our supply chain, technology development, sales and other aspects of our operations.

In April 2009, an outbreak of influenza A caused by the H1N1 virus occurred in Mexico and the United States, and spread into a number of countries rapidly. There have also been reports of outbreaks of a highly pathogenic avian flu, caused by the H1N1 virus, in certain regions of Asia and Europe. In past few years, there were reports on the occurrences of avian flu in various parts of China, including a few confirmed human cases. In April 2013, there were reports of cases of H7N9 avian flu in southeast China, including deaths in Shanghai and Zhejiang Province. An outbreak of avian flu in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, particularly in Asia. Additionally, any recurrence of SARS, a highly contagious form of atypical pneumonia, similar to the occurrence in 2003 which affected China, Hong Kong, Taiwan, Singapore, Vietnam and certain other countries, would also have similar adverse effects. In addition, there were also outbreaks of Ebola in West Africa and some other parts of the world in the past decade. Since 2022 there have been reports of mpox outbreaks in various parts of the world.

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These outbreaks of contagious diseases and other adverse public health developments in China and around the world would have a material adverse effect on our business operations. These could include our ability to travel or ship our products outside China as well as temporary closure of our manufacturing facilities. Such closures or travel or shipment restrictions would severely disrupt our business operations and adversely affect our financial condition and results of operations. We have not adopted any written preventive measures or contingency plans to combat any future outbreak of avian flu, SARS or any other epidemic.

Risks Related to Doing Business in China

We may fail to comply with laws and regulations regarding PV production in China.

On February 23, 2021, the Ministry of Industry and Information Technology of China (the “MIIT”) promulgated the Standard Conditions of Photovoltaic Production Industry, or the Photovoltaic Production Rule, in place of its old version, which took effect as of March 15, 2021. The Photovoltaic Production Rule was enacted in substantially the form published for public comment, which among other things, strengthens requirements with regard to the investment standard, product quality and cell efficiency, and sets forth encouragement in intelligent manufacturing. Such tightened requirements may increase our compliance and production costs. In addition, on December 30, 2022, the Ministry of Commerce of China issued a notice announcing a few revisions to China’s Export Prohibition and Restricted Technology Catalogue (the “Catalogue”) for public comment, which added large-size wafer technology, silicon preparation technology, ultra-high efficiency ingot casting monocrystalline / polycrystalline process and other photovoltaic wafer preparation technology (“wafer preparation-related technologies”) into the list of restricted export technologies. Once the above amendments take effect, the export of wafer-related preparation technologies will be subject to license management and will be prohibited from export without permission. Failure to obtain permissions or licenses in the future may restrict our ability to export, re-export or transfer our products and technologies that are subject to the Catalogue, which may have an adverse impact on the expansion of our overseas business. Our failure to comply with these rules and the laws and regulations related thereto, if and when effective, could result in fines, sanctions, suspension, revocation or non-renewal of approvals, permits or licenses, which could have a material adverse effect on our business, financial condition and results of operations.

We cannot assure you that we will be able to promptly and adequately respond to changes of laws and regulations, or that our employees and contractors will act in accordance with our internal policies and procedures. Failure to comply with such laws and regulations relating to PV production may materially adversely affect our business, financial condition and results of operations.

Uncertainties in the global economy and the slowdown of the Chinese economy may adversely affect our business, results of operations and financial condition.

The global financial markets experienced significant disruptions in 2008 and the United States, Europe and other economies went into recession. The recovery from the lows of 2008 and 2009 was uneven, including the escalation of the European sovereign debt crisis since 2011, the impact of COVID-19, the impact of the Russia-Ukraine crisis since early 2022 and the related sanctions on Russia and other conflicts between Russia and Western countries, and the slowdown of the Chinese economy in the recent years. It is unclear whether the Chinese economy will continue slowing down, and economic conditions in China are sensitive to global economic conditions. Inflation risks have been heightened following the expansionary monetary and fiscal policies adopted by the central banks and financial authorities of some of the world’s leading economies. To combat inflation, the U.S. Federal Reserve significantly raised the interest rate on reserve balances in 2022 and the interest rate increase is expected to continue at least in 2023. Other major currencies including the Euro and the GBP have followed suit in interest rate raises. These circumstances have resulted in significant market volatility globally and expectations of economic recession of the U.S. in 2023, which would have a material adverse impact on the global economy. The conflict in Ukraine and the imposition of broad economic sanctions on Russia raises the prices of conventional energy, which may benefit development of the new energy. However, heightened tensions in international economic relations and the economic recession as a result of the conflict could adversely affect us and/or our supply chain, business partners, or customers. There have also been concerns over unrest in the Middle East, especially the tensions between the U.S. and Iran, which have resulted in volatility in oil and other markets, as well as the economic effect of the territorial disputes involving China in Asia and the tensions in the relationship between China and Japan. Although the U.S. and China have reached a phase-one deal in January 2020, the trade conflicts between China and the U.S. have, and may continue to, put pressure on China’s economic growth, particularly our export to the U.S. Economic conditions in China are sensitive to global economic conditions.

Any prolonged slowdown in the global or Chinese economy may have a negative impact on our business, results of operations and financial condition, and continued turbulence in the international markets may adversely affect our ability to access the capital markets to meet liquidity needs. In 2020, 2021 and 2022, we generated 18.1%, 24.8% and 41.9% of our net revenues from sales in China, respectively. China is one of the world’s largest emerging markets, while the economies of emerging markets are typically more vulnerable to market downturns and economic slowdowns elsewhere in the world. Any prolonged slowdown in the Chinese economy may have a negative impact on our business, results of operations and financial condition.

Changes in United States and China relations and related regulations may adversely impact our business, our operating results, our ability to raise capital and the price of the ADSs.

Political tensions between the United States and China have escalated. The U.S. government has taken a range of action relating to U.S-China relations, including imposing several rounds of tariffs affecting certain products manufactured in China, imposing sanctions, export controls and investment restrictions against Chinese companies, imposing sanctions on certain officials of the PRC and Hong Kong governments, enacting legislation such as the UFLP Act and the HFCAA, and implementing enhanced reviews of companies with significant China-based operations. Partially in response to these actions, the PRC government has also taken steps affecting U.S.-China relations, including the issuance of the Unreliable Entity List in 2019 and the enactment of the Anti-Foreign Sanctions Law in 2021. Rising political tensions between China and the U.S. could reduce levels of trade, investment, 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 also restrict our ability to do business with entities both within and outside of China and may cause investors to lose confidence in Chinese companies and counterparties, including us. In addition, new legislation, executive orders, tariffs, laws or regulations may be adopted that negatively affect companies with significant connections to the U.S. or to China, our industry or on us. Any unfavorable government policies on cross-border relations or international trade, including increased scrutiny on companies with significant China-based operations may affect the competitive position of our products, the hiring of research and development personnel, our ability to sell our polysilicon products in the U.S. and certain other markets, the demand for our products or the products of companies that use our products as raw materials, our ability to raise capital, and the market price of the ADSs.

The SEC has issued statements focused on companies with significant China-based operations. For example, on July 30, 2021, SEC Chairman Gary Gensler, issued a Statement on Investor Protection Related to Recent Developments in China, in which he reported that he has directed the SEC staff to engage in targeted additional reviews of filings for companies with significant China-based operations. Consistent with that directive, on December 20, 2021, the SEC posted an illustrative letter containing sample comments to companies with the majority of their operations in the PRC or Hong Kong. The statement and sample comment letter also addressed risks inherent in companies with a variable interest entity, or a VIE, structure, which are used by some companies in China that operate in sectors that are subject to foreign ownership limitations. We do not have a VIE structure and are not in an industry that is subject to foreign ownership limitations. Further, we have reviewed the letter and believe that we have full and complete applicable disclosures as suggested in that letter. However, our periodic reports and other filings with the SEC may be subject to enhanced review by the SEC, and this additional scrutiny could affect our ability to effectively raise capital in the United States.

In response to the SEC's July 30 statement, the CSRC announced on August 1, 2021, that the CSRC will continue to collaborate "closely with different stakeholders including investors, companies, and relevant authorities to further promote transparency and certainty of policies and implementing measures." There is no assurance that the tension between the two nations will ease soon.

If any new legislation, executive orders, tariffs, laws and/or regulations are implemented, if existing trade agreements are renegotiated or if the U.S. or Chinese governments take retaliatory actions due to the U.S.-China tension, such changes could have an adverse effect on our business, financial condition and results of operations, our ability to raise capital and the price of the ADSs.

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

Our auditor, the independent registered public accounting firm that issues the audit report included elsewhere in this annual report, as an auditor of companies that are traded publicly in the United States and a firm registered with the PCAOB, is 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 auditor is 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 firm's 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 the 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

The ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.

Pursuant to the HFCAA, if the SEC determines that we 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, the SEC will prohibit our shares or ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the United States.

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 auditor was subject to that determination. On May 26, 2022, the SEC conclusively listed us as a "Commission-Identified Issuer" under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. For this reason, we do not expect to be identified as a Commission-Identified Issuer under the HFCAA after we file this annual report on Form 20-F for the fiscal year ended December 31, 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 our financial statements filed with the Securities and Exchange Commission, 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. If our shares and 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 the ADSs when you wish to do so, and the risk and uncertainty associated with delisting would have a negative impact on the price of the 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.

The approval of the MOFCOM for or in connection with our corporate restructuring in 2007 and 2008 may be subject to revocation, which will have a material adverse effect on our business, operating results and trading price of the ADSs.

On August 8, 2006, six PRC governmental and regulatory agencies, including the Ministry of Commerce of the People's Republic of China (the "MOFCOM"), and the CSRC promulgated a rule entitled "Provisions Regarding Mergers and Acquisitions of Domestic Enterprises by Foreign Investors", or Circular 10, which became effective on September 8, 2006 and was amended in June 2009. Article 11 of Circular 10 requires PRC domestic enterprises or domestic natural persons to obtain the prior approval of MOFCOM when an offshore company established or controlled by them proposes to merge with or acquire a PRC domestic company with which such enterprises or persons have a connected relationship.

On January 1, 2020, the Foreign Investment Law of the People's Republic of China (the "Foreign Investment Law") came into effect. On February 5, 2020, the MOFCOM stated in a reply to the public that the provisions in Circular 10 do not conflict with the Foreign Investment Law and its implementing regulations should continue to apply. The MOFCOM will, in conjunction with the implementation of the Foreign Investment Law and its implementing regulations, study relevant issues related to Circular 10 and start relevant work at appropriate time to further improve the foreign mergers and acquisitions system under the framework of the Foreign Investment Law.

We undertook a restructuring in 2007, or the 2007 Restructuring, and our founders and JinkoSolar Investment Limited ("JinkoSolar Investment") (previously known as JinkoSolar Technology Limited and Paker Technology Limited), obtained the approval of Jiangxi MOFCOM, for the acquisition of certain equity interest in Jiangxi Desun and the pledge by our founders of their equity interest in Jiangxi Desun to JinkoSolar Investment, or the 2007 acquisition and pledge. However, because our founders are PRC natural persons and they controlled both JinkoSolar Investment and Jiangxi Desun, the 2007 acquisition and pledge would be subject to Article 11 of Circular 10 and therefore subject to approval by MOFCOM at the central government level. To remedy this past non-compliance, we undertook another corporate restructuring in 2008, or the 2008 Restructuring, under which the share pledge was terminated on July 28, 2008 and JinkoSolar Investment transferred all of its equity interest in Jiangxi Desun to Long Faith Creation Limited ("Long Faith"), an unrelated Hong Kong company, on July 31, 2008. In addition, on November 11, 2008, we received written confirmation from Jiangxi MOFCOM in its reply to our inquiry that there had been no modification to the former approvals for the 2007 acquisition and pledge and JinkoSolar Investment's transfer of its equity interest in Jiangxi Desun to Long Faith, and we might continue to rely on those approvals for further transactions. Nevertheless, we cannot assure you that MOFCOM will not revoke such approval and subject us to regulatory actions, penalties or other sanctions because of such past non-compliance. If the approval of Jiangxi MOFCOM for the 2007 acquisition and pledge were revoked and we were not able to obtain MOFCOM's retrospective approval for the 2007 acquisition and pledge, Jiangxi Desun may be required to return the tax benefits to which only a foreign-invested enterprise was entitled and which were recognized by us during the period from April 10, 2007 to December 31, 2007, and the profit distribution to JinkoSolar Investment in December 2008 may be required to be unwound. Under an indemnification letter issued by our founders to us, our founders have agreed to indemnify us for any monetary losses we may incur as a result of any violation of Circular 10 in connection with the restructuring we undertook in 2007. We cannot assure you, however, that this indemnification letter will be enforceable under the PRC law, our founders will have sufficient resources to fully indemnify us for such losses, or that we will not otherwise suffer damages to our business and reputation as a result of any sanctions for such non-compliance.

Meanwhile, given the uncertainty with respect to what constitutes a merger with or acquisition of a PRC domestic enterprise and what constitutes circumvention of its approval requirements under the Circular 10, we cannot assure you that the 2008 Restructuring is in all respects compliance with Circular 10. If MOFCOM subsequently determines that its approval of the 2008 Restructuring was required, we may face regulatory actions or other sanctions by MOFCOM or other PRC regulatory agencies. Such actions may include compelling us to terminate the contracts between Jiangxi Desun and us, the limitation of our operating privileges in China, the imposition of fines and penalties on our operations in China, restrictions or prohibition on the payment or remittance of dividends by Jiangxi Jinko or others that may have a material adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of the ADSs.

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

Our business is primarily based in the PRC and a portion of our sales are made in the PRC. Accordingly, our business, financial condition, results of operations and prospects are affected significantly by economic, political and legal developments in the PRC. The PRC economy differs from the economies of most developed countries in many respects, including:

- the level of government involvement;

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

While the PRC economy has grown significantly in the past 30 years, the growth has been uneven, both geographically and among various sectors of the economy. The PRC government has implemented various measures to encourage economic growth and guide the allocation of resources. Some of these measures benefit the overall PRC economy, but may have a negative effect on us. For example, our financial condition and results of operations may be materially adversely affected by government control over capital investments or changes in tax regulations that are applicable to us.

The PRC economy has been transitioning from a planned economy to a more market-oriented economy. Although in recent years the PRC government has implemented measures emphasizing the utilization of market forces for economic reform, the reduction of state ownership of productive assets and the establishment of sound corporate governance in business enterprises, a substantial portion of the productive assets in China is still owned by the PRC government. The continued control of these assets and other aspects of the national economy by the PRC government could materially adversely affect our business. The PRC government also exercises significant control over China's economic growth through allocating resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. We cannot predict whether changes in China's political, economic and social conditions, laws, regulations and policies will have any material adverse effect on our current or future business, financial condition and results of operations.

Uncertainties and limitations with respect to the PRC legal system, including the interpretation and enforcement of PRC laws and regulations, could have a material adverse effect on us.

We are incorporated in Cayman Islands and are subject to laws and regulations applicable to foreign investment in China and, in particular, laws applicable to wholly foreign owned companies. The PRC legal system is based on written statutes. Prior court decisions have limited precedential value. Since 1979, PRC legislation and regulations have significantly enhanced the protections afforded to various forms of foreign investments in China. However, since these laws and regulations are relatively new and the PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involve uncertainties and inconsistencies, which may limit legal protections available to us. For example, we may have to resort to administrative and court proceedings to enforce the legal protection that we enjoy either by law or contract. However, since PRC administrative authorities and courts have significant discretion in interpreting and implementing statutory and contractual terms, it may be difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we enjoy. These uncertainties may impede our ability to obtain or maintain licenses and permits or enforce the contracts we have entered into with our business partners, clients and suppliers. In addition, such uncertainties, including the inability to obtain or maintain licenses and permits and enforce our contracts, could materially adversely affect our business and operations. Rules and regulations in China can change quickly with little advance notice. In recent years, Chinese regulators have announced regulatory actions aimed at providing the Chinese government with greater oversight over certain sectors of China's economy, including the for-profit education sector and technology platforms that have a quantitatively significant number of users located in China. Although the solar energy industry does not appear to be the focus of these regulatory actions, we cannot guarantee that the Chinese government will not in the future take regulatory actions that materially adversely affect the business environment and financial markets in China as they relate to us, our ability to operate our business, our liquidity and our access to capital.

Furthermore, intellectual property rights and confidentiality protections in China may not be as effective as in the United States or other countries. Accordingly, we cannot predict the effect of future developments in the PRC legal system, including the promulgation of new laws, changes to existing laws or the interpretation or enforcement thereof, or the preemption of national laws by local regulations. In addition, due to jurisdictional limitations, matters of comity and various other factors, the SEC, U.S. Department of Justice and other U.S. authorities may be limited in their ability to pursue bad actors, including in instances of fraud, in the PRC. For example, there are significant legal and other obstacles to obtaining information needed for investigations or litigation in the PRC. Similar limitations apply to the pursuit of actions against individuals, including officers, directors and individual gatekeepers, who may have engaged in fraud or other wrongdoing. See “—It may be difficult to effect service of process on, or to enforce any judgments obtained outside the PRC against, us, our directors, or our senior management members who live inside the PRC.” Moreover, local authorities in the PRC may be constrained in their ability to assist U.S. authorities and overseas investors. In addition, according to Article 177 of the PRC Securities Law, which became effective in March 2020, no overseas securities regulator, including the SEC, PCAOB, and the Department of Justice, can directly conduct investigations or evidence collection activities within the PRC and no entity or individual in China may provide documents and information relating to securities business activities to overseas regulators without Chinese government approval. Furthermore, shareholder claims that are common in the U.S., including class action under securities laws and fraud claims, generally are difficult or impossible to pursue as a matter of law or practicality in the PRC. Investors in the PRC may not have the ability to pursue or seek certain legal claims and remedies against China-based Issuers, or their officers, directors, and gatekeepers in U.S. courts as private plaintiffs, and may have to rely on domestic legal claims and remedies that are available in the PRC, which can be significantly different from those available in the United States and difficult to pursue. These uncertainties and limitations could limit the legal protections available to us and other foreign investors, including you. In addition, any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention.

Recent regulatory developments in China may subject us to additional regulatory review and disclosure requirements, expose us to government interference, or otherwise restrict or completely hinder our ability to offer securities and raise capital outside China, which could adversely affect our business operations and cause the value of our securities to significantly decline or become worthless.

A significant part of our business operations in China are conducted in China, we are exposed to legal and other risks associated with our operations in China. The PRC government has significant authority to exert influence on the ability of a company with operations in China, including us, to conduct its business, and may exert substantial intervention and influence over the manner our operations. Any actions by the PRC government to exert more oversight and control over offerings that are conducted overseas or foreign investment in companies having operations in China, including us, could significantly limit or completely hinder our ability to offer or continue to offer securities to investors, and cause the value of our securities to significantly decline or become worthless. Recently, the PRC government initiated a series of regulatory actions and statements to regulate business operations in China with little advance notice, including cracking down on illegal activities in the securities market, enhancing supervision over China-based companies listed overseas, adopting new measures to extend the scope of cybersecurity reviews and new laws and regulations related to data security, expanding the efforts in anti-monopoly enforcement, and adopting new rules to request China-based companies to fulfill relevant filing procedure and report relevant information to the CSRC for overseas offerings. While we do not believe that these regulatory changes would have any material impact on us, we cannot guarantee that the authorities will agree with us or will not promulgate new regulations that restrict our business operations or access to capital.

With the trend of strengthening anti-monopoly supervision around the world, the PRC government has issued a series of anti-monopoly laws and regulations in 2021, paying more attention to corporate compliance. On February 7, 2021, the Antimonopoly Commission of the State Council of the PRC promulgated the Guidelines for Anti-monopoly in the field of Platform Economy. On November 15, 2021, the State Administration for Market Regulation of the PRC promulgated the Guidelines for the Overseas Anti-monopoly Compliance of Enterprises. We believe that these regulations have little impact on us, but we cannot guarantee that regulators will agree with us or that these regulations will not affect our business operations in the future.

Cybersecurity and data privacy and security issues are subject to increasing legislative and regulatory focus in China. On July 30, 2021, the State Council of the PRC promulgated the Regulation on the Protection of the Security of Critical Information Infrastructure, which took effect on September 1, 2021. This regulation require, among others, certain competent authorities to identify critical information infrastructures. If any critical information infrastructure is identified, the relevant authorities shall promptly notify the relevant operator and the Ministry of Public Security. In November 2021, the CAC promulgated the Draft Administrative Regulations on Cyber Data Security, or the Draft Cyber Data Security Regulations, for public comment. These draft regulations set forth different scenarios under which data processors would be required to apply for cybersecurity review. However, there is no definite timetable as to when these draft regulations will be enacted. In addition, the CAC and a number of other departments under the State Council promulgated the Measures for Cybersecurity Review on December 28, 2021, which became effective on February 15, 2022. According to this regulation, critical information infrastructure operators purchasing network products and services and data processors carrying out data processing activities, which affect or may affect national security, are required to conduct cybersecurity review. On July 7, 2022, the CAC issued the Security Assessment Measures, which became effective on September 1, 2022. In accordance with the Security Assessment Measures, a data processor should apply to the CAC for a security assessment under certain circumstances, including (i) where a data processor provides important data abroad; (ii) where a critical information infrastructure operator or a data processor processing personal information of over one million people provides personal information abroad; (iii) where a data processor has provided personal information of 100,000 people or sensitive personal information of 10,000 people in total abroad since January 1 of the previous year; and (iv) other circumstances prescribed by the CAC. Moreover, the Security Assessment Measures provide that for non-compliant cross-border data transfers that had been carried out before this regulation came into effect, rectification must be completed within six months from the effective date of the regulation. We believe that these regulations are not applicable to us, because we are neither a critical information infrastructure operator nor a data processor within the meanings of these regulation. However, we cannot guarantee that the regulators will agree with us. As of the date hereof, we have not been involved in any investigations on cybersecurity review made by the CAC, and we have not received any inquiry, notice, warning, or sanctions in such respect. However, as these are new regulations, there remains uncertainties as to how they will be interpreted or implemented in the context of an overseas offering.

We may be subject to PRC laws relating to the collection, use, sharing, retention security, and transfer of confidential and private information, such as personal information and other data. These PRC laws apply not only to third-party transactions, but also to transfers of information between us and our wholly foreign-owned enterprises in China, and other parties with which we have commercial relations. For example, on September 1, 2021, the PRC Data Security Law became effective, which imposes data security and privacy obligations on entities and individuals conducting data-related activities, and introduces a data classification and hierarchical protection system based on the importance of data in economic and social development, as well as the degree of harm it will cause to national security, public interests, or legitimate rights and interests of individuals or organizations when such data is tampered with, destroyed, leaked, or illegally acquired or used. In addition, the Standing Committee of PRC National People's Congress promulgated the Personal Information Protection Law (the "PIPL") on August 20, 2021, which took effect on November 1, 2021. The PIPL further emphasizes processors' obligations and responsibilities for personal information protection and sets out the basic rules for processing personal information and the rules for cross-border transfer of personal information. As of the date hereof, we have not been involved in any investigations on data security or privacy compliance issues in connection with the PRC Data Security Law or the PIPL, and we have not received any inquiry, notice, warning, or sanctions in such respect. In addition, we do not expect to have significant data security or privacy issues given that the nature of our business does not involving collecting and use of vast personal data. However, we cannot guarantee that the regulators will agree with us or will not in the future adopt new regulations that restrict our business operations.

On July 6, 2021, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council jointly issued Opinions on Strictly Cracking Down Illegal Securities Activities in Accordance with the Law. These opinions emphasized the need to strengthen the administration over illegal securities activities and the supervision on overseas listings by China-based companies. These opinions proposed to take effective measures, such as promoting the construction of relevant regulatory systems, to deal with the risks and incidents facing China-based overseas-listed companies and the demand for cybersecurity and data privacy protection. These opinions and any related implementation rules to be enacted may subject us to additional compliance requirement. On February 17, 2023, the CSRC released a set of regulations consisting of six documents, including the Trial Administrative Measures of Overseas Securities Offering and Listing by Domestic Companies and five supporting guidelines, collectively, the Overseas Listing Filing Rules, which came into effective on March 31, 2023. According to the Overseas Listing Filing Rules, China-based companies that have already offered shares or been listed overseas prior to the implementation of such new regulations qualify as “Stock Enterprises”, and Stock Enterprises are not required to apply for the filing immediately until a subsequent re-financing event occurs. However, the Overseas Listing Filing Rules, among others, require the issuer or its main operational entity in the PRC to file with the CSRC for its follow-on securities offerings in the same offshore market within three business days after the completion of such offerings, and file with the CSRC for its offerings or listing in offshore stock market other than the stock market of its initial public offering or listing within three business days after the submission of offering application outside mainland China.

We had been listed on the New York Stock Exchange prior to the implementation of the Overseas Listing Filing Rules. Therefore, we are qualified as a “Stock Enterprise” and are not required to apply for the filing immediately until a subsequent re-financing event occurs according to the Overseas Listing Filing Rules. However, we are required to file with the CSRC for its follow-on securities offerings in the same offshore market within three business days after the completion of such offerings, and file with the CSRC for our offerings or listing in offshore stock market other than the stock market of our initial public offering or listing within three business days after the submission of offering application outside mainland China. Failure to comply with the filing requirements for any offering, listing or any other capital raising activities, may result in administrative penalties, such as order to rectify, warnings, fines and other penalties, on the companies, the controlling shareholders, the actual controllers, the person directly in charge and other directly liable persons. As of the date of this annual report, we have not received any inquiry, notice, warning, sanctions or regulatory objection from the CSRC. Given the uncertainties surrounding the CSRC filing requirements at this stage, we cannot assure you that we will be able to complete the filings and fully comply with the relevant new rules on a timely basis, or at all, if we conduct listing in other offshore stock markets or follow-on offerings, issuance of convertible corporate bonds, exchangeable bonds, and other equivalent offering activities in the future.

Since these statements and regulatory actions are new, it is highly uncertain how soon legislative or administrative regulation making bodies will respond and what existing or new laws or regulations or detailed implementations and interpretations will be modified or promulgated, if any, or the potential impact such modified or new laws and regulations will have on our daily business operation, our ability to accept foreign investments and listing on a U.S. or other foreign exchanges. PRC laws and their interpretations and enforcement continue to develop and are subject to change, and the PRC government may adopt other rules and restrictions in the future.

The approval, filing or other requirements of the CSRC or other PRC regulatory authorities is required under PRC law in connection with our future issuance of securities overseas, which could impose uncertainty on our capital raising activities

The Provisions Regarding Mergers and Acquisitions of Domestic Projects by Foreign Investors (the “M&A Rules”) require an overseas special purpose vehicle that is controlled by PRC companies or individuals formed for the purpose of seeking a public listing on an overseas stock exchange through acquisitions of PRC domestic companies using shares of such special purpose vehicle or held by its shareholders as considerations to obtain the approval of the CSRC prior to the listing and trading of such special purpose vehicles securities on an overseas stock exchange. However, the application of the M&A Rules remains unclear. If CSRC approval is required, it is uncertain whether it would be possible for us to obtain the approval. Any failure to obtain or delay in obtaining CSRC approval would subject us to sanctions imposed by the CSRC and other PRC regulatory agencies.

On February 17, 2023, the CSRC published the Overseas Listing Filing Rules, which took effect from March 31, 2023 and regulate both direct and indirect overseas offering and listing of PRC-based companies by adopting a filing-based regulatory regime. According to the Overseas Listing Filing Rules, if the issuer meets both of the following criteria, the overseas securities offering and listing conducted by such issuers shall be deemed as indirect overseas offering and listing: (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 accounting year is accounted for by domestic companies; and (ii) the main parts of the issuer’s business activities are conducted in China, or its main places of business are located in China, or the senior managers in charge of its business operation and management are mostly Chinese citizens or domiciled in China.

The Overseas Listing Filing Rules provide that (i) the filing procedures with the CSRC be completed within three business days after the issuer submits its application documents relating to the initial public offering and/or listing in overseas; (ii) a timely report be submitted to the CSRC and update its CSRC filing within three business days after the occurrence of any of the following material events, if any of the following events occurs before the completion of the overseas offering and/or listing but after the completion of its CSRC filing: (a) any material change to principal business, licenses or qualifications of the issuer, (b) a change of control of the issuer or any material change to equity structure of the issuer, and (c) any material change to the offering and listing plan; (iii) after the completion of the listing, a report relating to the issuance information of such offering and/or listing be submitted to the CSRC and a report be submitted to the CSRC within three business days upon the occurrence and public announcement of any of the following material events after the overseas offering and/or listing: (a) a change of control of the issuer, (b) the investigation, sanction or other measures undertaken by any foreign securities regulatory agencies or relevant competent authorities in respect of the issuer, (c) change of the listing status or transfer of the listing board, and (d) the voluntary or mandatory delisting of the issuer; and (iv) where there is material change in the main business of the issuer after overseas offering and listing, which does not apply to the Overseas Listing Filing Rules therefore, such issuer shall submit to the CSRC a report and a relevant legal opinion issued by a domestic law firm within three business days after occurrence of such change.

Given the substantial uncertainties surrounding the latest CSRC filing requirements at this stage, we cannot assure you that we will be able to complete the filings and fully comply with the relevant new rules on a timely basis, if at all. If it is determined that CSRC approval is required for any of our securities offerings, we may face sanctions by the CSRC or other PRC regulatory agencies for failure to obtain or for delay in obtaining CSRC approval for our offerings. These sanctions may include fines and penalties on our operations in China, limitations on our operating privileges in China, delays in or restrictions on the repatriation of the proceeds from our offerings into the PRC, restrictions on or prohibition of the payments or remittance of dividends by our subsidiaries in China, or other actions that could have a material and adverse effect on our business, reputation, financial condition, results of operations, prospects, as well as the trading price of the ADSs.

In addition, our future financing activities may also need to be filed with and/or reported to the CSRC according to the Overseas Listing Filing Rules. On February 24, 2023, the CSRC, together with other governmental authorities, released the Provisions on Strengthening the Confidentiality and Archives Administration Related to the Overseas Securities Offering and Listing by Domestic Enterprises (the “Confidentiality and Archives Administration Provisions”), which became effective on March 31, 2023 and aims to expand the applicable scope of the regulation to indirect overseas offerings and listings by PRC domestic companies and emphasize the confidentiality and archive management duties of PRC domestic companies during the process of overseas offerings and listings. However, as there remain substantial uncertainty with respect to the interpretation and implementation of the Overseas Listing Filing Rules as well as the Confidentiality and Archives Administration Provisions, which both have just been released recently, we cannot assure you that we will be able to complete such filings in a timely manner and/or fully comply with such regulations in connection with our continued listing overseas and our overseas securities offerings in the future. If a domestic company fails to complete the filing procedure or conceals any material fact or falsifies any major content in its filing documents, such domestic company may be subject to administrative penalties, such as order to rectify, warnings, fines, and its controlling shareholders, actual controllers, the person directly in charge and other directly liable persons may also be subject to administrative penalties, such as warnings and fines.

Furthermore, if the CSRC or other regulatory authorities later promulgate new rules or explanations requiring that we obtain their approvals or accomplish the required filing or other regulatory procedures for any future financing activities, we may be unable to fulfill such requirements in a timely manner or at all. Any failure to comply with the PRC regulatory requirements in this regard, our ability to conduct business, our ability to pay dividends outside of China, any future financing activities may be restricted, and our business, reputation, financial condition, and results of operations may be adversely affected.

PRC regulations may subject our future mergers and acquisitions activity to national security review.

In February 2011, the General Office of the State Council of China (the “State Council”) promulgated Circular 6, a notice on the establishment of a security review system for mergers and acquisitions of domestic enterprises by foreign investors. Circular 6 became effective on March 4, 2011. To implement Circular 6, MOFCOM promulgated the MOFCOM Security Review Rules on August 25, 2011, which became effective on September 1, 2011. According to Circular 6 and the MOFCOM Security Review Rules, national security review is required to be undertaken to complete mergers and acquisitions (i) by foreign investors of enterprises relating to national defense and (ii) through which foreign investors may acquire de facto control of a domestic enterprise that could raise national security concerns. When determining whether to subject a specific merger or acquisition to national security review, the MOFCOM will look at the substance and actual impact of the transaction. Bypassing national security review by structuring transactions through proxies, trusts, indirect investments, leases, loans, control through contractual arrangements or offshore transactions by foreign investors is prohibited.

Under the framework of the Foreign Investment Law that came into effect on January 1, 2020, the scope of national security review expands from mergers and acquisitions to all foreign investment activities. According to Article 35 of the Foreign Investment Law, a security review system for foreign investment will be established in the country, under which the security review shall be conducted for any foreign investment affecting or having the possibility to affect national security. According to Article 40 of the Foreign Investment Law, where any country or region takes any discriminatory prohibitive or restrictive measures, or other similar measures against China in terms of investment, China may take corresponding measures against the said country or region in light of the actual conditions.

In addition, even if a merger or acquisition by foreign investors is not currently subject to national security review, or is determined to have no impact on national security after such review, it may still be subject to future review. A change in conditions (such as change of business activities, or amendments to relevant documents or agreements) may trigger the national security review requirement, then the foreign investor to the merger or acquisition must apply for the relevant approval with the MOFCOM.

Currently, there are no public provisions or official interpretations specifically providing that our current businesses fall within the scope of national security review and there is no requirement that foreign investors to those merger and acquisition transactions completed prior to the promulgation of Circular 6 take initiatives to submit such transactions to MOFCOM for national security review. However, as there is no clear statutory interpretation on the implementation of the security review system, there is no assurance that the relevant PRC regulatory authorities will have the same view as us when applying them. If our future merger and acquisition transactions and other indirect investments are subject to the national security review, the application of the national security review may further complicate our future merger and acquisition and investment activities, and our expansion strategy may be adversely affected as a result.

PRC regulations relating to overseas investment by PRC residents may restrict our overseas and cross-border investment activities and adversely affect the implementation of our strategy as well as our business and prospects.

On July 4, 2014, the State Administration of Foreign Exchange of China (the “SAFE”) issued the Circular on the Administration of Foreign Exchange Issues Related to Overseas Investment, Financing and Roundtrip Investment by Domestic Residents through Offshore Special Purpose Vehicles (the “SAFE Circular 37”), which replaced the former circular commonly known as “SAFE Circular 75” promulgated on October 21, 2005. The SAFE Circular 37 requires PRC residents to register with the competent local SAFE branch in connection with their direct establishment or indirect control of an offshore special purpose vehicle, for the purpose of overseas investment and financing, with such PRC residents’ legally owned assets or equity interests in domestic enterprises or offshore assets or interests. The SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contribution by PRC individuals, share transfer or exchange, merger, division or other material event. In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute additional capital into its PRC subsidiary. Moreover, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for evasion of foreign exchange controls.

We believe that all of our beneficial owners who are PRC citizens or residents have completed their registrations with the competent local SAFE branch in accordance with the SAFE Circular 75 before the promulgation of SAFE Circular 37. However, we may not at all times be fully aware or informed of the identities of all of our beneficial owners who are PRC citizens or residents, and we may have little control over either our present or prospective direct or indirect PRC resident beneficial owners or the outcome of such registration procedures. We cannot assure you that the SAFE registrations of our present beneficial owners or future beneficial owners who are PRC citizens or residents have been or will be amended to reflect, among others, the shareholding information or equity investment as required by the SAFE Circular 37 and subsequent implementation rules at all times. The failure of these beneficial owners to comply with the registration procedures set forth in the SAFE Circular 37 may subject such beneficial owners and our PRC subsidiaries to fines and legal sanctions. Such failure may also result in restrictions on our PRC subsidiaries’ ability to distribute profits to us or our ability to inject capital into our PRC subsidiaries or otherwise materially adversely affect our business, financial condition and results of operations. Furthermore, it is unclear how the SAFE Circular 37 and any future regulation concerning offshore or cross-border transactions will be interpreted and implemented by the relevant PRC government authorities. We cannot predict how these regulations will affect our business operations or future strategy.

On December 25, 2006, the People's Bank of China promulgated the Measures for Administration of Individual Foreign Exchange, and on January 5, 2007, the SAFE promulgated relevant Implementation Rules. On February 15, 2012, the SAFE promulgated the Notice on Various Issues Concerning Foreign Exchange Administration for Domestic Individuals Participating in Equity Incentive Plans of Overseas Listed Companies (the "Stock Option Notice"). The Stock Option Notice terminated the Application Procedures of Foreign Exchange Administration of Domestic Individuals' Participating in an Employee Stock Holding Plan or Stock Option Plan of an Overseas Listed Company issued by the SAFE on March 28, 2007. According to the Stock Option Notice, PRC citizens who are granted shares or share options by a company listed on an overseas stock market according to its employee stock holding plan or stock incentive plan are required to register with the SAFE or its local counterparts by following certain procedures.

We and our employees who are PRC citizens and individual beneficiary owners, or have been granted restricted shares or share options, are subject to the Individual Foreign Exchange Rules and its relevant implementation regulations. The failure of our PRC individual beneficiary owners and the restricted holders to complete their SAFE registrations pursuant to the SAFE's requirement or the Individual Foreign Exchange Rules may subject these PRC citizens to fines and legal sanctions. It may also limit our ability to contribute additional capital into our PRC subsidiaries, and limit our PRC subsidiaries' ability to distribute dividends to us, or otherwise materially adversely affect our business.

On December 26, 2017, the NDRC promulgated the Administrative Measures for the Outbound Investment of Enterprises (the "new ODI Measure"), which took effect from March 1, 2018, and replaced the Administrative Measures for Approval and Record-filing on Overseas Investment Projects promulgated by the NDRC on April 8, 2014. The new ODI Measure will further enhance supervision of overseas investments through reports of seriously unfavorable events, inquiry letters and related supervision systems. Where PRC citizens make investments abroad through overseas enterprises under their control, the new ODI Measure will apply *mutatis mutandis*.

Besides overseas investments of PRC subsidiaries, all of our overseas investments may subject to supervision and inspection under the new ODI Measure, which may materially increase the complexity of regulatory compliance aspect of our overseas investments. However, the implementation and interpretation of the new ODI Measure are uncertain and will subject to the practice of the NDRC.

Our ability to access financing could be adversely affected by PRC regulations.

Laws, regulations and policies issued in the PRC may apply to our company. For example, the NDRC issued the Administrative Measures for Examination and Registration of Medium and Long-term Foreign Debts of Enterprises, which came into effect on February 10, 2023. Such Administrative Measures require domestic enterprises and/or their overseas controlled enterprises or branches to procure the registration with the NDRC of such issuance of debt instruments with a maturity of more than 1 year (not inclusive). Registrations for issuance of foreign debt may not be accepted by the NDRC for either administrative reasons or failure to meet the registration requirements. There is also no assurance that any registration with the NDRC will not be revoked or amended in the future.

The application of relevant laws, regulations and policies issued in the PRC, such as the Administrative Measures for Examination and Registration of Medium and Long-term Foreign Debts of Enterprises, could therefore restrict our ability to raise debt financing and could also impose registration and reporting requirements that could affect our ability to raise debt financing in a timely manner.

Our China-sourced income is subject to PRC withholding tax under the CIT Law, and we may be subject to PRC corporate income tax at the rate of 25%.

We are a Cayman Islands holding company with a substantial part of our operations conducted through our operating subsidiaries in China. Under the Corporate Income Tax Law of the PRC (the “CIT Law”) which became effective on January 1, 2008 and was amended on February 24, 2017 and December 29, 2018, and the Regulation on the Implementation of the CIT Law (the “Implementation Rules of the CIT Law”) which became effective on January 1, 2008 and was amended on April 23, 2019, China-sourced passive income of non-PRC tax resident enterprises, such as dividends paid by a PRC subsidiary to its overseas parent and gains on sales of securities, is generally subject to a 10% withholding tax. Under an arrangement between China and Hong Kong, such dividend withholding tax rate is reduced to 5% if the beneficial owner of the dividends is a Hong Kong tax resident enterprise which directly owns at least 25% of the PRC company distributing the dividends and has owned such equity for at least 12 consecutive months before receiving such dividends. For example, as JinkoSolar Investment is a Hong Kong company and has owned 73.3% of the equity interest in Jiangxi Jinko directly for more than 12 consecutive months to date, any dividends paid by Jiangxi Jinko to JinkoSolar Investment will be entitled to a withholding tax at the reduced rate of 5% after obtaining approval from the competent PRC tax authority, provided that JinkoSolar Investment is deemed the beneficial owner of such dividends and that JinkoSolar Investment is not deemed to be a PRC tax resident enterprise as described below. However, according to the Circular of the State Taxation Administration on How to Understand and Identify a “Beneficial Owner” under Tax Treaties (“STA Circular 601”), effective on October 27, 2009, and the Announcement of the State Taxation Administration on the Determination of “Beneficial Owners” in the Tax Treaties (“STA Announcement 30”), effective on June 29, 2012, an applicant for treaty benefits, including benefits under the arrangement between China and Hong Kong on dividend withholding tax, that does not carry out substantial business activities or is an agent or a conduit company may not be deemed a “beneficial owner” of the PRC subsidiary and therefore, may not enjoy such treaty benefits. If JinkoSolar Investment is determined to be ineligible for such treaty benefits, any dividends paid by Jiangxi Jinko to JinkoSolar Investment will be subject to the PRC withholding tax at a 10% rate instead of a reduced rate of 5%. On February 3, 2018, the State Taxation Administration of China (the “STA”) released Announcement of the State Taxation Administration on Issues concerning the “Beneficial Owner” in Tax Treaties (the “STA Announcement 9”) which replaced STA Circular 601 and STA Announcement 30. The STA Announcement 9 comprehensively updates the assessment principles for the determination of beneficial ownership under agreements between China and other jurisdictions for the avoidance of double taxation. The STA Announcement 9 has also tightened the first two unfavorable factors of STA Circular 601. This will be challenging for some non-resident taxpayers as their treaty benefits may be denied for the lack of beneficial ownership status.

The CIT Law, however, also provides that enterprises established outside China whose “de facto management bodies” are located in China are considered “PRC tax resident enterprises” and will generally be subject to the uniform 25% PRC corporate income tax rate as to their global income. Under the Implementation Rules of the CIT Law, “de facto management bodies” is defined as the bodies that have, in substance, overall management control over such aspects as the production and operation, personnel, accounts and properties of an enterprise. On April 22, 2009, the STA promulgated the Notice Regarding the Determination of Chinese-Controlled Offshore Incorporated Enterprises as PRC Tax Resident Enterprises on the Basis of De Facto Management Bodies (“STA Circular 82”). According to STA Circular 82, an offshore-incorporated enterprise controlled by a PRC enterprise or a PRC enterprise group will be regarded as a PRC tax resident by virtue of having its “de facto management body” in China only if certain conditions are met. Despite of those conditions, as STA Circular 82 only applies to enterprises incorporated outside China controlled by PRC enterprises or a PRC enterprise, it remains unclear how the PRC tax authorities will determine the location of “de facto management bodies” for offshore enterprises that are controlled by individual PRC tax residents or non-PRC enterprises, as our company and JinkoSolar Investment. Therefore, it remains unclear whether the PRC tax authorities would regard our company or JinkoSolar Investment as PRC tax resident enterprises. If our company and JinkoSolar Investment are regarded by PRC tax authorities as PRC tax resident enterprises for PRC corporate income tax purposes, any dividends distributed from Jiangxi Jinko to JinkoSolar Investment and ultimately to our company could be exempt from the PRC withholding tax, while our company and JinkoSolar Investment will be subject to the uniform 25% corporate income tax rate on our global income at the same time.

Dividends payable by us to our foreign investors and gains on the sale of our shares or ADSs may become subject to PRC corporate income tax liabilities.

The Implementation Rules of the CIT Law provide that (i) if the enterprise that distributes dividends is domiciled in China, or (ii) if gains are realized from transferring equity interests of enterprises domiciled in China, then such dividends or capital gains are treated as China-sourced income. It is not clear how “domicile” will be interpreted under the CIT Law. It may be interpreted as the jurisdiction where the enterprise is incorporated or where the enterprise is a tax resident. Therefore, if our company and our subsidiaries in Hong Kong are considered PRC tax resident enterprises for tax purposes, any dividends we pay to our overseas shareholders or ADS holders, as well as any gains realized by such shareholders or ADSs holders from the transfer of our shares or ADSs, may be viewed as China-sourced income and, as a consequence, be subject to PRC corporate income tax at 10% or a lower treaty rate. If we are required to withhold PRC income tax on dividends we pay to our overseas shareholders or ADS holders, or if you are required to pay PRC income tax on gains from the transfer of our shares or ADSs, the value of your investment in our shares or ADSs may be materially adversely affected.

Our ability to make distributions and other payments to our shareholders depends to a significant extent upon the distribution of earnings and other payments made by our subsidiaries in the PRC.

We conduct a substantial part of our operations through our operating subsidiaries in China. Our ability to make distributions or other payments to our shareholders depends on payments from these operating subsidiaries in China, whose ability to make such payments is subject to PRC regulations. Regulations in the PRC currently permit payment of dividends only out of accumulated profits as determined in accordance with accounting standards and regulations in China. According to the relevant PRC laws and regulations applicable to our operating subsidiaries in China and their respective articles of association, these subsidiaries are each required to set aside 10% of their after-tax profits based on PRC accounting standards each year as statutory common reserves until the accumulative amount of these reserves reaches 50% of their registered capital. These reserves are not distributable as cash dividends. As of December 31, 2022, these general reserves amounted to RMB1.03 billion (US\$149.8 million), accounting for 4.3% of the total registered capital of all of our operating subsidiaries in China. In addition, under the CIT Law and its Implementation Rules, dividends from our operating subsidiaries in China to us are subject to withholding tax to the extent that we are considered a non-PRC tax resident enterprise under the CIT Law. See “—Our China-sourced income is subject to PRC withholding tax under the CIT Law, and we may be subject to PRC corporate income tax at the rate of 25%.” Furthermore, if our operating subsidiaries in China incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other distributions to us such as requiring prior approval from relevant banks.

Restrictions on currency exchange may limit our ability to receive and use our revenue effectively.

Certain portions of our revenue and expenses are denominated in Renminbi. If our revenue denominated in Renminbi increases or expenses denominated in Renminbi decrease in the future, we may need to convert a portion of our revenue into other currencies to meet our foreign currency obligations, including, among others, payment of dividends declared, if any, in respect of the ADSs. Under China’s existing foreign exchange regulations, foreign currency under current account transactions, such as dividend payments and trade-related transactions are generally convertible. Accordingly, our operating subsidiaries in China are able to pay dividends in foreign currencies without prior approval from the SAFE, by complying with certain procedural requirements. On January 1, 2020, the Foreign Investment Law and its implementing regulations came into effect. According to the Foreign Investment Law, a foreign investor may, in accordance with the law, freely transfer into or out of the PRC its contributions, profits, capital earnings, income from asset disposal, intellectual property rights royalties acquired, compensation or indemnity legally obtained, income from liquidation, etc., made or derived within the territory of the PRC in RMB or any foreign currency, subject to no illegal restriction by any entity or individual in terms of the currency, amount, frequency of such transfer into or out of the PRC, etc. The foreign exchange control in the field of foreign investment has been continuously relaxed. However, in practice, laws and regulations regarding the legality of foreign exchange projects still need to be followed. The SAFE issued the Circular on Further Promoting the Reform of Foreign Exchange Administration and Improving Examination of Authenticity and Compliance on January 26, 2017, pursuant to which the SAFE restated the procedures and reemphasized the bona-fide principle for banks to follow during their review of certain cross-border profit remittance. We cannot assure you that the PRC government would not take further measures in the future to restrict access to foreign currencies for current account transactions. Foreign exchange transactions by our operating subsidiaries in China under capital accounts continue to be subject to significant foreign exchange controls and require the approval of, or registration with, PRC governmental authorities. In particular, if one of our operating subsidiaries in China borrows foreign currency loans from us or other foreign lenders, these loans must be registered with the SAFE.

If we finance our subsidiaries in China by means of additional capital contributions, these capital contributions must be filed or approved by certain government authorities, including the MOFCOM or its local counterparts. On August 29, 2008, the SAFE promulgated Circular 142, which used to regulate the conversion by a foreign-invested company of foreign currency into Renminbi by restricting how the converted Renminbi may be used. On March 30, 2015, the SAFE issued the Circular on Reforming the Administration Approach Regarding the Foreign Exchange Capital Settlement of Foreign-invested Enterprises (“Circular 19”), which became effective on June 1, 2015 and replaced Circular 142. Circular 19 provides that the conversion from foreign currency registered capital of foreign-invested enterprises into the Renminbi capital may be at foreign-invested enterprises’ discretion, which means that the foreign currency registered capital of foreign-invested enterprises for which the rights and interests of monetary contribution has been confirmed by the local foreign exchange bureau (or the book-entry of monetary contribution has been registered) can be settled at the banks based on the actual operational needs of the enterprises. However, Circular 19 does not materially change the restrictions on the use of foreign currency registered capital of foreign-invested enterprises that Circular 142 has set forth. On June 9, 2016, the SAFE promulgated the Circular on Reforming and Standardizing the Administrative Provisions on Capital Account Foreign Exchange (“Circular 16”), which applies to all domestic enterprises in China. Circular 19 and Circular 16 continue to prohibit foreign-invested enterprises from, among other things, spending Renminbi capital converted from its foreign currency registered capital on expenditures beyond its business scope. Therefore, Circular 19 and Circular 16 may significantly limit the ability of our operating subsidiaries in China to transfer and use Renminbi funds from its foreign currency denominated capital, which may adversely affect our business, financial condition and results of operations.

The expiration or reduction of tax incentives by the PRC government may have a material adverse effect on our operating results.

The CIT Law imposes a uniform tax rate of 25% on all PRC enterprises, including foreign-invested enterprises, and eliminates or modifies most of the tax exemptions, reductions and preferential treatments available under the previous tax laws and regulations. Under the CIT Law, enterprises that were established before March 16, 2007 and already enjoyed preferential tax treatments have (i) in the case of preferential tax rates, continued to enjoy such tax rates that were gradually increased to the new tax rates within five years from January 1, 2008 or, (ii) in the case of preferential tax exemptions or reductions for a specified term, continued to enjoy the preferential tax holiday until the expiration of such term.

Jiangxi Jinko, Zhejiang Jinko, Haining Jinko and Yiwu Jinko were designated by the relevant local governmental authorities as “High and New Technology Enterprises” under the CIT Law. Jiangxi Jinko, Yuhuan Jinko and Haining Jinko were subject to a preferential tax rate of 15% for 2019, 2020 and 2021. Yiwu Jinko has obtained the qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Zhejiang Jinko has renewed its qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Jiangxi Jinko and Haining Jinko have successfully renewed this qualification for 2022. In addition, Shangrao Jinko and Zhejiang New Material obtained HNTE qualification to enjoy the preferential tax rate of 15% for 2022, 2023 and 2024. Xinjiang Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% for 2018, 2019 and 2020. According to the “Announcement on Continuation of CIT Policies for Large-scale Development in the Western Region” published on April 23, 2020, enterprises established in the western region in encouraged industries can continue to enjoy a preferential tax rate of 15% till December 31, 2030. Sichuan Jinko, Leshan Jinko, Chuxiong Jinko and Qinghai Jinko were also designated by the relevant local governmental authorities as an “Enterprise in the Encouraged Industry” and can enjoy a preferential tax rate of 15% till 2030. However, we cannot assure you that Jiangxi Jinko, Shangrao Jinko, Zhejiang New Material, Yiwu Jinko, Zhejiang Jinko, Leshan Jinko, Haining Jinko, Xinjiang Jinko and Sichuan Jinko will continue to qualify as “High and New Technology Enterprises” or “Enterprise in the Encouraged Industries” as they are subject to reevaluation in the near future. In addition, there are uncertainties on how the CIT Law and the Implementation Rules of the CIT Law will be enforced, and whether the future implementation of these rules will be consistent with the current interpretation. If the corporate income tax rates of some of our PRC subsidiaries increase, our financial condition and results of operations could be materially adversely affected.

According to the Provisional Regulation of the PRC on Value-Added Tax as amended on November 19, 2017 and its implementing rules, and the Announcement on Relevant Policies for Deepening Value-Added Tax Reform promulgated on March 20, 2019, effective from the date of April 1, 2019, gross proceeds from sales and importation of goods and provision of services are generally subject to a value-added tax (“VAT”) at 13%, instead of 16%, with exceptions for certain categories of goods that are taxed at a rate at 9%, instead of 10%.

The State Council promulgated the Circular of the State Council on Cleaning up and Standardizing Preferential Policies on Tax and Other Aspects (“Circular 62”), on November 27, 2014 in an effort to render the preferential policies on tax, non-tax income, fiscal expenditure, and other aspects of the local government consistent with the PRC central laws and regulations. According to the Circular 62, the local tax authorities shall conduct the special clean-up action, which leads to preferential policies violating PRC central laws and regulations being declared ineffective and repealed and preferential policies not violating PRC central laws and regulations being retained. In addition, the special clean-up action requires that all provincial governments and relevant authorities shall, prior to the end of March 2015, report the outcome of the special clean-up action in respect of preferential policies on tax and other aspects to the Ministry of Finance, and the Ministry of Finance shall then forward the outcome to the State Council for final determination. On May 10, 2015, the State Council issued the Circular on Matters Relating to Preferential Policies for Tax and Other Aspects (“Circular 25”), which suspended the implementation of special clean-up action of Circular 62. Circular 25 provides that in respect of existing local preferential policies with specified time limit, such time limit shall still apply; if there is no specified time limit, the local governments shall have the discretion to set up a transitional period to adjust the policies. Furthermore, it provides that preferential tax policies stipulated in the agreements between local governments and enterprises remain valid and the implemented part of the policies shall not be retrospectively affected. However, it is not clear whether or not and when the special clean-up action will resume. The repeal of any preferential policy on tax and other aspects may materially adversely affect our financial condition and business operations.

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

Under the current PRC tax regulations, indirect transfers of equity interests and other properties of PRC tax resident enterprises by non-PRC holding companies may be subject to PRC tax. In accordance with the Announcement of the State Taxation Administration on Several Issues concerning the Enterprise Income Tax on the Indirect Transfers of Properties by Non-Resident Enterprises (“STA Announcement 7”), issued by the STA on February 3, 2015, if a non-PRC tax resident enterprise indirectly transfers equities and other properties of a PRC tax resident enterprise and such indirect transfer will produce a result identical or substantially similar to direct transfer of equity interests and other properties of the PRC tax resident enterprise, the non-PRC tax resident enterprise may be subject to PRC withholding tax at a rate up to 10%. The Announcement of the State Taxation Administration on Matters Concerning Withholding of Income Tax of Non-resident Enterprises at Source (“STA Announcement 37”), which was issued by the STA on October 17, 2017 and became effective on December 1, 2017, renovates the principles and procedures concerning the indirect equity transfer tax withholding for a non-PRC tax resident enterprise. Failure to comply with the tax payment obligations by a non-PRC tax resident will result in penalties, including full payment of tax owed, fines and default interest on those tax.

According to STA Announcement 7, where a non-resident enterprise indirectly transfers equity interests or other properties of PRC tax resident enterprises, (“PRC Taxable Property”) to avoid its tax liabilities by implementing arrangements without reasonable commercial purpose, such indirect transfer shall be re-characterized and recognized as a direct transfer of PRC Taxable Property. As a result, gains derived from such indirect transfer and attributable to PRC Taxable Property may be subject to PRC withholding tax at a rate of up to 10%. In the case of an indirect transfer of property of establishments of a foreign enterprise in the PRC, the applicable tax rate would be 25%. STA Announcement 7 also illustrates certain circumstances which would indicate a lack of reasonable commercial purpose. STA Announcement 7 further sets forth certain “safe harbors” which would be deemed to have a reasonable commercial purpose. As a general principle, the STA also issued the Administration of General Anti-Tax Avoidance (Trial Implementation) (“GATA”), which became effective on February 1, 2015 and empowers the PRC tax authorities to apply special tax adjustments for “tax avoidance arrangements.”

There is uncertainty as to the application of STA Announcement 7 as well as the newly issued STA Announcement 37 and GATA. For example, it may be difficult to evaluate whether or not the transaction has a reasonable commercial purpose, and such evaluation may be based on ambiguous criteria which have not been formally declared or stated by tax authorities. As a result, any of our disposals or acquisitions of the equity interests of non-PRC entities which indirectly hold PRC Taxable Property or any offshore transaction related to PRC Taxable Property, including potential overseas restructuring, might be deemed an indirect transfer under PRC tax regulations. Therefore, we may be at risk of being taxed under STA Announcement 7 and STA Announcement 37 and we may be required to expend valuable resources to comply with STA Announcement 7 and STA Announcement 37 or to establish that we should not be taxed thereunder, which may materially adversely affect our financial condition and results of operations.

As a foreign company, our acquisitions of PRC companies may take longer and be subject to higher level of scrutiny by the PRC government, which may delay or prevent any intended acquisition.

Circular 10 established additional procedures and requirements including the requirements that in certain instances foreign investors obtain MOFCOM's approval when they acquire equity or assets of a PRC domestic enterprise. According to Article 35 of the Foreign Investment Law, a security review system for foreign investment will be established in the country, under which the security review shall be conducted for any foreign investment affecting or having the possibility to affect national security. According to Article 40 of the Foreign Investment Law, where any country or region takes any discriminatory prohibitive or restrictive measures, or other similar measures against the People's Republic of China in terms of investment, the People's Republic of China may take corresponding measures against the said country or region in light of the actual conditions. In the future, we may want to grow our business in part by acquiring complementary businesses, although we do not have plans to do so at this time. Complying with Circular 10 the Foreign Investment Law and other relevant regulations to complete these transactions could be time-consuming and costly, and could result in an extensive review by the PRC government and its increased control over the terms of the transaction, and any required approval processes may delay or inhibit our ability to complete such transactions, which could affect our ability to expand our business or maintain our market share.

Our failure to make payments of statutory social welfare and housing funds to our employees could adversely and materially affect our financial condition and results of operations.

According to the relevant PRC laws and regulations, we are required to pay certain statutory social security benefits, including medical care, injury insurance, unemployment insurance, maternity insurance and pension benefits, and housing funds, for our employees. Our failure to comply with these requirements may subject us to monetary penalties imposed by the relevant PRC authorities and proceedings initiated by our employees, which could materially adversely affect our business, financial condition and results of operations.

In line with local customary practices, we have not made full contribution to the social insurance funds, and the contributions we made to the social insurance funds met the requirement of the local minimum wage standard, instead of the employees' actual salaries as required, and have not made full contribution to the housing funds. We estimate the aggregate amount of unpaid social security benefits and housing funds in China to be RMB1.07 billion (US\$155.3 million) as of December 31, 2022. We may be required by the relevant PRC authorities to pay these statutory social security benefits and housing funds within a designated time period. In addition, an employee is entitled to seek compensation by resorting to labor arbitration at the labor arbitration center or filing a labor complaint with the labor administration bureau within a designated time period. We have made provisions for such unpaid social security benefits and housing funds of our former and current PRC subsidiaries. All employee participants in our share incentive plans who are domestic individual participants may be required to register with SAFE. We may also face regulatory uncertainties that could restrict our ability to adopt additional option plans for our directors and employees under PRC law.

All employees participating in our share incentive plans who are domestic individual participants may be required to register with SAFE. We may also face regulatory uncertainties that could restrict our ability to adopt additional option plans for our directors and employees under PRC law.

On February 15, 2012, SAFE released the Stock Option Notice, which superseded the Application Procedures of Foreign Exchange Administration for Domestic Individuals Participating in an Employee Stock Holding Plan or Stock Option Plan of an Overseas-Listed Company, issued by SAFE in 2007. According to the Stock Option Notice, PRC individual participants include directors, supervisors, senior management personnel and other employees who are PRC citizens (which includes citizens of Hong Kong, Macau and Taiwan) or foreign individuals who reside in the PRC for 12 months consecutively. Under the Stock Option Notice, PRC and foreign citizens who receive equity grants from an overseas listed company are required, through a PRC agent or PRC subsidiary of such listed company, to register with SAFE and complete certain other bank and reporting procedures. In addition, according to the Stock Option Notice, domestic individual participants must complete the registration with SAFE or its local branch within three days rather than 10 days from the beginning of each quarter.

Failure to comply with such provisions may subject us and the participants of our share incentive plans who are domestic individual participants to fines and legal sanctions and prevent us from further granting options under our share incentive plans to our employees, and we may become subject to more stringent review and approval processes with respect to our foreign-exchange activities, such as in regards to our PRC subsidiaries' dividend payment to us or in regards to borrowing foreign currency, which could adversely affect our business operations.

It may be difficult to effect service of process on, or to enforce any judgments obtained outside the PRC against, us, our directors, or our senior management members who live inside the PRC.

A majority of our existing directors and senior management members reside in the PRC and a substantial part of our assets and the assets of such persons are located in the PRC. Accordingly, it may be difficult for investors to effect service of process on any of these persons or to enforce judgments obtained outside of the PRC against us or any of these persons. The PRC does not have treaties providing for the reciprocal recognition and enforcement of judgments awarded by courts in many countries, including the Cayman Islands, the United States and the United Kingdom. Therefore, the recognition and enforcement in the PRC of judgments of a court in any of these jurisdictions in relation to any matter not subject to a binding arbitration provision may be difficult or even impossible.

Higher labor costs and inflation in China may adversely affect our business and our profitability.

Labor costs in China have risen in recent years as a result of the enactment of new labor laws and social development. In addition, inflation in China has increased. According to the National Bureau of Statistics of China, consumer price inflation in China was 2.5%, 0.9% and 2.0% in 2020, 2021 and 2022, respectively. Because we purchase raw materials from suppliers in China, higher labor cost and inflation in China increases the costs of labor and raw materials we must purchase for manufacturing. As we expect our production staff to increase and our manufacturing operations to become more labor intensive when we commence silicon wafer and solar module production, rising labor costs may increase our operating costs and therefore negatively impact our profitability.

Because we source contractors and purchase raw materials in China, higher labor cost and inflation in China increases the costs of labor and raw materials we procure for production. In addition, our suppliers may also be affected by higher labor costs and inflation. Rising labor costs may increase our operating costs and partially erode the cost advantage of our China-based operations and therefore negatively impact our profitability.

Risks Related to the ADSs

The market price for the ADSs has been volatile, which could result in substantial losses to investors.

The market price for the ADSs has been and may continue to be highly volatile and subject to wide fluctuations, which could result in substantial losses to investors. The closing prices of the ADSs ranged from US\$38.64 to US\$75.54 per ADS in 2022. The price of the ADSs may continue to fluctuate in response to factors including the following:

- announcements of new products by us or our competitors;
- technological breakthroughs in the solar and other renewable power industries;
- reduction or elimination of government subsidies and economic incentives for the solar industry;
- news regarding any gain or loss of customers by us;
- news regarding recruitment or loss of key personnel by us or our competitors;
- announcements of competitive developments, acquisitions or strategic alliances in our industry;
- changes in the general condition of the global economy and credit markets;
- general market conditions or other developments affecting us or our industry;
- the operating and stock price performance of other companies, other industries and other events or factors beyond our control;
- regulatory developments in our target markets affecting us, our customers or our competitors;
- announcements regarding patent litigation or the issuance of patents to us or our competitors;
- announcements of studies and reports relating to the conversion efficiencies of our products or those of our competitors;

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- actual or anticipated fluctuations in our quarterly results of operations;
- changes in financial projections or estimates about our financial or operational performance by securities research analysts;
- changes in the economic performance or market valuations of other solar power technology companies;
- release or expiry of lock-up or other transfer restrictions on our outstanding ordinary shares or ADSs;
- sales or perceived sales of additional ordinary shares or ADSs; and
- commencement of, or our involvement in, litigation.

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

We cannot give any assurance that these factors will not occur in the future again. In addition, the securities market has from time to time experienced significant price and volume fluctuations that are not related to the operating performance of particular companies. Particularly, concerns over economic slowdown resulting from the COVID-19 pandemics have triggered a U.S. key market-wide circuit breaker for several times since March 9, 2020, leading to a historic drop for the U.S. capital market. No guarantee can be given on how the capital markets will react although actions have been taken worldwide to combat the spread of the COVID-19. These market fluctuations may also have a material adverse effect on the market price of the ADSs. In the past, following periods of volatility in the market price of their stock, many companies have been the subject of securities class action litigation. If we become involved in similar securities class action litigation in the future, it could result in substantial costs and diversion of our management's attention and resources and could harm our stock price, business, prospects, financial condition and results of operations.

Conversion of the convertible notes we offered may dilute the ownership interest of existing shareholders, including holders who had previously converted their convertible notes.

The conversion of some or all of the convertible notes will dilute the ownership interests of existing shareholders and existing holders of the ADSs. Any sales in the public market of the ADSs issuable upon such conversion could adversely affect prevailing market prices of the ADSs. In addition, the existence of the convertible notes may encourage short selling by market participants because the conversion of the convertible notes could depress the price of the ADSs.

Provisions of the convertible notes we offered could also discourage an acquisition of us by a third party.

Certain provisions of the convertible notes could make it more difficult or more expensive for a third party to acquire us, or may even prevent a third party from acquiring us. For example, in terms of the convertible notes we offered in 2019, upon the occurrence of certain transactions constituting a fundamental change, holders of the convertible notes will have the right, at their option, to require us to repurchase all of their convertible notes or any portion of the principal amount of the convertible notes in integral multiples of US\$1,000. We may also be required to increase the conversion rate for conversions in connection with certain fundamental changes. By discouraging an acquisition of us by a third party, these provisions could have the effect of depriving the holders of our ordinary shares and holders of the ADSs of an opportunity to sell their ordinary shares and ADSs, as applicable, at a premium over prevailing market prices.

You may not receive dividends or other distributions on our ordinary shares and you may not receive any value for them, if it is illegal or impractical to make them available to you.

Under Cayman Islands law, we may only pay dividends out of our profits or our share premium account provided always that we are able to pay our debts as they fall due in the ordinary course of our business. Our ability to pay dividends will therefore depend on our ability to generate sufficient profits. We cannot give any assurance that we will declare dividends of any amounts, at any rate or at all in the future. We have not paid any dividends in the past. Future dividends, if any, will be paid at the discretion of our board of directors and will depend upon our future operations and earnings, capital expenditure requirements, general financial conditions, legal and contractual restrictions and other factors that our board of directors may deem relevant. Our shareholders may, by ordinary resolution, declare a dividend, but no dividend may exceed the amount recommended by our board of directors. See “—Risks Related to Our Business and Industry—We rely principally on dividends and other distributions on equity paid by our principal operating subsidiary, and limitations on their ability to pay dividends to us could have a material adverse effect on our business and results of operations” above for additional legal restrictions on the ability of our PRC subsidiaries to pay dividends to us.

The depositary of the ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on ordinary shares or other deposited securities underlying the ADSs, after deducting its fees and expenses. You will receive these distributions in proportion to the number of ordinary shares your ADSs represent. However, the depositary is not responsible for making such distribution if it decides that it is unlawful or impractical to make a distribution available to any holders of ADSs. For example, it would be unlawful to make a distribution to a holder of ADSs if it consists of securities that require registration under the Securities Act but that are not properly registered or distributed under an applicable exemption from registration. The depositary may also determine that it is not feasible to distribute certain property through the mail. Additionally, the value of certain distributions may be less than the cost of mailing such distributions. In these cases, the depositary may determine not to distribute such property. We have no obligation to register under U.S. securities laws any ADSs, ordinary shares, rights or other securities received through such distributions. We also have no obligation to take any other action to permit the distribution of ADSs, ordinary shares, rights or anything else to holders of ADSs. This means that you may not receive distributions we make on our ordinary shares or any value for them if it is illegal or impractical for us to make them available to you. These restrictions may cause a material decline in the value of the ADSs.

Holders of ADSs have fewer rights than shareholders and must act through the depositary to exercise those rights.

As a holder of ADSs, you will not be treated as one of our shareholders and you will not have shareholder rights. Instead, the depositary will be treated as the holder of the shares underlying your ADSs. However, you may exercise some of the shareholders' rights through the depositary, and you will have the right to withdraw the shares underlying your ADSs from the deposit facility.

Holders of ADSs may only exercise the voting rights with respect to the underlying ordinary shares in accordance with the provisions of the deposit agreement. Under our current articles of association, the minimum notice period required to convene a general meeting is ten days. When a general meeting is convened, you may not receive sufficient notice of a shareholders' meeting to permit you to withdraw the ordinary shares underlying your ADSs to allow you to cast your vote with respect to any specific matter. In addition, the depositary and its agents may not be able to send voting instructions to you or carry out your voting instructions in a timely manner. We plan to make all reasonable efforts to cause the depositary to extend voting rights to you in a timely manner, but we cannot assure you that you will receive the voting materials in time to ensure that you can instruct the depositary to vote your ADSs. Furthermore, the depositary and its agents will not be responsible for any failure to carry out any instructions to vote, for the manner in which any vote is cast or for the effect of any such vote. As a result, you may not be able to exercise your right to vote and you may lack recourse if the shares underlying your ADSs are not voted as you requested. In addition, in your capacity as an ADS holder, you will not be able to call a shareholder meeting.

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

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

We are a Cayman Islands exempted company and, because judicial precedent regarding the rights of shareholders is more limited under Cayman Islands law than that under U.S. law, you may have less protection for your shareholder rights than you would under U.S. law.

Our corporate affairs are governed by our memorandum and articles of association, as amended and restated from time to time, the Companies Act (As Revised) of the Cayman Islands and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary duties of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as that from English common law, which has persuasive, but not binding, authority on a court in the Cayman Islands. The rights of our shareholders and the fiduciary duties of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial 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, some U.S. states, such as Delaware, have more fully developed and judicially interpreted bodies of corporate law than the Cayman Islands.

In addition, Cayman Islands companies may not have standing to initiate a shareholder derivative action before federal courts of the United States.

As we are a Cayman Islands exempted company and a substantial part of our consolidated assets are located outside of the United States and a substantial part of our current operations are conducted in China, there is uncertainty as to whether the courts of the Cayman Islands or China would recognize or enforce judgments of U.S. courts predicated upon the civil liability provisions of the securities laws of the United States or any state against us and our officers and directors, most of whom are not residents of the United States and the substantial majority of whose assets are located outside the United States. In addition, it is uncertain whether the Cayman Islands or PRC courts would entertain original actions brought in the Cayman Islands or in China against us or our officers and directors predicated on the federal securities laws of the United States. While there is no statutory recognition in the Cayman Islands of judgments obtained in the federal or state courts of the United States (and the Cayman Islands are not a party to any treaties for the reciprocal enforcement or recognition of such judgments), a foreign money judgment obtained in a foreign court of competent jurisdiction will be recognized and enforced in the courts of the Cayman Islands at common law, without any re-examination of the merits of the underlying dispute, by an action commenced on the foreign judgment debt in the Grand Court of the Cayman Islands, provided such judgment (a) is given by a foreign court of competent jurisdiction, (b) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given, (c) is final and conclusive, (d) is not in respect of taxes, a fine or a penalty, (e) is not inconsistent with a Cayman Islands judgment in respect of the same matter, and (f) is not impeachable on the grounds of fraud and was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands. However, the Cayman Islands courts are unlikely to enforce a judgment obtained from the U.S. courts under civil liability provisions of the U.S. federal securities law if such judgment is determined by the courts of the Cayman Islands to give rise to obligations to make payments that are penal or punitive in nature. Because such a determination has not yet been made by a court of the Cayman Islands, it is uncertain whether such civil liability judgments from U.S. courts would be enforceable in the Cayman Islands. A Cayman Islands court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

As a result of all of the above, shareholders of a Cayman Islands company may have more difficulty in protecting their interests in the face of actions taken by our management, members of the board of directors or controlling shareholders than they would as shareholders of a company incorporated in a jurisdiction in the United States. For example, contrary to the general practice in most corporations incorporated in the United States, Cayman Islands incorporated companies may not generally require that shareholders approve sales of all or substantially all of a company's assets. The limitations described above will also apply to the depositary who is treated as the holder of the shares underlying your ADSs.

Our current articles of association contain anti-takeover provisions that could prevent a change in control even if such takeover is beneficial to our shareholders.

Our current articles of association contain provisions that could delay, defer or prevent a change in control of our company that could be beneficial to our shareholders. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors and take other corporate actions. As a result, these provisions could limit the price that investors are willing to pay in the future for the ADSs. These provisions might also discourage a potential acquisition proposal or tender offer, even if the acquisition proposal or tender offer is at a price above the then current market price of the ADSs. These provisions provide that our board of directors has authority, without further action by our shareholders, to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our ordinary shares, in the form of ADSs or otherwise. Our board of directors may decide to issue such preferred shares quickly with terms calculated to delay or prevent a change in control of our company or make the removal of our management more difficult. If our board of directors decides to issue such preferred shares, the price of the ADSs may fall and the voting and other rights of holders of our ordinary shares and ADSs may be materially adversely affected.

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 U.S. domestic public companies.

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

- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q, quarterly certifications by the principal executive and financial officers, or current reports on Form 8-K;
- 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 financial year. Press releases relating to financial results and material events will also be furnished to the SEC on Form 6-K. However, the information we are required to file with or furnish to the SEC will be less extensive and less timely compared to that required to be filed with the SEC by U.S. domestic issuers. As a result, 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.

As an exempted company incorporated in the Cayman Islands, we may adopt certain home country practices in relation to corporate governance matters. These practices may afford less protection to shareholders than they would enjoy if we complied fully with the NYSE corporate governance listing standards.

As a non-U.S. company with ADSs listed on the NYSE, we are subject to the NYSE corporate governance listing standards. However, in reliance on Section 303A.11 of the NYSE Listed Company Manual, which permits a foreign private issuer to follow the corporate governance practices of its home country, we have adopted certain corporate governance practices that may differ significantly from the NYSE corporate governance listing standards. For example, we may include non-independent directors as members of our compensation committee and nominating and corporate governance committee, and our independent directors are not required to hold regularly scheduled meetings at which only independent directors are present. Such home country practice differs from the NYSE corporate governance listing standards, because there are no specific provisions under the Companies Act (As Revised) of the Cayman Islands imposing such requirements. Accordingly, executive directors, who may also be our major shareholders or representatives of our major shareholders, may have greater power to make or influence major decisions than they would if we complied with all the NYSE corporate governance listing standards. While we may adopt certain practices that are in compliance with the laws of the Cayman Islands, such practices may differ from more stringent requirements imposed by the NYSE rules and as such, our shareholders may be afforded less protection under Cayman Islands law than they would under the NYSE rules applicable to U.S. domestic issuers. See “Item 16G. Corporate Governance.”

We may be a passive foreign investment company, which could result in adverse U.S. federal income tax consequences to U.S. Holders of the ADSs or ordinary shares.

A non-U.S. corporation will be considered a passive foreign investment company, which we refer to as a PFIC, for U.S. federal income tax purposes in any taxable year in which either 75% or more of its gross income is “passive income” or 50% or more of its assets constitute “passive assets” (generally determined on the basis of a quarterly average). The calculation of the value of our assets will be based, in part, on the market value of the ADSs, which is subject to change. The determination as to whether a non-U.S. corporation is a PFIC is based upon the application of complex U.S. federal income tax rules (which are subject to differing interpretations), the composition of income and assets of the non U.S. corporation from time to time and the nature of the activities performed by its officers and employees.

Based upon the composition of our current and projected income, assets and activities, we do not expect to be considered a PFIC for our current taxable year or in the foreseeable future. However, because the determination of whether we are a PFIC will be based upon the composition of our income, assets and the nature of our business, as well as the income, assets and business of entities in which we hold at least a 25% interest, from time to time, and because there are uncertainties in the application of the relevant rules, there can be no assurance that the United States Internal Revenue Service, will not take a contrary position.

If we are a PFIC for any taxable year during which a U.S. Holder, as defined in “Item 10. Additional Information—E. Taxation—U.S. Federal Income Taxation”, holds the ADSs or ordinary shares, the U.S. Holder might be subject to increased U.S. federal income tax liability and to additional reporting obligations. See “Item 10. Additional Information—E. Taxation—U.S. Federal Income Taxation—Passive Foreign Investment Company.” U.S. Holders are encouraged to consult their own tax advisors regarding the applicability of the PFIC rules to their purchase, ownership and disposition of the ADSs or ordinary shares.

We may issue additional ordinary shares, other equity or equity-linked or debt securities, which may materially adversely affect the price of our ordinary shares or ADSs. Hedging activities may depress the trading price of our ordinary shares.

We may issue additional equity, equity-linked or debt securities for a number of reasons, including to finance our operations and business strategy (including in connection with acquisitions, strategic collaborations or other transactions), to satisfy our obligations for the repayment of existing indebtedness, to adjust our ratio of debt to equity, to satisfy our obligations upon the exercise of outstanding warrants or options or for other reasons. Any future issuances of equity securities or equity-linked securities could substantially dilute your interests and may materially adversely affect the price of our ordinary shares or ADSs. We cannot predict the timing or size of any future issuances or sales of equity, equity-linked or debt securities, or the effect, if any, that such issuances or sales may have on the market price of our ordinary shares or ADSs. Market conditions could require us to accept less favorable terms for the issuance of our securities in the future.

Substantial future sales of our ordinary shares or ADSs in the public market, or the perception that such sales could occur, could cause the price of our ordinary shares or ADSs to decline.

Sales of our ordinary shares or ADSs in the public market, or the perception that such sales could occur, could cause the market price of our ordinary shares to decline. As of December 31, 2022, we had 201,189,189 ordinary shares outstanding, excluding 67,668 ADS representing 270,672 ordinary shares reserved for future grants under our share incentive plans and conversion of our convertible notes, and 2,945,840 ordinary shares as treasury stock. The number of ordinary shares outstanding and available for sale will increase when our employees and former employees who are holders of restricted share units and options to acquire our ordinary shares become entitled to the underlying shares under the terms of their units or options. To the extent these shares are sold into the market, or are converted to ADSs which are sold into the market place, the market price of our ordinary shares or ADSs could decline.

Your right to participate in any future rights offerings may be limited, which may cause dilution to your holdings.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make these rights available in the United States unless we register the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Our legal and commercial name is JinkoSolar Holding Co., Ltd. Our principal executive office is located at 1 Yingbin Road, Shangrao Economic Development Zone, Jiangxi Province, 334100, People's Republic of China. Our telephone number at this address is (86-793) 858-8188 and our fax number is (86-793) 846-1152. Our registered office in the Cayman Islands is Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands.

We commenced our operations in June 2006 through our then consolidated subsidiary Jiangxi Desun Energy Co., Ltd. We were incorporated as a limited liability company in the Cayman Islands on August 3, 2007. Following a series of equity transactions, we established a holding company structure with us being the ultimate holding company in 2009. We conduct our business principally through our majority-owned operating subsidiary in China, Jiangxi Jinko. As of December 31, 2022, we had 14 production facilities globally and 23 overseas subsidiaries in Japan, South Korea, Vietnam, India, Turkey, Germany, Italy, Switzerland, the United States, Mexico, Brazil, Chile, Australia, Canada, Malaysia, the United Arab Emirates, Denmark, Indonesia and Nigeria. As of the same date, we also had global sales teams in China, the United States, Canada, Brazil, Chile, Mexico, Italy, Germany, Turkey, Spain, Japan, the United Arab Emirates, Netherlands, Vietnam and India to conduct sales, marketing and brand development for our products around the world.

On May 19, 2010, we completed our initial public offering, in which we offered and sold 5,835,000 ADSs representing 23,340,000 ordinary shares, raising US\$64.2 million in proceeds before expenses to us. The ADSs are listed on the New York Stock Exchange under the symbol "JKS."

On November 10, 2010, we completed a follow-on public offering of 3,500,000 ADSs representing 14,000,000 ordinary shares, of which 2,000,000 ADSs were sold by us and 1,500,000 ADSs were sold by the selling shareholders.

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On September 25, 2013, we completed a follow-on public offering of 4,370,000 ADSs representing 17,480,000 ordinary shares, including 570,000 ADSs sold pursuant to the underwriters' full exercise of their option to purchase additional ADSs.

On January 22, 2014, we completed a follow-on public offering of 3,750,000 ADSs representing 15,000,000 ordinary shares and a concurrent offering of US\$150.0 million in aggregate amount of 4.0% convertible senior notes due 2019.

In November 2016, as a result of the sale of all of the 55% equity interest indirectly held by us in JinkoPower, we disposed of our downstream solar power project business in China and received US\$250 million in cash.

In February 2017, we announced completion of repurchase of 4.00% convertible senior notes due 2019 at the option of holders of the notes. An aggregate principal amount of US\$61,074,000 of the notes was tendered for repurchase, with US\$10,000 convertible senior notes remaining outstanding after such repurchase.

In February 2018, we closed the follow-on public offering of 4,140,000 ADSs, each representing four of our ordinary shares, par value US\$0.00002 per share, at US\$18.15 per ADS. The net proceeds of the follow-on offering to us, after deducting underwriting commissions and fees and estimated offering expenses, was US\$71.1 million. Concurrently we completed the private placement with Tanka International Limited, an exempted company incorporated in the Cayman Islands held by Mr. Xiande Li, our founder, chairman and chief executive officer, and Mr. Kangping Chen, our founder, of its purchase of US\$35 million of our ordinary shares.

In May 2019, we completed a follow-on public offering of 4,671,875 ADSs, each representing four of our ordinary shares, at US\$16.00 per ADS. Concurrently with the offering, we issued convertible senior notes of US\$85 million due 2024 to support capital expenditure and supplement working capital. The notes will mature on June 1, 2024 and the holders will have the right to require us to repurchase for cash all or any portion of their notes on June 1, 2021. The interest rate is 4.5% per annum payable semi-annually, in arrears. As of the date of this annual report, the convertible notes of US\$29.75 million in aggregate have been converted. In connection with the issuance of the convertible notes, we entered into a zero strike call option transaction with an affiliate of Credit Suisse Securities (USA) LLC, whom we refer to as the option counterparty. The zero strike call option transaction was completed in July 2021.

In June 2019, we supplied Trung Nam Group with 258MW of monocrystalline PERC double glass modules which were installed at one of the largest solar-wind hybrid projects in Vietnam.

In June 2019, we supplied Power Construction Corporation of China with 351MW of solar modules, which were installed at the Hồng Phong solar PV plant in Vietnam, one of the largest PV projects in the Asia Pacific region.

In March 2020, we announced a share repurchase program of up to US\$100 million of our ordinary shares represented by ADSs within twelve months. Purchases may be made from time to time on the open market at prevailing market prices in open-market transactions, privately negotiated transactions or block trades, and/or through other legally permissible means, depending on market conditions and in accordance with the applicable rules and regulations. The timing and conditions of the share repurchases will be subject to various factors including the requirements under Rule 10b-18 and Rule 10b5-1 of the Exchange Act, as well as our insider trading policy. We plan to use our existing funds to fund repurchases made under the share repurchase program. We repurchased an aggregate of 305,660 ADSs under this share repurchase program.

In June 2020, Mr. Shaoguo Ji was appointed as our Chief Human Resources Officer (CHO).

In August 2020, we unveiled our RE100 roadmap by providing detail on our approach to achieve 100% powered by renewables by 2025.

In August 2020, we signed a contract with Shanghai Electric Hongkong Co., Limited to supply approximately 1 GW of solar modules for Phase V of the Dubai Electricity and Water Authority Solar Park. This project is located in Dubai, and is part of the government's sustainable development to support the Dubai Clean Energy Strategy 2050 with the goal of providing 75% of Dubai's total power output from clean energy sources by 2050. We would supply its high efficiency Swan series modules, which would meet the high requirements of Dubai's scorching temperatures and on the leveled cost of energy.

In September 2020, we supplied Trung Nam Group with 611MW of Tiger bifacial transparent backsheet modules, which were installed at the Thuan Nam solar power plant project in Vietnam. Located in Thuan Nam, the Thuan Nam solar power plant project was one of the largest solar power projects by capacity that were using bifacial modules in both Vietnam and Southeast Asia.

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In September 2020, we announced our intention to cooperate with ENEOS Corporation, Japan's largest oil refiner, on the provision of solar modules for a Virtual Power Plant project. For this project, our high-efficiency monocrystalline products would be deployed and installed on the roof of gas stations connected to a cloud-based distributed power plant, and would become our first Virtual Power Plant project in Japan.

In September 2020, our board of directors approved a strategic plan to access China's capital markets through our principal operating subsidiary Jiangxi Jinko. To qualify Jiangxi Jinko for a STAR Market listing and to raise additional capital to support its continuous expansion, our board of directors also approved an equity financing of Jiangxi Jinko.

In October 2020, the previously announced equity financing of Jiangxi Jinko was completed. Immediately after the closing, reputable Chinese third-party investors including China Industrial Bank Group, CIIT Asset Management Co., Ltd., YunShang Fund, Huaho Capital, and China Capital Management Co., Ltd., China Securities Investment Co., Ltd., together with our founders and senior management personnel, directly or through their investment arms, would collectively own approximately a 26.7% equity interest in Jiangxi Jinko. Following the closing of this transaction, we would actively prepare for the planned STAR Market listing of Jiangxi Jinko pursuant to relevant laws and regulations in China. We would remain the majority and controlling shareholder of Jiangxi Jinko after its STAR Market listing.

In November 2020, we and our subsidiary JinkoSolar (Sichuan) Co., Ltd. ("Sichuan Jinko") signed a long-term purchase agreement with certain subsidiaries of Tongwei Co., Ltd. The raw materials procurement would ensure a stable supply of polycrystalline silicon in line with our strategic and operational plans. Under the agreement, we locked in nearly 100,000 metric tons of polycrystalline silicon, and both parties could negotiate additional purchases. The price for any additional order would be negotiated and determined based on market conditions.

In December 2020, Mr. Longgen Zhang resigned as our director and Mr. Haiyuan (Charlie) Cao was appointed as our director. In connection with its proposed listing on the STAR Market, relevant PRC law requires that the senior management of Jiangxi Jinko be different from that of its controlling shareholder, our company. Accordingly, in December 2020, our board of directors approved the following changes to our senior management: (i) Mr. Kangping Chen, Mr. Gener Miao, Dr. Jiun-Hua Allen Guo, Mr. Shaoguo Ji and Dr. Hao Jin resigned as chief executive officer, chief marketing officer, chief operating officer, chief human resources officer and chief technology officer of our company, respectively, while retaining the same roles at Jiangxi Jinko (which runs substantially all of our business); and (ii) Mr. Xiande Li, our founder and the chairman of our board of directors, was additionally appointed as our chief executive officer. We do not believe these changes will have material impact on our business operations, because the relevant management members will continue performing their previous responsibilities at Jiangxi Jinko and our chief executive officer and chief financial officer will continue managing the overall business of our company under the direction of our board of directors.

In December 2020, we filed a prospectus supplement to sell up to an aggregate of US\$100 million of the ADSs through an at-the-market equity offering program (the "2020 ATM Program"). In January 2021, we completed the 2020 ATM Program, under which we sold 1,494,068 ADSs and received US\$98.25 million after deducting commissions and offering expenses.

In January 2021, our Tiger monofacial module won the prestigious PV Magazine Award 2020 in the module category.

In February 2021, we won the Green Builder Media's 2021 Green Innovation award.

In February 2021, we became the first international solar company to have signed on to the Global Framework Principles for Decarbonizing Heavy Industry, as part of our efforts to continue supporting the decarbonization of the heavy industry sector in favor of a transition towards clean energy.

In March 2021, we were recognized as "Overall High Achiever" in the 2020 PV Module Index Report published by the Renewable Energy Testing Center (RETC).

In March 2021, we launched a new series of ultra-efficient Tiger Pro modules with higher power capacity targeted for distributed generation market.

In April 2021, we joined the United Nations Global Compact, the world's largest corporate sustainability initiative. Under the U.N. Global Compact, signatories are encouraged to align their operations and strategies with key principles.

In April 2021, we won the award for "Asia's Best Employer" for the third consecutive year.

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In April 2021, we won the 7th All Quality Matters Award for Green Module Efficiency at the Solar Congress 2021 held by TÜV Rheinland.

In May 2021, we officially updated its new value-based strategy to redefine the incorporation of principles, social responsibility and profitability.

In May 2021, we were awarded Top 1 Prestigious Module PV Brand in Vietnamese Market 2020 voting jointly organized by the National Steering Committee for electricity Development of Vietnam, the Ministry of Industry and Trade (MOIT), and Vietnam Energy Magazine.

In May 2021, we received the award for Best HR Strategy of the Year at the Energy HR Summit India 2021.

In May 2021, Mr. Mengmeng (Pan) Li became our new chief financial officer and Mr. Haiyun (Charlie) Cao resigned as chief financial officer of our company, in order to comply with certain business operation independence requirements of the STAR Market in relation to the proposed listing of its principal operating subsidiary, Jiangxi Jinko on the STAR Market.

In May 2021, the maximum solar conversion efficiency of our large-area N-type monocrystalline silicon solar cells reached 25.25%, setting a new world record for large-size contact-passivated solar cells.

In June 2021, our flagship Tiger Pro dual glass module received the world's first IEC TS 62804-1-1:2020 certificate issued by DEKRA, one of the world's largest independent inspection companies.

In June 2021, we were ranked Top Performer in PV Evolution Labs' (PVEL) 2021 PV Module Reliability Scorecard for the seventh consecutive time.

In June 2021, we were recognized as an "Overall High Achiever" in Renewable Energy Testing Center's ("RET") 2021 PV Module Index Report for the second consecutive year.

In June 2021, our subsidiary, Shangrao JinkoSolar Industry Development Co., Ltd. planned to invest RMB315 million of monetary capital to increase capital and shares in Inner Mongolia Xinte Silicon Materials Co., Ltd., a wholly-owned subsidiary of Xinte Energy Co., Ltd. (HKEX: 1799).

In June 2021, the application documents regarding a potential initial public offering and listing of the shares of Jiangxi Jinko, a principal operating subsidiary of our company, was submitted to and received by the Shanghai Stock Exchange.

In July 2021, our principal operating subsidiary Jinko Solar Co., Ltd. signed a strategic cooperation agreement with Maersk for End-to-end Transportation and Digitalized Logistics Solutions.

In July 2021, the maximum solar conversion efficiency of our advanced high-efficiency solar module reached 23.53% and outperformed the previous record of 23.01%, also set by us, in January 2021, after recently setting a test record of 25.25% for large-area N-type monocrystalline silicon solar cells.

In July 2021, we were selected as an "Eco-Leader" by Green Builder® Media for the third time.

In July 2021, the United States Court of Appeals for the Federal Circuit issued a Rule 36 summary affirmance agreeing with the International Trade Commission's conclusion that our products do not infringe a patent asserted by Hanwha Q CELLS.

In August 2021, we obtained the first photovoltaic module LCA (Life Cycle Assessment) certificate in the Greater China region issued by TÜV Rheinland (China) Ltd., and concurrently passed the Italian EPD certification.

In August 2021, our principal operating subsidiary, Jiangxi Jinko signed a long-term polysilicon supply agreement with Wacker Chemie AG.

In September 2021, our principal operating subsidiary, Jiangxi Jinko signed a strategic cooperation framework agreement with Contemporary Amperex Technology Co., Ltd.

In September 2021, we announced that it is investing US\$500 million to build a monocrystalline ingot and wafer manufacturing facility in Quảng Ninh Province, Vietnam.

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In September 2021, we were awarded the “Top Brand PV USA” seal by EUPD Research.

In October 2021, we achieved a major technical breakthrough on its N-type monocrystalline silicon solar cell, setting a new world record for the fourth time in a year with the maximum solar conversion efficiency of 25.4% for its large-size passivating contact solar cell.

In October 2021, we won the prestigious Green World Awards for Environmental Best Practice named by the Green Organization in the global campaign to find the world’s greenest countries, companies, and communities.

In October 2021, our Tiger and Tiger Pro module series met the carbon footprint verification standards of TÜV Rheinland Group, a leading global services provider in the testing of PV modules and components.

In October 2021, we worked with Catholic Charities Jacksonville to provide refugees living in Jacksonville access to devices and internet in order to facilitate their English classes and better acclimate to life in America.

In November 2021, we launched a new series of ultra-efficient 2021 Flagship Tiger Neo modules.

In November 2021, Jiangxi Jinko plans to invest RMB450 million for equity in Sichuan Yongxiang Energy Technology Co., Ltd., a subsidiary of Tongwei Co., Ltd. (Shanghai Stock Exchange: 600438).

In December 2021, Jiangxi Jinko and Aldo Solar, which stands out as the largest distributor of solar energy solutions in Brazil with 31% market share, reinforce their partnership for 2022 with the signing of the largest distribution agreement for distributed generation ever signed by Jiangxi Jinko outside China.

In January 2022, Jiangxi Jinko had completed the STAR Listing. Jiangxi Jinko issued 2,000,000,000 shares representing approximately 20% of the total 10,000,000,000 shares outstanding after the STAR Listing. The shares were issued at a public offering price of RMB5.00 per share and the total gross proceeds of the STAR Listing were approximately RMB10.00 billion. After the STAR Listing, we own approximately 58.62% of Jiangxi Jinko.

In February 2022, our Tiger Neo bifacial modules reached competitive carbon footprint value for tenders in France.

In March 2022, Jiangxi Jinko entered into a project investment cooperation framework agreement with Qinghai Provincial Department of Industry and Information Technology, Xining Municipal Government and Xining Economic and Technological Development Zone Management Committee for a joint monocrystalline silicon pull rod project.

In March 2022, Jiangxi Jinko entered into an investment framework agreement with the Shangrao Guangxin District Government for a high-efficiency solar module and PV module aluminum frame project.

By March 2022, we are the first company to deliver solar modules of 100 GW globally.

In April 2022, we delivered our bifacial modules to a 204MW Solar Power Plant in Kozani, Western Macedonia, Greece. The Kozani project consists of 18 project sites adding up to a total of 204MW capacity. We delivered more than 500,000 bifacial modules to juwi Hellas Renewable Energy Sources S.A.

In May 2022, we signed our first European Energy Storage Solution (ESS) agreement with Memodo GmbH (“Memodo”). The Memodo exclusivity agreement for our ESS product portfolio will cover the D-A-CH region (Germany, Austria and Switzerland) for 2022 and 2023, respectively, which includes an all-in-one system, a stackable low-voltage and high-voltage storage system and a single or three-phase hybrid inverter. All power storage devices are installed with lithium iron phosphate batteries and are compatible with well-known inverters.

In May 2022, Jiangxi Jinko signed a new distribution agreement in Latin America with Aldo Solar. Aldo Solar, which stands out as the largest distributor of solar energy solutions in the country with a market share of approximately 30% in the Distributed Generation segment, will bring to market the new N-Type ultra-efficiency photovoltaic Tiger Neo modules from us.

In June 2022, our Malaysia factory became our first overseas “RE100 factory” fully powered by renewables. 100% of the electricity consumed in production and operation activities supporting roughly 7GW vertically integrated solar cell-module capacity is supplied by green electricity.



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In July 2022, we announced a share repurchase program of up to US\$200 million of our ordinary shares represented by ADSs during an 18-month period. Repurchases may be made from time to time on the open market at prevailing market prices in open-market transactions, privately negotiated transactions or block trades, and/or through other legally permissible means, depending on market conditions and in accordance with the applicable rules and regulations. The timing and conditions of the share repurchases will be subject to various factors including the requirements under Rule 10b-18 and Rule 10b5-1 of the Exchange Act, as well as our insider trading policy. We plan to use our existing funds to fund repurchases made under the share repurchase program. We have not repurchased any ADSs under this share repurchase program as of the date of this annual report.

In November 2022, we announced that following the record of maximum solar conversion efficiency of 26.1% recently set by our 182 mm and above large-size monocrystalline silicon TOPCon solar cell, the maximum solar conversion efficiency of our 182 mm N-type module reached 23.86%, refreshing the record of 23.53% for N-type module, also set by us, in July 2021. The result was independently tested and confirmed by TÜV Rheinland, one of the world's leading testing service providers on internationally recognized safety and quality standards.

In November 2022, we announced that Jiangxi Jinko will supply approximately 522 MW of Tiger Neo 78 Cell modules for Phase I of the Santa Luzia Complex Project in Paraíba State, Brazil.

In December 2022, our high-efficiency N-Type monocrystalline silicon solar cell set a new record with maximum conversion efficiency of 26.4%, which has been independently confirmed by the National Institute of Metrology, China.

In January 2023, we revealed our Second Generation Tiger Neo panel family – one of the world's most efficient and powerful solar panels. The upgraded Tiger Neo family includes three series with up to 445Wp for 54-cell, 615Wp for 72-cell, and 635Wp for 78-cell and module efficiency up to 22.27%, 23.23%, and 22.72% respectively.

In April 2023, Jiangxi Jinko completed the issuance of its convertible bonds in the principal amount of RMB10.00 billion on the STAR Market. The net proceeds from the convertible bond issuance will be used for (i) construction and development of certain solar cell and module production projects by Jiangxi Jinko, and (ii) working capital for Jiangxi Jinko. We subscribed for the convertible bonds in an aggregate amount of RMB5.50 billion with our special preemptive rights and is subject to a six-month lock-up period. We have the right to either sell such convertible bonds after the lock-up period or convert such convertible bonds into Jiangxi Jinko's ordinary shares.

In April 2023, our EAGLE Encore Residential Solar + Storage platform has been recognized by Green Builder® Media as a 2023 Sustainable Product of the Year.

B. Business Overview

We are a global leader in the PV industry based in China. We have built a vertically integrated solar power product value chain, manufacturing from silicon wafers to solar modules. We sell most of our solar modules under our own "JinkoSolar" brand, with a small portion of solar modules on an OEM basis. We also sell silicon wafers and solar cells that we do not use in our solar module production.

We sell our products in major export markets and China. As of December 31, 2022, we had 14 production facilities globally and 23 overseas subsidiaries in Japan, South Korea, Vietnam, India, Turkey, Germany, Italy, Switzerland, the United States, Mexico, Brazil, Chile, Australia, Canada, Malaysia, the United Arab Emirates, Denmark, Indonesia and Nigeria. As of the same date, we also had global sales teams in China, the United States, Canada, Brazil, Chile, Mexico, Italy, Germany, Turkey, Spain, Japan, the United Arab Emirates, Netherlands, Vietnam and India to conduct sales, marketing and brand development for our products around the world. In addition, as of December 31, 2022, we had an aggregate of over 3,000 customers in over 160 countries and regions for our solar modules, including distributors, project developers and system integrators.

Our solar cells and modules utilize advanced solar technologies, such as the PERC technology and half cell technology, and have achieved industry-leading conversion efficiency. In 2020, 2021 and 2022, the average conversion efficiency rate of our solar cells using our P-type monocrystalline silicon wafers was 22.9%, 23.3% and 23.6%, respectively. In 2020, 2021 and 2022, the average conversion efficiency rate of our N-type monocrystalline solar cells was 23.5%, 24.5% and 25.1%, respectively. We believe that both of these average conversion efficiency rates were consistently higher than industry average. In July 2020, the maximum conversion efficiency rate of our N-Type monocrystalline solar cells reached 24.8%. In October 2021, our N-type monocrystalline solar cells reached the maximum conversion efficiency rate of 25.4%. In December 2022, our 182mm N-type monocrystalline solar cells reached the maximum conversion efficiency rate of 26.4%.

Our high-quality manufacturing capabilities have enabled us to produce solar cells and modules meeting the industry’s highest performance standards. All of our solar modules sold in Europe are TÜV, PID, Salt mist, Ammonia, Dust & Sand and CE certified, all of our solar module sold in India are BIS certified, all of our solar modules sold in North America are UL certified, all of our solar modules sold in Korea are KS certified and our solar modules sold in China are CQC certified. In 2013, our solar modules passed TÜV Nord’s Dust & Sand Certification Test, demonstrating their suitability for installation in desert regions, and we also unveiled our “Eagle II” solar modules, which represent a new standard for performance and reliability. In May 2017, we became one of the first Chinese PV manufacturers to pass the intensive UV test according to IEC 61345 from TÜV Rheinland. In July 2017, we guaranteed that all our standard PV modules meet IEC 62804 double anti-PID standards. In May 2018, our entire portfolio of PV modules passed the Potential Induced Degradation resistance test as required by TÜV Nord’s IEC TS 62804-1 standards. In March 2019, we received the 5th “All Quality Matters Award” from TÜV Rheinland. In October 2021, our Tiger and Tiger Pro module series met the carbon footprint verification standards of TÜV Rheinland Group, a leading global services provider in the testing of PV modules and components. In February 2022, our factory in Shangrao obtained our first SNI certification.

We leverage our vertically integrated platform and cost-efficient manufacturing capabilities in China to produce high quality products at competitive costs. Our solar cell and silicon wafer operations support our solar module production. As of December 31, 2022, we had an integrated annual capacity of approximately 65 GW for mono wafers, 55 GW for solar cells and 70 GW for solar modules. Our manufacturing facilities are primarily located in eight provinces across China, Florida of the United States, Penang of Malaysia and Quảng Ninh Province of Vietnam, providing convenient and timely access to key resources and suppliers.

We no longer have any downstream solar power projects in China after we disposed of our downstream solar power projects business in China in the fourth quarter of 2016, but still have two overseas solar power plants which are respectively located in Abu Dhabi and Mexico. The solar power plant in Mexico is still under construction.

Our Products and Services

Our product mix has evolved rapidly since our inception, as we have incorporated more of the solar power value chain through the expansion of our production capabilities and acquisitions. We currently manufacture a series of products from silicon wafers to solar modules. Our principal product is solar modules, but we also sell silicon wafers and solar cells from time to time to meet our customers’ demand. In 2022, sales of solar modules, silicon wafers and solar cells represented 96.5%, 0.6% and 1.2%, respectively, of our total revenues. In addition, we also sell small volumes of recovered silicon materials to optimize the utilization of our production capacity.

The following table sets forth details of our sales volume by product for the periods indicated:

Products	2020 (MW)	2021 (MW)	2022 (MW)
Silicon wafers	1,583.7	2,153.4	1,062.6
Solar cells	670.6	856.4	997.0
Solar modules	18,770.6	22,232.7	44,333.8

Leveraging our expertise in manufacturing high quality solar modules and substantial experience in the solar industry, we commenced developing solar power projects and providing solar system integration services in late 2011. In November 2019, we entered into an agreement to sell two solar power plants in Mexico with a combined capacity of 155 MW to an independent third party, which was completed in March 2020.

Unless otherwise specified, the results presented in this annual report do not include the results of our downstream solar power project business in China, a discontinued operation.

On January 1, 2018, we adopted new revenue guidance ASC Topic 606, “Revenue from Contracts with Customers”, by applying the modified retrospective method to those contracts that were not completed as of January 1, 2018. Results for reporting periods beginning on or after January 1, 2018 are presented under ASC Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with our historical accounting practices under ASC Topic 605 “Revenue Recognition”. See “Item 5. Operating and Financial Review and Prospects—A. Operational Results—Selected Statement of Operations Items—Revenues.”

In 2020, 2021 and 2022, we did not record revenues from sales of products to subsidiaries of Renesola Zhejiang Ltd. (“ReneSola”), one of our related parties controlled by an immediate family member of principal shareholders and directors of our company, who are also the executive officers of our company.

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In 2020, 2021 and 2022, revenues from sales of products to subsidiaries of Sweihan PV Power Company P.S.J.C, one of our related parties, amounted to RMB51.2 million, nil and nil, respectively.

In 2020, 2021 and 2022, revenues from sales of solar module products to subsidiaries of JinkoPower amounted to RMB5.1 million, RMB27.1 million and RMB325.2 million (US\$47.1 million), respectively.

Solar Modules

We commenced producing solar modules in August 2009. In 2022, we sold 44.5 GW of solar modules and generated RMB80.22 billion (US\$11.63 billion) of revenue from sales of solar modules, which accounted for 96.5% of our total revenue. We expect that sales of solar modules will continue to be our largest revenue source in the future.

In September 2020, the maximum conversion efficiency of our N-Type mono bifacial module reached 23.01%.

In May 2020, we officially launched our 2020 flagship Tiger Pro module series. The module series could generate a maximum power output of up to 580Wp, which was 40% higher than current mainstream products installed in utility projects. All these high energy density modules used innovative multi-wire 9BB and TR tiling ribbon technology to reach significantly improved performance with a conversion efficiency of up to 21.6%.

In June 2020, our innovative Tiger Pro Series of high-efficiency modules received the world's first IEC 61701 Ed. 3 (FDIS) certification for salt mist corrosion test issued by TÜV Nord AG, an independent provider of technical services for testing, inspection, certification, consultation and training.

In August 2020, we launched our new generation of 610W Tiger Pro High-efficiency monocrystalline TR solar module and our BIPV solutions, Building Integrated Photovoltaics product series, which were unveiled at SNEC 2020 in Shanghai.

On August 21, 2020, we were ranked as a top solar brand in debt financed projects and named a most “bankable” PV manufacturer by Bloomberg New Energy Finance. Forty-nine global solar module manufacturers were ranked based on Bloomberg New Energy Finance's global survey of key PV stakeholders assessing which module brands used in projects are most likely to obtain non-recourse debt financing from commercial banks.

In September 2020, we supplied Trung Nam Group with 611MW of Tiger bifacial transparent backsheet modules, which were installed at the Thuan Nam solar power plant project in Vietnam. Located in Thuan Nam, the Thuan Nam solar power plant project was one of the largest solar power projects by capacity that were using bifacial modules in both Vietnam and Southeast Asia.

In November 2020, we supplied 541 MW Tiger Series modules for the first phase of the Xuan Thien project in Vietnam. This project was considered as one of the largest solar power projects in Southeast Asia. This project demonstrates the latest PV development and energy transformation in Southeast Asia.

In June 2021, our flagship Tiger Pro dual glass module received the world's first IEC TS 62804-1-1:2020 certificate issued by DEKRA, one of the world's largest independent inspection companies.

In July 2021, the maximum solar conversion efficiency of our advanced high-efficiency solar module reached 23.53% and outperformed the previous record of 23.01%, also set by us, in January 2021, after recently setting a test record of 25.25% for large-area N-type monocrystalline silicon solar cells.

In August 2021, we obtained the first photovoltaic module LCA (Life Cycle Assessment) certificate in the Greater China region issued by TÜV Rheinland (China) Ltd., and concurrently passed the Italian EPD certification.

In October 2021, our Tiger and Tiger Pro module series met the carbon footprint verification standards of TÜV Rheinland Group, a leading global services provider in the testing of PV modules and components. In November 2021, we launched a new series of ultra-efficient 2021 Flagship Tiger Neo modules.

In November 2021, we announced that Jiangxi Jinko plans to invest RMB450 million for equity in Sichuan Yongxiang Energy Technology Co., Ltd., a subsidiary of Tongwei Co., Ltd. (Shanghai Stock Exchange: 600438).

In December 2021, we and Aldo Solar, which stands out as the largest distributor of solar energy solutions in Brazil with 31% market share, reinforce their partnership for 2022 with the signing of the largest distribution agreement for Distributed Generation ever signed by us outside China.

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In January 2022, we had completed the STAR Listing of Jiangxi Jinko and started trading its shares on the Star Market (SSE, code: 688223). Jiangxi Jinko issued 2,000,000,000 shares representing approximately 20% of the total 10,000,000,000 shares outstanding after the STAR Listing. The shares were issued at a public offering price of RMB5.00 per share and the total gross proceeds of the STAR Listing were approximately RMB10.00 billion. After the STAR Listing, we own approximately 58.62% of Jiangxi Jinko.

In February 2022, our Tiger Neo Bifacial BDV 570 (144 cells) and Tiger Neo Bifacial BDV 610 (156 cells) modules have been officially certified by CERTISOLIS for their very competitively low carbon footprint values.

In March 2022, we recently hosted a high-level dialogue with delegates from the UN Global Compact Liaison Office in Beijing, on the role of solar PV technology development in achieving global Sustainable Development Goals set up by the United Nations.

In March 2022, we entered into a project investment cooperation framework agreement with Qinghai Provincial Department of Industry and Information Technology, Xining Municipal Government and Xining Economic and Technological Development Zone Management Committee for a joint monocrystalline silicon pull rod project, and the total estimated investment is approximately RMB10.00 billion.

In March 2022, we entered into an investment framework agreement with the Shangrao Guangxin District Government for a high-efficiency solar module and PV module aluminum frame project, with a total estimated investment at approximately RMB10.80 billion.

By March 2022, we had delivered 100GW of solar modules globally, being the first company in history to achieve this milestone. Approximately one out of every ten solar modules installed in the world was produced by us.

In May 2022, we were recognized as a Top Performer in the 2022 PV Module Reliability Scorecard published by PV Evolution Labs. We are one of only two module manufacturers to have been rated as a Top Performer for eight consecutive times since it was introduced in 2014.

In May 2022, we signed an agreement with Aldo Solar for the distribution of 600 MW N-type Tiger Neo Modules.

In July 2022, we were recognized for “Overall High Achievement in Manufacturing” in the 2022 edition of the Renewable Energy Testing Center’s PV Module Index Report for three consecutive years.

In November 2022, we announced that our 182 mm TOPCon module reached highest conversion efficiency of 23.86%.

In November 2022, we announced we will supply approximately 522 MW of modules for Phase I of the Santa Luzia Utility PV Project Complex in Brazil.

In January 2023, we revealed our Second Generation Tiger Neo panel family – one of the world’s most efficient and powerful solar panels. The upgraded Tiger Neo family includes three series with up to 445Wp for 54-cell, 615Wp for 72-cell, and 635Wp for 78-cell and module efficiency up to 22.27%, 23.23%, and 22.72% respectively.

Solar Cells

We commenced production of solar cells in July 2009 following our acquisition of Zhejiang Jinko. The efficiency of a solar cell converting sunlight into electricity is represented by the ratio of electrical energy produced by the solar cell to the energy from sunlight that reaches the solar cell. The conversion efficiency of solar cells is determined to a large extent by the quality of silicon wafers used to produce the solar cells. In 2018, we led the industry in the resizing of the 158 mm x 158 mm solar cell. In 2019, we released solar cells of larger size and incorporating the tiling ribbon technology, which greatly increased the power of the components and brought more benefits to customers. In 2020, we developed and mass produced highly efficient P-type monocrystalline solar cells of 163 mm x 163 mm and 182 mm x 182 mm, and constructed an industry-leading production line for N-type monocrystalline solar cells. In December 2020, our maximum mass production efficiency of P-type monocrystalline solar cells and N-type monocrystalline solar cells reached 23.2% and 24.2%, respectively. In October 2021, our high-efficiency N-Type monocrystalline silicon solar cell set new world record with the highest conversion efficiency of 25.4%. In the fourth quarter of 2021, the mass production efficiency of approximately 900MW N-type Topcon Cells in our Haining production facility has reached 24.5%, with the yield rate close to that of the PERC. By the end of 2022, we had 35GW of N-type cell production capacity came on stream and the mass-produced efficiency for TOPCon cells reached approximately 25.1%.

In September 2020, the maximum solar conversion efficiency of our large-area N-type monocrystalline silicon solar cells reached 24.9%, which was confirmed by the Institute for Solar Energy Research in Hamelin (ISFH) in Germany and set a world record for large-size contact-passivated solar cells.

In May 2021, the maximum solar conversion efficiency of our large-area N-type monocrystalline silicon solar cells reached 25.25%, setting a new world record for large-size contact-passivated solar cells.

In July 2021, the maximum solar conversion efficiency of our advanced high-efficiency solar module reached 23.53% and outperformed the previous record of 23.01%, also set by us, in January 2021, after recently setting a test record of 25.25% for large-area N-type monocrystalline silicon solar cells.

In October 2021, we achieved a major technical breakthrough on its N-type monocrystalline silicon solar cell, setting a new world record for the fourth time in a year with the maximum solar conversion efficiency of 25.4% for its large-size passivating contact solar cell.

In December 2022, we achieved a major technical breakthrough for our 182 mm high-efficiency N-type monocrystalline silicon solar cell, setting maximum solar conversion efficiency of 26.4% for our 182 mm and above large-size monocrystalline silicon TOPCon solar cell. This result has been independently confirmed by the National Institute of Metrology, China.

Silicon Wafers

We commenced production of monocrystalline silicon wafers and multicrystalline silicon wafers in March 2008 and July 2008, respectively.

In 2018, we developed P-type and N-type monocrystalline silicon wafers with high quality and low oxygen content of 158 mm x 158 mm. In 2019, we developed technologies for silicon wafers of larger size, which resolved technical difficulties such as non-destructive cutting and concentric circle defects, and combined with N4/N5 technology, greatly improved the quality and efficiency of N-type monocrystalline silicon wafers while reducing its cost. In 2020, we developed and mass produced high quality silicon wafers of 182 mm x 182 mm, and conducted research on silicon wafers of 210 mm x 210 mm or larger size. We optimized Outer-furnace Czochralski technology and charging technology and developed and verified N7/N8 technology, which greatly improved the quality and efficiency of silicon wafers while increasing manufacturing capacity and reducing costs. In 2021 and 2022, we continued to reduce the thickness of mono wafers to save on polysilicon. By the end of 2022, thickness of the mass production of N-type 182mm silicon wafers and P-type 182mm silicon wafers had reduced to 125 microns and 140 microns, respectively. We also conducted research on larger size silicon wafers and larger size mono wafers as well as improved their quality and efficiency.

Recovered Silicon Materials

We commenced processing of recoverable silicon materials into recovered silicon materials in June 2006. We are able to process and recover a broad range of recoverable silicon materials, which enables us to reduce our overall silicon material costs and improve product quality and yield.

Solar Power Generation and Solar System EPC Services

We commenced developing solar power projects in China in 2011 and generated revenue from sales of electricity generated by our own solar power projects when they were connected to the grid. In November 2016, we disposed of our downstream solar power project business in China.

We obtained two small solar power projects as the repayment of our accounts receivable in Italy and commenced developing solar power projects overseas in 2016, which were disposed of in 2018.

In November 2019, we entered into an agreement to sell two of our solar power plants in Mexico with a combined capacity of 155 MW to an independent third party, which was completed in March 2020. In December 2021, we entered into an agreement to dispose of one power plant in Argentina with capacity of 93.3MW to JinkoPower, which was completed in June 2022. Currently, we have two overseas solar power plants located in Abu Dhabi and Mexico, respectively. The solar power plant in Mexico is still under construction.

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In addition, in order to promote our high-efficiency modules and cutting-edge N-type cell technologies, we, through a joint venture, Poyang Luohong, in which we then held 51% equity interest, had bid and won a 250 MW solar project under NEA's "Technology Top Runner" program in Shangrao, Jiangxi Province. The Technology Top Runner Project was connected to grid on December 8, 2019. We sold all of our equity interest in Poyang Luohong to an independent third party buyer and filed such change of ownership with Shangrao Market Supervision Administration on December 17, 2019. We considered the Technology Top Runner Project as a unique business opportunity. Other than the solar power plant under construction in Mexico, currently we do not have plans to develop any other solar projects in China or overseas.

Energy Storage System

We launched our energy storage system business in 2022. We offer residential energy storage system, commercial and industrial (C&I) energy storage system, and energy storage system designed for large-scale power plants. We have entered into framework agreements and distribution agreements regarding the supply of our energy storage systems with various power suppliers and distributors in China and worldwide including Middle and East Africa, Southeast Asia, North America, Australia and Japan.

Manufacturing

We manufacture and sell solar modules, solar cells, silicon wafers and recovered silicon materials.

Manufacturing Capacity and Facilities

Manufacturing Capacity

Our annual production capacity for mono wafers, solar cells and solar modules as of December 31, 2022 was 65 GW, 55 GW and 70 GW, respectively.

Property and Plant

We both own and lease properties for our operations. When we state that we own certain properties in China, we own the relevant land use rights because land is owned by the PRC state under the PRC land system. As of the date of this annual report, we had obtained land use rights to 5.7 million square meters of land. The following table sets forth the size, use and the location of the land, to which we had obtained the land use rights, as the date of this annual report:

Location	Industrial Use (square meters)	Residential Use (square meters)
Shangrao, Jiangxi Province	1,663,915	50,370
Haining, Zhejiang Province	1,253,682	18,963
Leshan, Sichuan Province	405,654	—
Yuhuan, Zhejiang Province	92,351	—
Yiwu, Zhejiang Province	277,816	—
Chuzhou, Anhui Province	289,091	—
	32,680	—
Yili, Xinjiang Province		
Hefei, Anhui Province	822,726	—
Yushan, Jiangxi Province	189,111	—
Jinchang, Gansu Province	322,525	—
Xining, Qinghai Province	356,212	—
Shanghai	—	93,277
Total	5,705,763	162,610

We lease office space and manufacturing facilities in various locations around the world where we maintain subsidiaries and offices.

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Except as indicated otherwise, we own the facilities completed and under construction and own the right to use the relevant land for the durations described below (including capacities and major equipment):

Products	Location	Facility No.	Plant Size (square meters)	Duration of Land Use Right	Major equipment
Silicon Ingots and Wafers	Shangrao Economic Development Zone, Jiangxi	1	287,985	(i) March 16, 2010 to February 3, 2057; (ii) December 9, 2009 to September 23, 2058; (iii) July 6, 2009 to August 10, 2059; (iv) July 10, 2009 to February 7, 2057; (v) January 6, 2009 to August 10, 2059	Monocrystalline furnaces, multicrystalline furnaces, wire saws, wire squarers
	Yushan, Jiangxi	7	189,111	2021/1/22 to 2071/1/21	
	Jinchang, Gansu	10	322,525	2011/7/31 to 2061/7/31	
Silicon Ingots	Yili, Xinjiang	2	32,680	(i) 2012/10/20 to 2062/10/19; (ii) 2012/12/4 to 2062/12/3	Monocrystalline furnaces
	Leshan, Sichuan	12	405,654	(i) 2021/1/19 to 2071/1/18; (ii) 2019/5/31 to 2069/5/31	
	Xining, Qinghai	15	356,212	2022/7/11 to 2072/7/11	
Solar Cells	Yuanhua Town, Haining, Zhejiang	3	106,260	(i) as of 2060/8/29; (ii) as of 2065/3/18	Diffusion furnaces, sintering furnaces, PECVD antireflection coatings manufacturing equipment, automatic printers
	Shangrao Economic Development Zone, Jiangxi	18	178,582	As of 2068/3/7	
	Penang, Malaysia	4	8,191	January 1, 2015 to December 31, 2022	
Solar Modules	Hefei, Anhui	19	302,516	2022/1/26 to 2072/1/26	Laminating machine, solar cell module production line before and after component lamination, automatic glue spreads' working station, solar cell module testing devices
	Jianshan, Haining, Zhejiang	20	468,050	(i) as of 2071/7/20; (ii) as of 2072/5/10	
	Shangrao Economic Development Zone, Jiangxi	5	724,799	July 6, 2009 to August 10, 2059	
	Yuanhua Town, Haining, Zhejiang	6	222,960	(i) as of 2060/7/25; (ii) as of 2064/11/30; (iii) as of 2068/3/15 ;	
	Penang, Malaysia	8	12,679	January 1, 2015 to December 31, 2022	
	Yuhuan, Zhejiang	9	92,351	September 9, 2016 to September 8, 2066	
	Jacksonville, Florida	11	26,538	May 1, 2018 to April 30, 2028	
	Chuzhou, Anhui	13	289,091	April 13, 2020 to April 12, 2070	
	Yiwu, Zhejiang	14	277,816	March 12, 2020 to March 12, 2070	
	Hefei, Anhui	16	520,210	(i) 2022/8/18 to 2072/8/18; (ii) 2022/9/4 to 2072/9/4	
	Jianshan, Haining, Zhejiang	17	346,626	(i) as of 2071/12/1; (ii) as of 2071/12/10; (iii) as of 2073/2/1	

As of December 31, 2022, short-term borrowings of RMB554.7 million (US\$80.4 million) and long-term borrowings of RMB1.48 billion (US\$214.7 million) were secured by land use rights, plant and equipment. We believe our current land use rights, existing facilities and equipment are adequate for our current requirements.

Major Plans to Construct, Expand or Improve Facilities

We have entered into purchase and other agreements for purchase of additional manufacturing equipment and expansion of our production capacities. Our capital commitments under these contracts amounted to RMB13.59 billion (US\$1.97 billion) as of December 31, 2022, of which RMB6.36 billion (US\$921.8 million) will be due in 2023 and RMB7.23 billion (US\$1.05 billion) will be due after one year but within five years. We may terminate these agreements or revise their terms in line with our new plan and as a result, may be subject to cancellation, late charges and forfeiture of prepayments. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We may continue to undertake acquisitions, investments, joint ventures or other strategic alliances, and such undertakings may be unsuccessful.” And “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We may face termination and late charges and risks relating to the termination and amendment of certain equipment purchases contracts.”

Manufacturing Process

Silicon Ingot Manufacturing

We produce monocrystalline silicon ingots in electric furnaces. We place silicon materials, consisting of virgin polysilicon feedstock and recovered silicon materials of various grades according to formulas developed in-house into a quartz crucible in the furnace, where the silicon materials are melted. While heating the silicon materials, we pump a stream of argon, a chemically inert gas, into the furnace to remove the impurities vaporized during the heating process and to inhibit oxidation, thus enhancing the purity of the silicon ingots. A thin crystal “seed” is dipped into the molten silicon to determine the crystal orientation and structure. The seed is rotated and then slowly extracted from the molten silicon, which adheres to the seed and is pulled vertically upward to form a cylindrical silicon ingots consisting of a single large silicon crystal as the molten silicon and crucible cool. We have modified some of our monocrystalline furnaces to allow us to apply our furnace reloading production process, which enables us to increase the size of our silicon ingots while lowering our unit production costs by enhancing the utilization rate of our furnaces and reducing unit costs of consumables and utilities. After the silicon ingot is pulled and cooled, we square the silicon ingots in our squaring machines into blocks.

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We test monocrystalline silicon ingots as to their minority carrier lifetime, which is an important measurement of impurity levels of crystalline silicon material, as well as resistivity, electric properties and chemical properties and cut off the unusable parts before they are cut into silicon wafers.

Silicon Wafer Cutting

We cut silicon ingots into silicon wafers with high-precision diamond wire saws carrying slurry to cut silicon wafers from the silicon ingot blocks. Using proprietary know-how and our process technology, we have improved these wire saws to enable us to cut silicon ingot blocks longer than the size that the wire saws were originally designed to cut as well as to increase the number of quality conforming silicon wafers produced from each silicon ingot block, produce silicon wafers with thickness of a high degree of consistency and improve the quality of silicon wafers. We mainly manufacture our P-type and N-type monocrystalline silicon wafers in 182mm x 182mm dimensions. The dimensions of the silicon wafers we produce are dictated by current demands for market standard products. However, our production equipment and processes are also capable of producing silicon wafers in other dimensions if market demand should so require.

After silicon wafers are cut from silicon ingots, they are cleaned and inserted into frames. The framed silicon wafers are further cleaned, dried and inspected before packaging.

Solar Cell Manufacturing

Solar cell manufacturing process starts with an ultrasonic cleaning process to remove grease and particles from the wafer surface, followed by chemical cleaning and texturing in wet benches to remove organic and metallic contaminate, as well as to create suede-like or pyramid-like topograph, depending on mono-crystalline wafer used, on the wafer surface. This rough surface could reduce the optical loss of solar cells due to lowering light reflection and creating longer optical path beneficial for light absorption. The wafer then receives a high temperature diffusion process to form p-n junction, which is the heart of solar cell to separate light generated carriers. An edge isolation process is adapted to electrically isolate diffused front and rear surfaces, followed by an anti-reflection coating process to deposit a thin layer of silicon nitride on the sunward side of the wafer to further enhance the light absorption. Metallization is then applied by screen printed metal paste on both sides of the wafer, followed by a high temperature co-firing process through a belt furnace to form ohmic-contact electrodes. The finished solar cells are tested and sorted, and ready for the solar module manufacturing process.

Solar Module Manufacturing

Solar modules are produced by interconnecting multiple solar cells into desired electrical configurations through welding. The interconnected solar cells are laid out and laminated in a vacuum with laboratory details involved. Through these processes and designs, the solar modules are weather-sealed, and thus are able to withstand high levels of ultraviolet radiation, moisture, wind, transportation damage and sand. Assembled solar modules are packaged in a protective aluminum frame prior to testing.

Raw and Ancillary Materials

The raw materials used in our manufacturing process consist primarily of virgin polysilicon and recoverable silicon materials, and the ancillary materials used in our manufacturing process consist primarily of metallic pastes, encapsulant, tempered glass, aluminum frames, back sheets, junction boxes and other related consumables. The prices of polysilicon and silicon wafers have been subject to significant volatility. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Volatility in the prices of silicon raw materials makes our procurement planning challenging and could have a material adverse effect on our results of operations and financial condition.”

Raw Materials

The principal raw material used in our manufacturing process is virgin polysilicon. We also use recoverable silicon materials in our production. In 2020, 2021 and 2022, virgin polysilicon accounted for over 90.0%, and recoverable silicon materials accounted for 5.0%, nil and nil, respectively, of our total silicon raw material purchases by value. We procure our raw materials from diversified sources. In 2022, purchases from foreign suppliers and domestic suppliers accounted for 90.8% and 9.2% of our total silicon raw material purchases, respectively.

In 2020, 2021 and 2022, our five largest group suppliers accounted for 70.0%, 78.7% and 77.4%, respectively, of our total silicon purchases by value. In 2020, four of our group suppliers individually accounted for more than 10%, and our largest group supplier accounted for 19.6% of our total silicon purchases by value. In 2021, three of our group suppliers individually accounted for more than 10.0%, and our largest group supplier accounted for 28.5% of our total silicon purchases by value. In 2022, two of our group suppliers individually accounted for more than 10%, and our largest group supplier accounted for 34.0% of our total silicon purchases by value. A “group supplier” refers to an aggregation of our suppliers that are within the same corporate group.

Our supply contracts generally include prepayment obligations for the procurement of silicon raw materials. As of December 31, 2022, we had RMB3.58 billion (US\$519.3 million) of advances to suppliers.

In September 2021, we signed long-term purchase agreements with Wacker Chemie AG and Hemlock Semiconductor to procure polycrystalline silicon. In November 2021, we formed a few strategic co-operations such as a joint investment with Tongwei Co., Ltd. in a high-purity crystalline silicon project with annual capacity of 45,000 metric tons. In June 2021, we entered into a strategic investment agreement with Inner Mongolia Xinte Silicon Materials Co. Ltd. (“Xinte”) to secure our polysilicon supply. We subsequently entered into a long-term purchase agreement with Xinte in 2022 for 336,000 metric tons of polycrystalline silicon. In 2022, we signed a long-term purchase agreement with certain subsidiaries of Tongwei Co., Ltd. The above cooperation would ensure us to sustain a stable supply of polycrystalline silicon and crystalline silicon.

Virgin Polysilicon

We purchase solar grade virgin polysilicon from both domestic and foreign suppliers. We purchase our virgin polysilicon through spot market purchases to take advantage of decreasing virgin polysilicon prices.

Recoverable Silicon Materials

We purchase pre-screened recoverable silicon materials from our suppliers which are delivered to our facilities for chemical treatment, cleaning and sorting into recovered silicon materials. Currently, we purchase most of our recoverable silicon materials on the spot market.

Ancillary Materials

We use metallic pastes as raw materials in our solar cell production process. Metallic pastes are used to form the grids of metal contacts that are printed on the front and back surfaces of the solar cells through screen-printing to create negative and positive electrodes. We procure metallic pastes from third parties under monthly contracts. In addition, we use EVA, tempered glass, aluminum frames and other raw materials in our solar module production process. We procure these materials from third parties on a monthly basis.

Customers and Markets

We primarily sell solar products in both China and overseas markets, and before the disposition of our downstream solar power project business in China in November 2016, we sold electricity generated by our solar power projects in China. In 2020, 2021 and 2022, we generated 18.1%, 24.8% and 41.9% of our revenues from domestic sales and 81.9%, 75.2% and 58.1% of our revenues from sales outside China, respectively. As of December 31, 2022, we had customers from China, the United States, Mexico, Australia, Japan, United Arab Emirates, Turkey, Jordan Vietnam, Egypt, Spain and Germany. The following table sets forth our net revenues generated from sales of products to customers in respective geographic locations both in absolute amounts and as percentages of net revenues, for the periods indicated.

	2020		2021		2022		
	RMB	(%)	RMB	(%)	RMB	US\$	(%)
(in thousands, except percentages)							
Inside China (including Hong Kong and Taiwan)	6,370,975.0	18.1 %	10,134,888.5	24.8 %	34,839,409.8	5,051,239.6	41.9 %
North America	10,098,116.0	28.7 %	6,621,798.5	16.2 %	3,727,493.5	540,435.7	4.5 %
Europe	4,644,486.8	13.2 %	7,481,580.8	18.3 %	19,637,776.6	2,847,210.0	23.6 %
Asia Pacific (except China which includes Hong Kong and Taiwan)	9,603,210.7	27.3 %	10,239,162.2	25.1 %	11,274,446.6	1,634,641.1	13.6 %
Rest of the world	4,412,670.1	12.7 %	6,349,091.1	15.6 %	13,648,169.1	1,978,798.5	16.4 %
Total	35,129,458.6	100.0 %	40,826,521.1	100.0 %	83,127,295.6	12,052,324.9	100.0 %

Sales of solar modules are our largest revenue contributor, which accounted for 96.5% of our total revenues in 2022. We sell silicon wafers and solar cells to the extent we do not consume them for our own production. We expect that our sales of solar modules will continue to be our largest revenue contributor.

None of our customers accounted for more than 10% of our total revenues in 2020, 2021 and 2022. In 2020, 2021 and 2022, our largest group customer accounted for 5.3%, 4.6% and 5.4% of our total revenue, respectively. A “group customer” refers to an aggregation of our customers that are within the same corporate group. The following table sets forth the primary products sold to our top five group customers and the percentage of total revenues generated by sales to our top five group customers for the periods indicated:

	2020		2021		2022	
	Products	(%)	Products	(%)	Products	(%)
Top five group customers	Solar modules	19.7	Solar modules	14.9	Solar modules	15.3

We sell most of our solar modules under our own brand “JinkoSolar”, with a small portion of solar modules on an OEM basis. Our customers for solar modules include distributors, project developers and system integrators. We have been able to establish strong relationships with a number of major customers, based on the quality of our products and our market reputation. Our module customers include leading players in the PV industry, such as, Swinterton Builder, NextEra, Sustainable Power Group, Green Light Contractors Pty Ltd., Copenhagen Infrastructure Partners, Vivint Solar Developer, LLC, CED Greentech and ConEdison Development.

Sales and Marketing

We sell solar modules under short-term contracts and by spot market sales. We negotiate payment terms on a case-by-case basis and we allow most of our overseas’ customers to make full payment within 90 days and our domestic customers to make 90%-95% of payment within 180 days after delivery and the balance will be paid when the Retainage Period (as defined below) ends.



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We expect to retain a substantial portion of our solar cells for our own solar module production, while maintaining our flexibility to respond to market changes and price fluctuations by selling a portion of our solar cells in the spot market under favorable circumstances. We sell our solar cells under short-term contracts and by spot market sales. We negotiate payment terms of our solar cell sales contracts on a case-by-case basis, and we allow most of our customers to make full payment within 15 to 90 days after delivery. See “Item 5. Operating and Financial Review and Prospects—A. Operational Results—Principal Factors Affecting Our Results of Operations—Industry Trend for Credit Sales.”

Historically, we made substantial sales of silicon wafers. Currently, we retain a substantial portion of our silicon wafers for our own solar cell production, while selling the remaining to our solar cell suppliers to set off a portion of our payment obligations for our solar cell purchases.

We made substantial sales of recovered silicon materials and silicon ingots before we built out our silicon wafer, solar cell and solar module production capacity. We currently sell a small volume of recovered silicon materials.

As we continue to diversify our product lines, we have successfully expanded our global marketing footprint. We established a sales and marketing center in Shanghai in January 2009, which provides us with convenient access to domestic and international sales channels. In November 2009, we established JinkoSolar International Limited in Hong Kong to get easy access to major export markets. We began exporting our silicon wafers to Hong Kong in May 2008, and have since expanded our sales to Taiwan, India, the Netherlands, Singapore and South Korea. With our entry into the downstream solar module markets, we have further successfully marketed our products to customers in China, United States, Brazil, Germany, Japan, United Arab Emirates, Spain, Netherlands, Vietnam, India and Mexico. As of December 31, 2022, we had global sales teams in China, the United States, Canada, Brazil, Chile, Mexico, Italy, Germany, Turkey, Spain, Japan, the United Arab Emirates, Netherlands, Vietnam and India and 23 overseas subsidiaries in Japan, South Korea, Vietnam, India, Turkey, Germany, Italy, Switzerland, the United States, Mexico, Brazil, Chile, Australia, Canada, Malaysia, the United Arab Emirates, Denmark, Indonesia and Nigeria.

In addition, we have devoted significant resources to developing solar module customers and a stable end-user customer base through establishing diversified sales channels comprising project developers, system integrators, distributors and sales agents and diversified marketing activities, including advertising on major industry publications, attending trade shows and exhibits worldwide as well as providing high quality services to our customers.

In May 2020, we were ranked as a Top Performer for the sixth consecutive year in the 2020 PV Module Reliability Scorecard, published by PVEL in partnership with DNV GL.

In July 2020, we won the 6th All Quality Matters Award for PV Module Energy Yield Simulation (Mono Group) at the Solar Congress 2020 organized by TÜV Rheinland.

On August 21, 2020, we were ranked as a top solar brand in debt financed projects and named a most “bankable” PV manufacturer by Bloomberg New Energy Finance. Forty-nine global solar module manufacturers were ranked based on Bloomberg New Energy Finance’s global survey of key PV stakeholders assessing which module brands used in projects are most likely to obtain non-recourse debt financing from commercial banks.

In September 2020, we were recognized as the top manufacturer in Silicon Valley Toxics Coalition’s latest Solar Scorecard with a perfect score of 100/100.

In December 2020, we were the sole PV company with a triple-A rating, the highest rating for credit quality in the Chinese market, in an evaluation conducted by the China Association for Quality.

In January 2021, we won the prestigious PV Magazine Award 2020 in the Module category for its Tiger monofacial module.

In February 2021, we won the Green Builder Media’s 2021 Green Innovation award.

In February 2021, we became the first international solar company to have signed on to the Global Framework Principles for Decarbonizing Heavy Industry, as part of its efforts to continue supporting the decarbonization of the heavy industry sector in favor of a transition towards clean energy.

In March 2021, we were recognized as “Overall High Achiever” in the 2020 PV Module Index Report published by the Renewable Energy Testing Center (RETC).

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In March 2021, we launched a new series of ultra-efficient Tiger Pro modules with higher power capacity targeted for distributed generation market.

In April 2021, we joined the United Nations Global Compact, the world's largest corporate sustainability initiative. Under the U.N. Global Compact, signatories are encouraged to align their operations and strategies with key principles.

In April 2021, we won the award for "Asia's Best Employer" for the third consecutive year.

In April 2021, we won the 7th All Quality Matters Award for Green Module Efficiency at the Solar Congress 2021 held by TÜV Rheinland.

In May 2021, we were awarded Top 1 Prestigious Module PV Brand in Vietnamese Market 2020 voting jointly organized by the National Steering Committee for electricity Development of Vietnam, the Ministry of Industry and Trade (MOIT), and Vietnam Energy Magazine.

In May 2021, we received the award for Best HR Strategy of the Year at the Energy HR Summit India 2021.

In June 2021, we were ranked Top Performer in PV Evolution Labs' (PVEL) 2021 PV Module Reliability Scorecard for the seventh consecutive time.

In June 2021, we were recognized as an "Overall High Achiever" in Renewable Energy Testing Center's ("RETC") 2021 PV Module Index Report for the second consecutive year.

In July 2021, we were selected as an "Eco-Leader" by Green Builder® Media for the third time.

In September 2021, we were awarded the "Top Brand PV USA" seal by EUPD Research.

In October 2021, we won the prestigious Green World Awards for Environmental Best Practice named by the Green Organization in the global campaign to find the world's greenest countries, companies, and communities.

In November 2021, we launched a new series of ultra-efficient 2021 Flagship Tiger Neo modules.

In February 2022, our Tiger Neo bifacial modules reached competitive carbon footprint value for tenders in France.

In March 2022, we hosted a high-level dialogue with delegates from the UN Global Compact Liaison Office in Beijing, on the role of solar PV technology development in achieving global Sustainable Development Goals ("SDGs") set up by the United Nations.

In March 2022, we won the "UGGC Best Practices Sustainability Awards 2021" for the first time, in the category of sustainable large-scale manufacturing category, as announced by UN Global Compact Network China, for our continuous commitment towards UN SDGs and the ten principles of the UNGC embedded in the way we conducts business.

In May 2022, we were recognized as a Top Performer in the 2022 PV Module Reliability Scorecard published by PV Evolution Labs. We are one of only two module manufacturers to have been rated as a Top Performer for eight consecutive times since it was introduced in 2014.

In July 2022, we were recognized for "Overall High Achievement in Manufacturing" in the 2022 edition of the Renewable Energy Testing Center's PV Module Index Report. This marks the third consecutive year that we had earned recognition as a top performer in the industry-leading report.

In December 2022, we won the Harvard Business Review Global Chinese Edition "ESG Innovator of 2022". This recognizes our innovative best practices in ESG and highlights our contribution to social responsibility and sustainability.

Quality Control

According to ISO9001 and IEC 62941 quality management standards, we have established a complete quality control system covering the whole cycle of R&D, procurement and manufacturing, etc., to ensure the consistency of our product quality and compliance with our internal production requirements. Our quality management systems in Shangrao, Jiangxi Province, Yiwu, Zhejiang Province, Haining, Zhejiang Province, Yili, the XUAR, Yuhuan, Zhejiang Province, Chuzhou, Anhui Province, Leshan, Sichuan Province, Feidong, Anhui Province, Chuxiong, Yunnan Province, Penang, Malaysia and Wilmington, United States have all received the TÜV Rheinland ISO9001:2015 certification. In addition, our module manufacturing factories in Shangrao, Jiangxi Province, Haining, Yuhuan, Yiwu, Zhejiang Province and Chuzhou, Anhui Province have received the TÜV-NORD IEC 62941 certification.

In addition, we have also received international and domestic certifications for certain models of our solar modules. For example, we have received TÜV, PID, Salt mist, Ammonia, Dust & Sand and CE certifications for all of our solar modules sold in Europe, JPEA certifications for all of our solar module sold in Japan, UL certifications for all solar modules sold in North America BIS and BIS certifications for all solar modules sold in India, KS certification for all solar modules sold in Korea and CQC certification for all of our solar modules in China. In May 2013, our modules became the first to pass TÜV NORD's dynamic mechanical load testing with maximum 1000 Pascal downward load. In 2013, our solar modules also passed TÜV Nord's Dust & Sand Certification Test, demonstrating their suitability for installation in desert regions. In December 2014, our modules became the first to pass TÜV NORD's transportation and shipping of PV Module stacks test. Our solar modules received the highest testing result, class 1, in the fire resistance test conducted by Italy's Istituto Giordano. We also obtained the JIS Q 8901 Certification from TÜV Rheinland. In May 2016, we became the first Chinese PV manufacturer that received Qualification Plus certification from TÜV Rheinland for solar modules. In May 2017, we became one of the first Chinese PV manufacturers to pass the intensive UV test according to IEC 61345 from TÜV Rheinland. In July 2017, we became one of the first PV module providers to guarantee that all our standard PV modules meet IEC 62804 double anti-PID standards. In August 2021, we obtained the first photovoltaic module LCA (Life Cycle Assessment) certificate in the Greater China region issued by TÜV Rheinland (China) Ltd., and passed the Italian EPD certification. In February 2022, our factory in Shangrao obtained our first SNI certification.

We conduct systematic inspections of incoming raw materials, ranging from silicon raw materials to various ancillary materials. We have formulated and adopted guidelines and continue to devote efforts to developing and improving our inspection measures and standards on recycling recoverable silicon materials and production of silicon ingots, silicon wafer, solar cell and solar module. We conduct a final quality check before packing to ensure that our solar power products meet all our internal standards and customers' specifications. In addition, we provide periodic training to our employees to ensure the effectiveness of our quality control procedures.

In February 2012, we opened our PV module testing laboratory in Jiangxi, China, which can conduct over 40 different kinds of tests, ranging from basic power and temperature tests to challenging hot spot, pre-decay and UV aging tests, all of which conform to UL and International Electrotechnical Commission regulations. In 2016, we set up two testing laboratories in Haining, Zhejiang province and Malaysia, and in Yiwu and Chuzhou respectively in 2021 and 2022. In February 2012, the facility was awarded the UL Witness Testing Data Program ("WTDP") Certificate and, in August 2012, the facility was certified by China National Accreditation Service ("CNAS"). In September 2014, the facility was certified by Intertek Satellite Lab and obtained TÜV Nord CB Lab certificate in the same year. In March 2016, the facility also obtained the CGC Certificate and was certified as TMP laboratory by TÜV Rheinland.

We have a dedicated team overseeing our quality control processes. In addition, we have established operation management and project-based customer service teams, aiming to supervise the whole installation process and service our customers in a timely manner. They work collaboratively with our sales team to provide customer support and after-sale services. We emphasize gathering customer feedback for our products and addressing customer concerns in a timely manner.

Competition

We operate in a highly competitive and rapidly evolving market. As we build out our solar cell and solar module production capacity and increase the output of these products, we mainly compete with integrated as well as specialized manufacturers of solar power products such as Longi Green Energy Technology Co., Ltd., Trina Solar Ltd., Canadian Solar Inc. and JA Solar Holdings Co., Ltd in a continuously evolving market. Recently, some upstream polysilicon manufacturers as well as downstream manufacturers have also built out or expanded their silicon ingots, silicon wafer, solar cell and solar module production operations. We expect to face increased competition as other silicon ingots, silicon wafer, solar cell and solar module manufacturers continue to expand their operations. Some of our current and potential competitors may have a longer operating history, greater financial and other resources, stronger brand recognition, better access to raw materials, stronger relationships with customers and greater economies of scale than we do. Moreover, certain of our competitors are highly-integrated producers whose business models provide them with competitive advantages as these companies are less dependent on upstream suppliers and/or downstream customers in the value chain.

We compete primarily in terms of product quality and consistency, pricing, timely delivery, ability to fill large orders and reputation for reliable customer support services. We believe that our high quality products, our low manufacturing costs and easy access to key resources from our strategically located production bases in China, the United States and Malaysia, our recoverable silicon material processing operations and our proprietary process technologies enhance our overall competitiveness.

In addition, some companies are currently developing or manufacturing solar power products based on new technologies, including thin film materials and CSPV. These new alternative products may cost less than those based on monocrystalline or multicrystalline technologies while achieving the same or similar levels of conversion efficiency in the future. Furthermore, the solar industry generally competes with other renewable energy and conventional energy sources.

See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We face intense competition in solar power product markets. If we fail to adapt to changing market conditions and to compete successfully with existing or new competitors, our business prospects and results of operations would be materially adversely affected.”

Production Safety

We are subject to extensive PRC laws and regulations in relation to labor and safety. We have adopted stringent safety procedures at our facilities to limit potential damage and personal injury in the event of an accident or natural disaster, and have devised a number of internal guidelines as well as instructions for our manufacturing processes, including the operation of equipment and handling of chemicals. We distribute safety-related manuals to employees and post bulletins setting forth safety instructions, guidelines and policies throughout our facilities. Failure by employees to follow these guidelines and instructions result in monetary fines. All of our new employees undergo extensive safety training and education. We require our technical staff to attend weekly training programs taught by instructors to enhance their work safety awareness and ensure safe equipment operation. We conduct regular inspections and our experienced equipment maintenance team oversees the operation of our manufacturing lines to maintain proper and safe working conditions. As a result, our occupational health and safety management systems are certified to fulfill the OHSAS 18001:2007 standards starting from March 2012. In 2019, we completed the certification transition from OHSAS 18001 to ISO 45001. In 2020, we completed the authentication of the second-level safety standardization. Since our inception, we have not experienced any major work-related injuries.

We use, store and generate volatile and otherwise dangerous chemicals and wastes during our manufacturing processes, and are subject to a variety of government regulations related to the use, storage and disposal of such hazardous chemicals and waste. In accordance with the requirements of the Regulations on the Safety Management of Hazardous Chemicals, which became effective on March 15, 2002 and were amended on December 1, 2011 and December 7, 2013, we are required to engage state-qualified institutions to conduct the safety evaluation on our storage instruments related to our use of hazardous chemicals and file the safety evaluation report with the competent safety supervision and administration authorities every three years. Moreover, we filed a report with the competent safety supervision and administration authorities and public security agencies concerning the actual storage situation of our chemicals and other hazardous chemicals that constitute major of hazard sources.

Environmental Matters

We generate and discharge chemical wastes, waste water, gaseous waste and other industrial waste at various stages of our manufacturing process as well as during the processing of recovered silicon material. We have installed pollution abatement equipment at our facilities to process, reduce, treat, and where feasible, recycle the waste materials before disposal, and we treat the waste water, gaseous and liquid waste and other industrial waste produced during the manufacturing process before discharge. We also maintain environmental teams at each of our manufacturing facilities to monitor waste treatment and ensure that our waste emissions comply with PRC environmental standards. Our environmental teams are on duty 24 hours. We are required to comply with all PRC national and local environmental protection laws and regulations and our operations are subject to periodic inspection by national and local environmental protection authorities. PRC national and local environmental laws and regulations impose fees, and from January 1, 2018, taxes for the discharge of waste materials above prescribed levels, require the payment of fines for serious violations and provide that the relevant authorities may at their own discretion close or suspend the operation of any facility that fails to comply with orders requiring it to cease or remedy operations causing environmental damage. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Compliance with environmentally safe production and construction and renewable energy development regulations can be costly, while non-compliance with such regulations may result in adverse publicity and potentially significant monetary damages, fines and suspension of our business operations.” Jiangxi Jinko obtained the certificate issued by the Bureau of Ecology and Environment of Shangrao Economic Development Zone confirming that we were in compliance with the environmental protection laws for 2018, 2019 and 2020.

Our factories are equipped with state-of-the-art equipment that has been designed to not only produce the highest quality products, but to also minimize the environmental impact. Our manufacturing facilities in Shangrao, Jiangxi Province have received the ISO 9001:2015 certification and our manufacturing facilities in Haining, Zhejiang Province have received the ISO 9001 and the ISO 14001 certification. Until February 22, 2021, our manufacturing facilities in Shangrao, Jiangxi Province, Haining, Zhejiang Province, Yuhuan, Zhejiang Province, Yiwu, Zhejiang Province, Chuzhou, Anhui Province, Yili, the XUAR and Penang, Malaysia have received ISO 14001:2015 environmental management system certification. In addition, Jiangxi Jinko successfully passed the greenhouse gas emission inspection and received SGS ISO 14064:2006 in January 2019. In January 2012, we joined the PV Cycle Association for the collection and recycling of end-of-life solar modules at European level. In September 2016, we helped create the first PV recycling network in the U.S. In November 2017, we were awarded the Cradle-to-Cradle certificate by SGS, the world’s leading testing, inspection, verification, and certification organization, which demonstrates our commitment to high environmental, health and safety standards in our products and manufacturing processes. In December 2017, we were selected as a 2016-17 Leader in Silicon Valley Toxics Coalition’s Solar Scorecard, a system which ensures that the PV sector is safe for the environment, workers, and communities. In 2019, our manufacturing facility in Shangrao obtained the discharge permit for cell industry. In 2020, we received the Jinggangshan Quality Award of Jiangxi Province.

We are required to obtain construction permits before commencing constructing production facilities. We are also required to obtain approvals from PRC environmental protection authorities before commencing commercial operations of our manufacturing facilities. We commenced construction of a portion of our solar cell and solar module production facilities prior to obtaining the construction permits and commenced operations of certain of our production facilities prior to obtaining the environmental approvals for commencing commercial operation and completing the required safety evaluation procedure. Although we have subsequently obtained all required environmental approvals covering all of our existing production capacity except a portion of our solar cell and solar module production capacity..

On March 22, 2012, our 600 MW solar cell manufacturing line passed the Haining City environmental authority’s environmental evaluation. In May 2012, pursuant to a request from the Haining City environmental authority as a part of a program directed to all local manufacturing companies, we took additional steps intended to improve our program for handling hazardous waste, which was approved in September 2012. In November 2012, we were selected on a random basis for an audit of our energy conservation and emission-reduction management systems by the Haining City environmental authority, which we completed successfully.

We continued to implement several environmental protection related projects at the Haining facility between 2013 and 2015, aiming to improve the waste treatment as well as to reduce carbon dioxide emission. We have invested to establish a new water recycle system, install roof-top solar panels, replace fluorescent tubes with LED light in the production lines, and upgrade waste chemical discharge sewers. In 2016, we completed the upgrade of the existing wastewater treatment station and improved the wastewater treatment of the Haining facility to comply with the new PRC environmental standards for the solar industry.

Seasonality

Demand for solar power products tends to be weaker during the winter months partly due to adverse weather conditions in certain regions, which complicate the installation of solar power systems. Our operating results may fluctuate from period to period based on the seasonality of industry demand for solar power products. Our sales in the first quarter of any year may also be affected by the occurrence of the Chinese New Year holiday during which domestic industrial activity is normally lower than that at other times.

Insurance

We have insurance policies covering certain machinery such as our monocrystalline and multicrystalline furnaces. These insurance policies cover damages and losses due to fire, flood, design defects or improper installation of equipment, water stoppages or power outages and other events stipulated in the relevant policies. Insurance coverage for Jiangxi Jinko's fixed assets other than land amounted to RMB11.64 billion (US\$1.69 billion) as of December 31, 2022. Insurance coverage for Zhejiang Jinko's fixed assets and inventory amounted to RMB11.00 billion (US\$1.60 billion) as of December 31, 2022. Insurance coverage for Jinko Malaysia's fixed assets and inventory amounted to RMB6.10 billion (US\$885.0 million) as of December 31, 2022. As of December 31, 2022, we had product liability insurance coverage for most of our manufacturing and marketing companies of up to US\$4.15 billion, export credit insurance coverage for most of our manufacturing and marketing companies of up to US\$2.72 billion and product transportation liability insurance coverage for all of our product transportation companies of up to RMB159.04 billion (US\$23.06 billion).

We engaged PowerGuard, a firm specializing in unique insurance and risk management solutions for the wind and solar energy industries to provide insurance coverage for the product warranty services for our solar modules worldwide. We renewed the insurance policy provided by PowerGuard upon its expiration in every May from 2011 to 2019. The policy offered back-to-back coverage through a maximum of 10-year limited product defects warranty, as well as a 25-year (30-year for dual glass module) warranty against degradation of module power output from the time of delivery. In April 2020, our engagement with PowerGuard expired. In December 2018, we engaged Ariel Syndicate 1910 of Lloyd's ("Ariel Re"), a firm specialized in unique insurance and risk management solutions for the wind and solar energy industries, to provide insurance coverage for the product warranty services of our solar modules worldwide effective from May 2019. We renewed the insurance policy provided by Ariel Re from 2021 to 2022. The policy offers back-to-back coverage through a maximum of ten-year limited product defects warranty, as well as a 25-year (30-year for dual glass module) linear warranty against degradation of module power output from the time of delivery. In January 2023, we engaged Munich Re to provide insurance coverage for the product warranty services of our solar modules worldwide effective from January 1, 2023. The policy offers back-to-back coverage through a maximum of 15-year limited product defects warranty, as well as a 30-year linear warranty against degradation of module power output from the time of delivery.

In addition, in November 2012, we also purchased a policy for environmental liabilities insurance covering our operations in Jiaxing, Zhejiang Province, as required by the Environmental Protection Bureau of Jiaxing City. We believe that our overall insurance coverage is consistent with the market practice in China. However, significant damage to any of our manufacturing facilities and buildings, whether as a result of fire or other causes, could have a material adverse effect on our results of operations. In accordance with customary practice in China, we do not carry any business interruption insurance. Moreover, we may incur losses beyond the limits, or outside the coverage, of our insurance policies. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We have limited insurance coverage and may incur losses resulting from product liability claims, business interruption or natural disasters." We paid an aggregate of RMB118.9 million, RMB30.0 million and RMB41.9 million (US\$6.1 million) in insurance premiums in 2020, 2021 and 2022, respectively.

Regulation

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

Renewable Energy Law and Other Government Directives

The *Renewable Energy Law*, which originally became effective on January 1, 2006 and was amended on December 26, 2009, sets forth policies to encourage the development and on-grid application of solar energy and other renewable energy. The law also sets forth a national policy to encourage the installation and use of solar energy water heating systems, solar energy heating and cooling systems, PV systems and other systems that use solar energy. It also provides financial incentives, such as national funding, preferential loans and tax preferential treatment for the development of renewable energy projects.

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The *PRC Energy Conservation Law*, which became effective on April 1, 2008 and was amended on July 2, 2016 and October 26, 2018, encourages the utilization and installation of solar power facilities on buildings for energy-efficiency purposes. The law also encourages and supports the development of solar energy system in rural areas.

On October 10, 2010, the State Council promulgated a decision to accelerate the development of seven strategic new industries. Pursuant to this decision, the PRC government will promote the popularization and application of solar thermal technologies by increasing tax and financial policy support, encouraging investment and providing other forms of beneficial support.

On March 27, 2011, the NDRC promulgated the revised *Guideline Catalogue for Industrial Restructuring* which categorizes the solar power industry as an encouraged item. On February 16, 2013, the NDRC promulgated the 2013 revised *Guideline Catalogue for Industrial Restructuring*, effective on May 1, 2013, and amended it on October 30, 2019 and December 30, 2021, the solar power industry is still categorized as an encouraged item.

In response to the increased pace of market development, the State Council, in a statement dated July 4, 2013, announced to support the development of PV production enterprises with high technology and strong market competitiveness, among other matters.

In March 2016, the National People's Congress approved the *Outline of the Thirteenth Five-Year Plan for National Economic and Social Development of the PRC*, which mentions a national commitment to continuing to support the development of PV generation industry.

In March 2021, the National People's Congress approved the *Outline of the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and Long-Range Objectives for 2035*, which further expressed determination of national will to continuing to support the development of PV generation industry.

On March 22, 2016, the NEA promulgated the *Guide Opinion on Energy for 2016, as amended by the Guide Opinion on Energy for 2017, Guide Opinion on Energy for 2018, Guide Opinion on Energy for 2020, Guide Opinion on Energy for 2021, Guide Opinion on Energy for 2022*, which encouraged the development of solar power.

On November 29, 2016, the State Council released the *Thirteen Five-Year Development Plan for National Strategic New Industries*, which aims to promote the diversification and large-scale development of solar power industry.

On December 8, 2016, the NEA officially released the *Thirteen Five-Year Plan on Solar Power Development*, pursuant to which, the NEA will provide market support to advanced technology and product and lead the PV technical advances and industry upgrading.

On December 30, 2016, the MIIT, NDRC, the Ministry of Science and Technology and MOF jointly promulgated the *Development Guide Regarding the New Materials Industry* to support and provide details for the development of the PRC solar power industry.

On February 10, 2017, the NEA promulgated the *Circular on Printing and Distributing the Guidance on Energy Work in 2017*, which promotes the construction of PV and thermal power projects. According to this circular, the PRC government planned to add the new construction scale of 20 million kilowatts and the new installed capacity of 18 million kilowatts in 2017.

On July 18, 2017, the NEA, MIIT and the Certification and Accreditation Administration of the PRC jointly promulgated a notice regarding improving technical standards of major photovoltaic products and strengthening supervision to promote the technological progress of photovoltaic industry.

On July 19, 2017, the NEA promulgated the *Guiding Opinions on the Implementation of the Thirteenth Five-Year Plan for Renewable Energy Development*, which aims to thoroughly implement the energy production and consumption revolutionary strategy, effectively solve the problems of abandoned water, abandoned wind, abandoned light and insufficient of subsidies in the development of renewable energy, and achieve sustainable and healthy development of the renewable energy industry.

On February 26, 2018, the NEA promulgated the *Guide Opinion on Energy for 2018*, which encouraged the development of solar power.

On April 2, 2018, the NEA promulgated the *Circular on Matters Concerning Easing the Burden of Enterprises in Renewable Energy Sector*, which aims to ease the burden of renewable energy enterprises through strengthening the implementation and supervision of existing policies.

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On May 31, 2018, the NDRC, the Ministry of Finance and the NEA issued a joint notice on matters related to photovoltaic power generation in 2018, which aims to (1) rationally grasp the pace of development and optimize the scale of new construction of photovoltaic power generation; (2) accelerate the reduction of subsidies for photovoltaic power generation; (3) give play to the decisive role of market allocation resources, and increase market-oriented projects.

On January 7, 2019, the NDRC and the NEA promulgated a joint notice on actively promoting the work related to wind power and photovoltaic power generation without subsidy. On February 1, 2019, the General Department of the NEA promulgated a joint notice on the publication of the environmental monitoring and evaluation results of the photovoltaic power generation market in 2018.

On February 14, 2019, the NDRC issued the *Green Industry Guidance Catalogue (2019 Edition)* to include solar power equipment manufacturing into the green industry guidance catalogue, to further encourage the development of solar industry. The NDRC organized the revision of the *Green Industry Guidance Catalogue (2019 Edition)* and, as a result, issued an announcement on March 16, 2023 to solicit opinions on *Draft of Green Industry Guidance Catalogue (2023 Edition)* from the public.

On October 30, 2019, the NDRC issued the *Industrial Structure Adjustment Guidance Catalogue (2019 Edition)* which became effective on January 1, 2020, to include the photovoltaic solar equipment manufacturing in the encouraged category, in order to coordinate the transition of the Chinese economy from a high-speed growth stage to a high-quality development stage.

On January 20, 2020, the NEA, the NDRC, and the Ministry of Finance jointly issued *Opinions on Promoting the Healthy Development of Non-hydroelectric Renewable Energy Power Generation*, aiming at (i) improving the current subsidy method, (ii) improving market allocation of resources and subsidy decline mechanism, and (iii) optimizing subsidy redemption process.

On September 29, 2020, the NDRC, the NEA and the Ministry of Finance jointly issued *Supplementary Notice on Matters Relating to Several Opinions on Promoting the Sound Development of Non-Hydro-Renewable Energy Power Generation* to further clarify relevant policies of additional subsidy funds for renewable energy electricity prices and stabilize industry expectations.

On March 5, 2020, the NEA issued *Notice on Matters Related to the Construction of Wind Power and Photovoltaic Power Generation Projects in 2020*, in order to adjust and improve the specific plans for the construction and management of wind power and photovoltaic power generation projects. On May 11, 2021, the NEA issued *Notice on Matters Related to the Development and Construction of Wind Power and Photovoltaic Power Generation Projects in 2021*, further adjusting and improving the specific plans for matters related to the development and construction of wind power and photovoltaic power generation projects in 2021.

On February 2, 2021, the State Council issued *Guiding Opinions on Accelerating the Establishment and Improvement of the Green and Low-Carbon Circular Development Economic System*, in order to accelerate the establishment of a robust economic system of green and low-carbon circular development.

On February 24, 2021, the NDRC, the MOF, the People's Bank of China, the China Banking and Insurance Regulatory Commission and the NEA issued *Notice on Guiding to Increase Financial Support to Promote the Healthy and Orderly Development of Wind Power and Photovoltaic Power Generation Industries*, in order to help solving the problems of renewable energy companies such as tight cash flow and difficulties in production and operation.

On April 19, 2021, the NEA issued *Notice on Guiding Opinions on Energy Matters*, setting forth, among other things, the target to further increase the percentage of wind power and photovoltaic power to 11%. On March 17, 2022, the NEA issued *Notice on Guiding Opinions on Energy Matters*, requiring in-depth implementation of the Fourteenth Five-Year Plan for Renewable Energy Development, vigorous development of wind power and photovoltaic power, and research on establishment of construction and operation mechanism for supporting energy storage system of the large-scale wind power and photovoltaic bases.

Environmental Protection

The construction processes of our solar power projects generate material levels of noise, waste water, gaseous emissions and other industrial wastes. Therefore, we are subject to a variety of government regulations related to the storage, use and disposal of hazardous materials and to the protection of the environment of the community. The major environmental regulations applicable to our business activities in the PRC include the *Environmental Protection Law of the PRC*, the *Law on the Prevention and Control of Noise Pollution*, the *Law on the Prevention and Control of Air Pollution*, the *Law on the Prevention and Control of Water Pollution*, the *Law on the Prevention and Control of Solid Waste Pollution*, the *Law on Environmental Impact Evaluation*, and the *Regulations on the Administration of Environmental Protection In Construction Projects*.

On April 24, 2014, the Standing Committee of the National People's Congress promulgated the *Environmental Protection Law of the PRC* (Amended in 2014), which became effective on January 1, 2015. This Law is formulated for the purposes of environmental protection and improvement, prevention and treatment of pollution and other hazards, protection of public health, promoting development of ecological civilization, promoting sustainable economic and social development.

On December 25, 2016, the Standing Committee of the National People's Congress promulgated the *Law on Environmental Protection Tax*, which became effective on January 1, 2018 and was amended on October 26, 2018. The *Law on Environmental Protection Tax* reformed and replaced the pollutant discharge fee system, which had been implemented over decades in China. The *Law on Environmental Protection Tax* provides that, among others, from its effective date, the enterprises, entities and other producers and operators that directly emit taxable pollutants into the environment within the territory and other sea areas under the jurisdiction of the PRC shall pay environmental protection tax instead of pollutant discharge fees. Under the *Law on Environmental Protection Tax*, taxable pollutants include air and water pollutants, solid waste and noise.

On December 29, 2018, Environmental Impact Assessment Law of the People's Republic of China was amended and implemented. On June 5, 2022, Prevention and Control of Noise Pollution Law of the People's Republic of China came into effect, replacing the original Prevention and Control of Environmental Noise Pollution Law of the People's Republic of China. The forgoing amendment and the new legislation increased and refined the work of environmental protection departments, increasing the penalties for violations of environmental protection law.

The operation of our factories in the U.S., Malaysia and Vietnam is required to comply with local laws and regulations on environmental protection, including but not limited to, those in relation to air emissions, noise exposure, lead regulation, toxics release and hazardous waste disposal.

See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Compliance with environmentally safe production and construction and renewable energy development regulations can be costly, while non-compliance with such regulations may result in adverse publicity and potentially significant monetary damages, fines and suspension of our business operations."

Foreign Investment in Solar Power Business

In the past decade, the principal regulation governing foreign ownership of solar power businesses in the PRC is the *Foreign Investment Industrial Guidance Catalog*, which has been amended from time to time. Under the catalog, the solar power industry has been classified as an "encouraged foreign investment industry." Foreign-invested enterprises in the encouraged foreign investment industries are entitled to certain preferential treatment, such as exemption from tariff on equipment imported for their operations, after obtaining approval from the PRC government authorities.

On March 15, 2019 the National People's Congress of the PRC issued the *Foreign Investment Law of the PRC* and on December 26, 2019, the State Council of the PRC issued the *Implementing Regulations on the Foreign Investment Law of the PRC*, both of which came into force on January 1, 2020, and replaced certain former laws regulating foreign-invested enterprises.

According to the Foreign Investment Law and its implementing regulations, the PRC applies the administrative system of pre-establishment national treatment and negative list to foreign investments. "Pre-establishment national treatment" means the treatment accorded to foreign investors and their investments will be no less favorable to that accorded to domestic investors and their investments at the stage of investment access. On June 28, 2018, the NDRC and the MOFCOM jointly issued the *Special Administrative Measures for the Access of Foreign Investment (2018 Edition)* (the "Negative List"), which came into force on July 28, 2018 and subsequently amended by the *Special Administrative Measures for the Access of Foreign Investment (2019 Edition)*, the *Special Administrative Measures for the Access of Foreign Investment (2020 Edition)* and *Special Administrative Measures for the Access of Foreign Investment (2021 Edition)*, and the *Special Administrative Measures for the Access of Foreign Investment (2022 Edition)*. "Negative list" means a special administrative measure for access of foreign investment in specific fields as imposed by the PRC. Foreign investors are not allowed to invest in the forbidden investment as specified in the negative list. Foreign investors must comply with the special equity management requirements, senior management requirements and other restrictive access special management measures when making investments in the restricted investments as specified in the negative list. The Negative List provides that sectors that are not specified in the Negative List shall be subject to administration under the principle of treating domestic investments and foreign investments equally. Simultaneously, the NDRC and the MOFCOM jointly issued the *Industrial Catalogue to Encourage Foreign Investment (2022 Edition)* to include photovoltaic power generation equipment manufacturing within the scope of industries that encourage foreign investment.

Work Safety

We are subject to laws and regulations in relation to work safety and occupational disease prevention, including the *Work Safety Law of the PRC*, which became effective on November 1, 2002 and was amended on August 31, 2014 and further amended on June 10, 2021, which took effect on September 1, 2021, the *Prevention and Control of Occupational Diseases of the PRC*, which was effective on May 1, 2002, and was amended on December 29, 2018, and other relevant laws and regulations, the *Law of the PRC on Special Equipment Safety*, which was effective on January 1, 2014.

Employment

Pursuant to the *Labor Law of the PRC*, the *Labor Contract Law of the PRC* and the *Implementing Regulations of the Labor Contract Law of the PRC*, employers must enter into written employment contracts with full-time employees. If an employer fails to do so within one year from the date on which the employment relationship is established, the employer must rectify the situation by entering into a written employment contract with the employee and pay the employee twice the amount of the employee's salary for the period during which the written contract is not signed. The *Labor Contract Law* and its implementing rules also require all employers must comply with local minimum wage standards. If the wage paid to the employee by the employer is lower than the local minimum wage standard, the competent labor authorities may order the employer to pay the difference; in the event of any failure to pay within the time limit, the employer may be ordered to pay additional compensation to the employee at the standard of more than 50% but less than 100% of the payable amount. Violations of the *Labor Law*, the *Labor Contract Law* and its implementing rules may result in the imposition of fines and other administrative liabilities.

Enterprises in the PRC are required by the PRC laws and regulations to participate in certain employee benefit plans covering pension insurance, unemployment insurance, maternity insurance, work-related injury insurance, medical insurance and housing funds, and contribute to the plans or funds in amounts equal to certain percentages of salaries, including bonuses and allowances, of the employees as specified by the local government from time to time at locations where they operate their businesses or where they are located. According to the *Social Insurance Law of the PRC*, which came into effect on July 1, 2011 and was amended on December 29, 2018, an employer that fails to make social insurance contributions may be ordered to pay the required contributions within a stipulated deadline and be subject to a late fee at the rate of 0.05% per day from the date on which the contribution becomes due. If the employer still fails to rectify the failure to make social insurance contributions within the stipulated deadline, it may be subject to a fine ranging from one to three times the amount overdue. According to the *Regulations on the Administration of Housing Fund*, which came into force on March 24, 2002 and was amended on March 24, 2019, an enterprise that fails to make housing fund contributions may be ordered to rectify the non-compliance and pay the required contributions within a stipulated deadline; otherwise, an application may be made to a local court for compulsory enforcement.

Taxation

PRC Corporate Income Tax

Prior to January 1, 2008, under the *PRC Income Tax Law on Foreign-invested Enterprise and Foreign Enterprise*, or the former *Income Tax Law*, and the related implementing rules, foreign-invested enterprises incorporated in the PRC were generally subject to a corporate income tax rate of 30% on taxable income and a local income tax rate of 3% on taxable income. The former *Income Tax Law* and the related implementing rules also provided for certain favorable tax treatments to foreign-invested enterprises.

On March 16, 2007, the CIT Law was passed, which, together with the *Implementation Rules of the CIT Law* issued on December 6, 2007, became effective on January 1, 2008. The CIT Law, amended on February 24, 2017 and December 29, 2018, applies a uniform 25% corporate income tax rate to both foreign invested enterprises and domestic enterprises and eliminates many of the preferential tax policies afforded to foreign investors. Furthermore, dividends paid by a foreign invested enterprise to a non-resident shareholder are now subject to a withholding tax rate of 10%, which may be reduced under any applicable bilateral tax treaty between the PRC and the jurisdiction where the non-resident shareholder resides.

The CIT Law provided a five-year grandfathering period, starting from its effective date, for enterprises established before the promulgation date of the CIT Law that were entitled to enjoy preferential tax policies under the former *Income Tax Law* or the related implementing rules. However, subject to the *Circular on Implementing the Grandfathering Preferential Policies of the Enterprise Income Tax*, or the Implementing Circular, promulgated by the State Council on December 26, 2007, only a certain number of the preferential policies provided under the former *Income Tax Law* and the related implementing rules were eligible to be grandfathered in accordance with the Implementing Circular.

With respect to our PRC operations, only the “two-year exemption” and “three-year half deduction” tax preferential policy enjoyed by Jiangxi Jinko and Zhejiang Jinko was grandfathered by the Implementation Circular. Both Jiangxi Jinko and Zhejiang Jinko were subject to a preferential tax rate of 12.5% in 2011 and 2012. Jiangxi Jinko, Jiangxi Materials, Zhejiang Jinko, Yuhuan Jinko and Haining Jinko were designated by the relevant local authorities as “High and New Technology Enterprises” and Xinjiang Jinko was designated by the relevant local authorities as “Enterprise in the Encouraged Industries” under the CIT Law.

Jiangxi Jinko, Yuhuan Jinko, Haining Jinko were subject to a preferential tax rate of 15% for 2019, 2020 and 2021. Yiwu Jinko has obtained the qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Zhejiang Jinko has successfully renewed this qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Jiangxi Jinko and Haining Jinko have successfully renewed this qualification for 2022, 2023 and 2024. Shangrao Jinko and Zhejiang New Material obtained HNTE qualification in 2022 to enjoy the preferential tax rate of 15% for 2022, 2023 and 2024. Xinjiang Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% for 2020, 2021 and 2022. According to the “Announcement on Continuation of CIT Policies for Large-scale Development in the Western Region” published on April 23, 2020, enterprises established in the western region in encouraged industries can continue to enjoy the preferential tax rate of 15% till December 31, 2030. Sichuan Jinko, Leshan Jinko, Chuxiong Jinko and Qinghai Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% from 2022 till 2030.

Certain solar power project entities enjoy the preferential tax policies in connection with the development of the western region of China and are subject to a preferential tax rate of 15%. The enterprises which are eligible for such preferential tax rate must engage in the business falling in the scope of the Catalogue of Industries Encouraged in the Western Region promulgated by the NDRC. Enterprises that are eligible for the preferential tax rate of 15% may be able to enjoy such preferential tax rate and tax holiday simultaneously where certain criteria are met.

According to the *Circular of the State Taxation Administration on How to Understand and Identify “Beneficial Owner” under Tax Treaties*, which became effective on October 27, 2009, and the *Announcement of the State Taxation Administration on the Determination of “Beneficial Owners” in the Tax Treaties*, effective on June 29, 2012, the PRC tax authorities must evaluate whether an applicant for treaty benefits in respect of dividends, interest and royalties qualifies as a “beneficial owner” on a case-by-case basis and following the “substance over form” principle. This circular sets forth the criteria to identify a “beneficial owner” and provides that an applicant that does not carry out substantial business activities, or is an agent or a conduit company may not be deemed a “beneficial owner” of the PRC subsidiary and therefore may not enjoy tax treaty benefits. According to *Announcement of the State Taxation Administration on Issues Concerning the Recognition of Beneficial Owners in Entrusted Investments*, effective on June 1, 2014, nonresidents may be recognized as “beneficial owners” and enjoy treaty benefits for the income derived from the PRC from certain investments. According to the *Announcement of the State Taxation Administration on Issues concerning the “Beneficial Owner” in Tax Treaties*, which became effective in April 2018, a resident enterprise is determined as a “beneficial owner” that can apply for a low tax rate under tax treaties based on an overall assessment of several factors. Furthermore, the *Administrative Measures for Non-Resident Enterprises to Enjoy Treatments under Tax Treaties*, which became effective in November 2015 and was amended in June 2018, require non-resident enterprises to determine whether they are qualified to enjoy the preferential tax treatment under the tax treaties and file relevant report and materials with the tax authorities.

An enterprise registered under the laws of a jurisdiction outside China may be deemed a PRC tax resident enterprise if its place of effective management is in China. If an enterprise is deemed to be a PRC tax resident enterprise, its worldwide income will be subject to the corporate income tax. According to the Implementation Rules of the CIT Law, the term “de facto management bodies” is defined as bodies that have, in substance, and overall management and control over such aspects as the production and the business, personnel, accounts and properties of the enterprise. In addition, under the CIT Law and the Implementation Rules of the CIT Law, foreign shareholders could become subject to a 10% withholding tax on any gains they realize from the transfer of their shares, if such gains are regarded as income derived from sources within China, which includes gains from transfer of shares in an enterprise considered a “tax resident enterprise” in China. Once a non-PRC company is deemed to be a PRC tax resident enterprise by following the “de facto management bodies” concept and any dividend distributions from such company are regarded as income derived from sources within China, PRC income tax withholding may be imposed and applied to dividend distributions from the deemed PRC tax resident enterprise to its foreign shareholders.

VAT

Pursuant to the *Interim Regulations on Value-added Tax* as amended on February 6, 2016 (the “2016 Interim Regulations on Value-added Tax”), and the *Implementing Rules of the Interim Regulations on Value-added Tax* as amended on October 28, 2011, all entities and individuals that are engaged in the sale of goods, the provision of repairs and replacement services and the importation of goods in the PRC are required to pay VAT. The 2016 Interim Regulations on Value-added Tax and their Implementing Rules also provide that gross proceeds from sales and importation of goods and provision of services are generally subject to a VAT rate of 17%, with exceptions for certain categories of goods that are taxed at a rate of 13%. The 2016 Interim Regulation on Value-added Tax was further amended on November 19, 2017, in which gross proceeds from sales and importation of goods and provision of services and tangible personal property leasing services are generally subject to a VAT rate of 17%, with exceptions for certain categories of goods that are taxed at a VAT rate of 11%. On April 4, 2018, the *Circular of the MOF and the STA on Adjusting Value-added Tax Rates* was promulgated, in which gross proceeds from sales and importation of goods and provision of services and tangible personal property leasing services are generally subject to a VAT rate of 16%, with exceptions for certain categories of goods that are taxed at a VAT rate of 10%. On March 20, 2019, the Announcement on Relevant Policies for Deepening Value-Added Tax Reform was jointly promulgated the Ministry of Finance, the STA and the General Administration of Customs, which further provides that effective from the date of April 1, 2019, the VAT rate of gross proceeds from sales and importation of goods and provision of services shall be adjusted from 16% to 13%, with the VAT rate of certain categories of goods shall be adjusted from 10% to 9%.

Foreign Currency Exchange

Foreign currency exchange regulation in the PRC is primarily governed by the *Regulations on the Administration of Foreign Exchange*, and the *Provisions on the Administration of Settlement, Sale and Payment of Foreign Exchange*. Currently, the Renminbi is convertible for current account items, including the distribution of dividends, interest payments, trade and service related foreign exchange transactions. On January 26, 2017, the SAFE issued the *Circular on Further Promoting the Reform of Foreign Exchange Administration and Improving Examination of Authenticity and Compliance*, pursuant to which the SAFE restated the procedures and reemphasized the bona fide principle for banks to follow during their review of certain cross-border profit remittance. Conversion of Renminbi for most capital account items, such as direct investment, security investment and repatriation of investment, however, is still subject to registration with the SAFE. Foreign-invested enterprises may buy, sell and remit foreign currencies at financial institutions engaged in foreign currency settlement and sale after providing valid commercial documents and, in the case of most capital account item transactions, obtaining approval from the SAFE. Capital investments by foreign enterprises are also subject to limitations, which include approvals by the NDRC, the MOFCOM, and registration with the SAFE.

In August 2008, the SAFE issued the *Circular on the Relevant Operating Issues Concerning the Improvement of the Administration of Payment and Settlement of Foreign Currency Capital of Foreign-Invested Enterprises*, or the Circular 142, regulating the conversion by a foreign invested enterprise of foreign currency-registered capital into RMB by restricting how the converted RMB may be used. Pursuant to the Circular 142, the RMB capital converted from foreign currency registered capital of a foreign-invested enterprise may only be used for purposes within the business scope approved by the applicable government authority and may not be used for equity investments within the PRC. In addition, the SAFE strengthened its oversight of the flow and use of the RMB capital converted from foreign currency registered capital of foreign-invested enterprises. The use of such RMB capital may not be changed without the SAFE’s approval, and such RMB capital may not in any case be used to repay RMB-denominated loans if the proceeds of such loans have not been used. Violations may result in severe monetary or other penalties. Furthermore, on March 30, 2015, the SAFE issued the *Circular on Reforming the Administration Approach Regarding the Foreign Exchange Capital Settlement of Foreign-invested Enterprises*, or Circular 19, which became effective on June 1, 2015 and replaced Circular 142. Circular 19 provides that, the conversion from foreign currency registered capital of foreign-invested enterprises into the Renminbi capital may be at foreign-invested enterprises’ discretion, which means that the foreign currency registered capital of foreign-invested enterprises for which the rights and interests of monetary contribution has been confirmed by the local foreign exchange bureau (or the book-entry of monetary contribution has been registered) can be settled at the banks based on the actual operational needs of the enterprises. However, Circular 19 does not materially change the restrictions on the use of foreign currency registered capital of foreign-invested enterprises. Circular 19 continues to prohibit foreign-invested enterprises from, among other things, spending Renminbi capital converted from its foreign currency registered capital on expenditures beyond its business scope. On June 9, 2016, SAFE promulgated the *Circular on Reforming and Regulating the Administrative Policies of Foreign Exchange Settlement under the Capital Account* (“Circular 16”), which applies to all domestic enterprises in China. Circular 16 expands the application scope from only the capital of the foreign-invested enterprises to the capital, foreign debt fund and fund from oversea public offering. Also, Circular 16 allows enterprises to use their foreign exchange capitals under capital accounts allowed by the relevant laws and regulations.

In February 2012, the SAFE promulgated the *Notice on the Administration of Foreign Exchange Matters for Domestic Individuals Participating in the Stock Incentive Plans of Overseas Listed Companies*, or the Stock Option Notice. The Stock Option Notice replaced a prior rule issued by SAFE in 2007, the *Application Procedure of Foreign Exchange Administration for Domestic Individuals Participating in an Employee Stock Holding Plan or Stock Option Plan of an Overseas-Listed Company*. Under the Stock Option Notice, domestic individuals who participate in equity incentive plans of an overseas listed company are required, through a PRC agent or PRC subsidiary of such listed company, to register with SAFE and complete certain other bank and reporting procedures. The Stock Option Notice simplifies the requirements and procedures for the registration of stock incentive plan participants, especially in respect of the required application documents and the absence of strict requirements on offshore and onshore custodian banks, as were stipulated in the previous rules.

The *Circular of Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment* issued by the SAFE on November 19, 2012 and amended on May 4, 2015 substantially amends and simplifies the foreign exchange procedure. Pursuant to this circular, the opening of various special purpose foreign exchange accounts (e.g., pre-establishment expenses account, foreign exchange capital account, guarantee account), the reinvestment of lawful incomes derived by foreign investors in the PRC (e.g., profit, proceeds of equity transfer, capital reduction, liquidation and early repatriation of investment), and purchase and remittance of foreign exchange as a result of capital reduction, liquidation, early repatriation or share transfer in a foreign-invested enterprise no longer require the SAFE's approval, and multiple capital accounts for the same entity may be opened in different provinces, which was not possible before. In addition, the SAFE promulgated the *Circular on Printing and Distributing the Provisions on Foreign Exchange Administration over Domestic Direct Investment by Foreign Investors and the Supporting Documents* in May 2013, as amended in October 2018, which specifies that the administration by the SAFE or its local branches over direct investment by foreign investors in the PRC must be conducted by way of registration and banks shall process foreign exchange business relating to the direct investment in the PRC based on the registration information provided by the SAFE and its branches. On February 13, 2015, the SAFE promulgated the *Circular on Further Simplification and Improvement of Foreign Currency Administration Policies on Direct Investment*, effective on June 1, 2015, which further simplifies the approval requirements of SAFE upon the direct investment by foreign investors. In particular, instead of applying for approvals from SAFE, entities and individuals are required to apply for foreign exchange registrations of foreign direct investment and overseas direct investment from qualified banks, while the qualified banks, under the supervision of the SAFE, will directly examine the applications and conduct the registration accordingly.

On July 4, 2014, the SAFE issued the *Circular on the Administration of Foreign Exchange Issues Related to Overseas Investment, Financing and Roundtrip Investment by Domestic Residents through Offshore Special Purpose Vehicles*, or the SAFE Circular 37, which replaced the former circular commonly known as "SAFE Circular 75" promulgated on October 21, 2005. The SAFE Circular 37 requires PRC residents to register with the competent local SAFE branch in connection with their direct establishment or indirect control of an offshore special purpose vehicle, for the purpose of overseas investment and financing, with such PRC residents' legally owned assets or equity interests in domestic enterprises or offshore assets or interests. The SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as any change of basic information (including change of the PRC residents, name and operation term), increase or decrease of capital contribution by the PRC residents, share transfer or exchange, merger, division or other material events. In the event that a PRC resident holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in its ability to contribute additional capital into its PRC subsidiary. Moreover, failure to comply with the various SAFE registration requirements described above could result in liability under the PRC law for evasion of foreign exchange controls.

On January 26, 2017, the SAFE issued the *Notice on Improving the Check of Authenticity and Compliance to further Promote Foreign Exchange Control* (the "Circular 3"), which continuously implements and improves the policy for outward remittance of foreign exchange profit generated from direct investment. In addition, Circular 3 expands the scope of settlement of exchange for domestic loans in foreign currencies, and it is allowed to transfer inward overseas loans under domestic guarantee. The debtor may, directly or indirectly, transfer inward the funds under guarantee by domestic lending, equity investment or other measures.

According to the Foreign Investment Law and its implementing regulations, a foreign investor may, in accordance with the law, freely transfer inward and outward its contributions, profits, capital gains, income from asset disposal, royalties of intellectual property rights, compensation or indemnity legally obtained, income from liquidation and so on made or derived within the territory of the PRC in RMB or a foreign currency. No entity or individual may illegally restrict the transfer inward or outward in terms of the currency, amount, frequency and so on of such transfer.

Dividend Distribution

The principal laws and regulations governing distribution of dividends paid by wholly foreign owned enterprises include the *Company Law of the PRC* as amended on October 26, 2018, the *Wholly Foreign Owned Enterprise Law of the PRC* as amended on October 1, 2016, and the *Implementing Rules of the Wholly Foreign Owned Enterprise Law of the PRC* as amended on February 19, 2014. On March 15, 2019 the National People's Congress of the PRC issued the *Foreign Investment Law of the PRC* and on December 26, 2019, the State Council of the PRC issued the *Implementing Regulations on the Foreign Investment Law of the PRC*, both of which have come into force on January 1, 2020, resulting in the expiration of the *Wholly Foreign Owned Enterprise Law of the PRC* and the *Implementing Rules of the Wholly Foreign Owned Enterprise Law of the PRC*.

Under the new regime of foreign investment, foreign-invested enterprises in the PRC, being treated equally with domestic companies, may pay dividends only out of their accumulated profits, if any, as determined in accordance with the PRC accounting standards and regulations. When distributing its after-tax profit, a company in the PRC is required to set aside as statutory common reserves of 10% of its after-tax profit, until the accumulative amount of such reserves reaches 50% of its registered capital. These reserves are not distributable as cash dividends. Where the aggregate balance of the company's statutory common reserve is insufficient to cover any loss the company made in the previous financial year, the current financial year's profits shall first be used to cover the loss before any statutory common reserve is drawn. In addition to the statutory common reserve, the company may draw a discretionary common reserve from its after-tax profits. Both the statutory common reserve and the discretionary common reserve may not be distributed to equity owners in the event of liquidation. A company is not permitted to distribute any profits until any losses from prior fiscal years have been offset and the common reserve is drawn. Profits retained from prior fiscal years may be distributed together with distributable profits from the current fiscal year.

Intellectual Property Rights

Patent

The PRC has domestic laws for the protection of rights in copyrights, patents, trademarks and trade secrets. The PRC is also a signatory to the world's major intellectual property conventions, including:

- Convention establishing the World Intellectual Property Organization (WIPO Convention) (June 4, 1980);
- Paris Convention for the Protection of Industrial Property (March 19, 1985);
- Patent Cooperation Treaty (January 1, 1994); and
- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) (November 11, 2001).

Patents in the PRC are governed by the *China Patent Law* (March 12, 1984), as amended and its *Implementing Regulations* (January 19, 1985), as amended.

The PRC is a signatory to the Paris Convention for the Protection of Industrial Property, in accordance with which any person who has duly filed an application for a patent in one signatory country shall enjoy, for the purposes of filing in the other countries, a right of priority during the period fixed in the convention (12 months for inventions and utility models, and 6 months for industrial designs).

The *China Patent Law* covers three kinds of patents, namely, patents for inventions, utility models and designs. The Chinese patent system adopts the principle of first to file, which means where multiple patent applications are filed for the same invention, a patent will be granted only to the party that filed the application first. Consistent with international practice, the PRC only allows the patenting of inventions or utility models that possess the characteristics of novelty, inventiveness and practical applicability. For a design to be patentable, it must not be identical with or similar to any design which has been publicly disclosed in publications in the country or abroad before the date of filing or has been publicly used in the country before the date of filing, and must not be in conflict with any prior right of another.

PRC law provides that anyone wishing to exploit the patent of another must enter into a written licensing contract with the patent holder and pay the patent holder a fee. One rather broad exception to this, however, is where a party possesses the means to exploit a patent for inventions or utility models under certain circumstances but cannot obtain a license from the patent holder on reasonable terms and in a reasonable period of time, the State Intellectual Property Office of the PRC is authorized to grant a compulsory license. A compulsory license can also be granted where a national emergency or any extraordinary state of affairs occurs or where the public interest so requires. The patent holder may appeal such a decision within three months from receiving notification by filing a suit in people's court in the PRC.

PRC law defines patent infringement as the exploitation of a patent without the authorization of the patent holder. A patent holder who believes his patent is being infringed may file a civil suit or file a complaint with a local PRC intellectual property administrative authority, which may order the infringer to stop the infringing acts. A preliminary injunction may be issued by the people's court upon the patentee's or the interested parties' request before any legal proceedings are instituted or during the proceedings. Evidence preservation and property preservation measures are also available both before and during the litigation. Damages in the case of patent infringement are determined as either the loss suffered by the patent holder arising from the infringement or the benefit gained by the infringer from the infringement. If it is difficult to ascertain damages in this manner, damages may be determined with reference to the license fee under a contractual license.

Trademark

The *PRC Trademark Law*, adopted in 1982 and revised in 1993, 2001, 2013 and 2019, with its implementation rules adopted in 2002 and revised in 2014, protects registered trademarks. The Trademark Office of the State Administration of Industry and Commerce handles trademark registrations and grants trademark registrations for a term of ten years which are renewable upon maturity. Trademark license agreements must be filed with the Trademark Office for record.

Computer Software Copyright

The *Regulations on Computer Software Protection*, adopted in 2001 and revised in 2011 and 2013, are enacted in accordance with the *Copyright Law of the PRC*, for the purposes of protecting the rights and interest of copyright owners of computer software. The National Copyright Administration ("NCAC") is in charge of the administration of the registration of software copyright and the NCAC accredits the China Copyright Protection Center as the body for software registration. A registration certificate of the computer software copyright is a preliminary proof of the registered items. The NCAC encourages the registration of software copyright and gives emphasized protection to the registered software.

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C. Organizational Structure

The following table sets out our significant subsidiaries as of the date of this annual report:

Subsidiaries	Date of Incorporation/Acquisition	Place of Incorporation	Percentage of Ownership
JinkoSolar Investment Limited	November 10, 2006	Hong Kong	100 %
Jinko Solar Co., Ltd.	December 13, 2006	PRC	58.6 %
Zhejiang Jinko Solar Co., Ltd.	June 30, 2009	PRC	58.6 %
Jinko Solar Import and Export Co., Ltd.	December 24, 2009	PRC	58.6 %
JinkoSolar GmbH	April 1, 2010	Germany	58.6 %
Zhejiang Jinko Trading Co., Ltd.	June 13, 2010	PRC	58.6 %
Xinjiang Jinko Solar Co., Ltd.	May 30, 2016	PRC	58.6 %
Yuhuan Jinko Solar Co., Ltd.	July 29, 2016	PRC	58.6 %
JinkoSolar (U.S.) Inc.	August 19, 2010	United States	58.6 %
Jiangxi Photovoltaic Materials Co., Ltd.	December 10, 2010	PRC	58.6 %
JinkoSolar (Switzerland) AG	May 3, 2011	Switzerland	58.6 %
JinkoSolar (US) Holdings Inc.	June 7, 2011	United States	58.6 %
Jinko Solar Canada Co., Ltd.	November 18, 2011	Canada	58.6 %
Jinko Solar Australia Holdings Co. Pty Ltd.	December 7, 2011	Australia	58.6 %
Jinko Solar Japan K.K.	May 21, 2012	Japan	58.6 %
Jinko Solar Technology Sdn.Bhd.	January 21, 2015	Malaysia	58.6 %
Jinko Solar (Shanghai) Management Co., Ltd.	July 25, 2012	PRC	58.6 %
JinkoSolar Trading Private Limited	February 6, 2017	India	58.6 %
JinkoSolar LATAM Holding Limited	August 22, 2017	Hong Kong	100 %
JinkoSolar Middle East DMCC	November 6, 2016	Emirates	58.6 %
JinkoSolar International Development Limited	August 28, 2015	Hong Kong	100 %
Canton Best Limited	September 16, 2013	BVI	100 %
Wide Wealth Group Holding Limited	June 11, 2012	Hong Kong	100 %
JinkoSolar (U.S.) Industries Inc.	November 16, 2017	United States	58.6 %
Poyang Ruilixin Information Technology Co., Ltd.	December 19, 2017	PRC	58.6 %
JinkoSolar Technology (Haining) Co. Ltd.	December 15, 2017	PRC	45.9 %
Jinko Solar Korea Co., Ltd.	December 3, 2018	South Korea	58.6 %
JinkoSolar (Sichuan) Co., Ltd.	February 18, 2019	PRC	38.4 %
JinkoSolar (Vietnam) Co., Ltd.	September 26, 2019	Vietnam	58.6 %
Jinko PV Material Supply Sdn. Bhd.	September 23, 2019	Malaysia	58.6 %
JinkoSolar (Chuzhou) Co., Ltd.	December 26, 2019	PRC	44.2 %
JinkoSolar (Yiwu) Co., Ltd.	September 19, 2019	PRC	35.7 %
JinkoSolar (Shangrao) Co., Ltd.	April 17, 2020	PRC	32.2 %
Rui Xu Co., Ltd.	July 24, 2019	PRC	35.2 %
Jinko Solar Denmark ApS	May 28, 2020	Denmark	58.6 %
JinkoSolar Hong Kong Limited	August 17, 2020	Hong Kong	58.6 %
JinkoSolar (Chuxiong) Co., Ltd.	September 25, 2020	PRC	58.6 %
Jinko Solar (Malaysia) SDN BHD.	August 28, 2020	Malaysia	58.6 %
Jinko Solar (Leshan) Co., Ltd.	April 25, 2021	PRC	41.0 %
Jinko Solar (Vietnam) Industries Company Limited	March 29, 2021	Vietnam	58.6 %
Jinko Solar (Anhui) Co., Ltd.	September 3, 2021	PRC	32.2 %
Jinko Solar (Yushan) Co., Ltd.	September 26, 2021	PRC	46.9 %
Zhejiang New Materials Co., Ltd.	March 24, 2020	PRC	58.6 %
Yiwu New Materials Co., Ltd.	October 16, 2020	PRC	58.6 %
JinkoSolar Italy S.R.L.	July 8, 2011	Italy	58.6 %
JinkoSolar (Qinghai) Co., Ltd.	April 3, 2019	PRC	32.2 %
Fengcheng Jinko PV Materials Co., Ltd	August 11, 2021	PRC	58.6 %
JinkoSolar (Feidong) Co., Ltd. ("Jinko Feidong")	September 23, 2021	PRC	32.2 %
JinkoSolar (Jinchang) Co., Ltd. ("Jinko Jinchang")	September 24, 2021	PRC	58.6 %
JinkoSolar (Poyang) Co., Ltd. ("Jinko Poyang")	December 1, 2021	PRC	58.6 %
Shangrao Changxin Enterprise Management Center LP. ("Shangrao Changxin")	December 16, 2021	PRC	100 %
Shangrao Changxin No. 1 Enterprise Management Center LP.	February 17, 2022	PRC	100 %
Shangrao Changxin No. 2 Enterprise Management Center LP.	February 17, 2022	PRC	100 %

Shangrao Changxin No. 3 Enterprise Management Center LP.	June 15, 2022	PRC	100 %
Shangrao Changxin No. 5 Enterprise Management Center LP.	June 15, 2022	PRC	100 %
Shangrao Changxin No. 6 Enterprise Management Center LP.	October 25, 2022	PRC	100 %
Jiaxing Jinyue Phase I Venture Capital Partnership("Jiaxing Jinyue")	April 26, 2022	PRC	78.2 %
Shangrao Jinko PV Manufacturing Co., Ltd	March 28, 2022	PRC	58.6 %
Shangrao Guangxin Jinko PV Manufacturing Co., Ltd	March 23, 2022	PRC	58.6 %
Jiangxi Jinko Energy Storage Co., Ltd	May 26, 2022	PRC	58.6 %
Jinko Energy Storage Technology Co., Ltd	December 6, 2022	PRC	58.6 %

D. Property, Plant and Equipment

For information regarding our material property, plant and equipment, see “—B. Business Overview—Manufacturing—Manufacturing Capacity and Facilities” in this annual report.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

We are a global leader in the PV industry based in China. We have built a vertically integrated solar power product value chain, manufacturing from silicon wafers to solar modules. We sell most of our solar modules under our own “JinkoSolar” brand, with a small portion of solar modules on an OEM basis. We also sell silicon wafers and solar cells not used in our solar module production. As of December 31, 2022, we had an integrated annual capacity of 65 GW for mono wafers, 55 GW for solar cells and 70 GW for solar modules.

Our revenues were RMB35.13 billion, RMB40.83 billion and RMB83.13 billion (US\$12.05 billion) in 2020, 2021 and 2022, respectively. We had net income of RMB335.3 million, RMB955.6 million and RMB1.57 billion (US\$226.9 million) in 2020, 2021 and 2022, respectively.

Principal Factors Affecting Our Results of Operations

We believe that the following factors have had, and we expect that they will continue to have, a significant effect on the development of our business, financial condition and results of operations.

Industry Demand

Our business and revenue growth depends on the industry demand for solar power and solar power products. Demand for solar power and products depends on various factors including the global macroeconomic environment, pricing, cost-effectiveness, performance and reliability in comparison to alternative forms of energy, and the impact of government regulations and policies. Solar power is one of the fastest-growing sources of energy and is driven by factors such as cost-competitiveness, reliability as a predictable energy source, and growing commitments by various governments to combat climate change.

In the second half of 2009, demand for solar power and solar power products was significantly affected by the global financial crisis. In early 2010, as the effect of the global financial crisis started to subside, industry demand for solar power and solar power products started to revive. Access to financing continued to improve from 2010 to the first half of 2011, driven by increasing awareness of renewable energy, stronger balance sheets for financing providers and sustainable government incentives to develop solar as an alternative energy solution. However, in 2011, a decrease in payment to solar power producers, in the form of FIT and other reimbursements, and a reduction in available financing caused a decrease in the demand for solar power products, including solar modules, in the European markets. Payments to solar power producers decreased as governments in Europe, under pressure to reduce public debt levels, reduced subsidies such as FIT. Furthermore, many downstream purchasers of solar power products were unable to secure sufficient financing for the solar power projects due to the global credit crunch. Demand for solar modules in Europe fell significantly in 2013. As a result, many solar power producers that purchase solar power products from manufacturers like us were unable or unwilling to expand their operations. Our business and revenue increased in Europe in 2014, partly due to the significant increase in demand for solar modules in the U.K. Compared with 2014, our revenue increased in North America in 2015 mainly attributable to the significant increase in demand for solar modules in the U.S. China had become the largest solar market in 2016, whereas the demand in India continued to grow rapidly, second to only China and the United States. A strong presence in these markets led to an increase in our revenue despite the decreasing module price as a result of the China FIT cut as well as the uncertainties of the China-United States relations, and the existing and potential changes to United States and China trade and tariffs policies. Demand for solar power products is also affected by macroeconomic factors, such as energy supply, demand and prices, as well as regulations and policies governing renewable energies and related industries. For example, in June 2016, the FIT in China for utility-scale projects was significantly cut down. As a result, subsequent to a strong demand in the first half of 2016, the domestic market was almost frozen and the competition in the global market also intensified in the second half of 2016. In 2017, China remained the largest solar market and the U.S. market showed strong demand for solar modules, which was second to China, while the emerging markets grew rapidly, especially Mexico and Brazil. In 2018, demand from overseas markets continued to grow and accounted for an increasing proportion of our shipments despite of the softened domestic demand following the policy change by the Chinese government in May 2018. Subsequent to this May 2018 policy, demand in the domestic market of China experienced an immediate sharp drop, but now it is stable. The NEA has laid out their plans for a bidding system and has started to grant subsidy approvals for utility-scale projects. Most importantly, subsidies are prepaid by the State Grid and as a result there should be no more payment delays for new projects. The May 2018 policy sets a clear direction for the country's solar plans and helps to greatly improve sentiment for the solar sector as the country tries to smoothly transit towards grid parity and encourages a more market-driven environment rather than a policy-driven one. The total subsidy scale for 2020 was RMB1.5 billion, which was decreased from RMB3.0 billion for 2019. The solar industry continues to make tremendous technological advancements that enhance quality and efficiency while lowering the solar generation costs. On a global scale, it remains enormous room for development of solar in many regions.

Since 2020, various de-carbonization policies from major economies such as the United States, Europe and China has underpinned strong future solar demand outlook. In the United States, solar demand is expected to be more than double over the next five years under the Biden administration, with major commitments to climate change including plans for the United States to rejoin the Paris Agreement, extension of 30% solar ITC for five years, and to achieve net zero emissions by 2050. The European Union has officially announced plans to increase the greenhouse gases reduction target from 40% to at least 60% below 1990 levels by 2030. China outlined strategic plans to hit peak emissions before 2030 and reach carbon neutrality by 2060, and we are expecting the 14th Five-Year Energy Plan to focus on non-fossil energy sources with higher proportions of renewable energy, construction plans for large-scale energy storage and grid transformation. Although the periodic increase in the price of PV products has caused some downward pressure on the project's internal rate of return, the year-end additional installation significantly increased to 48.2GW, as announced by NEA. Since 2021, the cost of PV systems has increased significantly due to the higher price of upstream raw materials, and increased bulk commodities as well as freight costs, which temporarily affected the downstream demand. However, due to the transition to renewable energy in most regions of the world, the increase in electricity prices, the availability of financing support and other favorable policies for PV projects, the resilience of solar demand gradually increased and the overall demand for PV has achieved steady year-over-year growth. Furthermore, market demand became more diversified in 2021 compared with previous years. For example, distributed generation business experienced rapid development in 2021 with more flexible business models and lower sensitivity to prices; and the demand to large size high-efficiency products increased significantly as a result of its lower cost. In China, the year-end additional installation has reached nearly 55GW in which distributed generation business contributed to more than half of total additional installation. Driven by accelerating energy transition in many countries and across several industries, as well as the energy supply crisis caused by the Russia-Ukraine conflict, demand for solar products has exploded globally in 2022. Newly-added installation in China increased 59% year over year to 87.4GW in 2022, as announced by the NEA. According to Infolink, China exported 154.8 GW of modules 2022, with a 74% year-over-year increase. Furthermore, we have seen wider acceptance by different customers in different markets to high-efficient N-type modules which deliver better power performance and have lower levelized cost of electricity. As the economics of solar energy become more and more prominent, we expect that solar power will play a vital role in accelerating the transformation of energy generation and the demand for PV will steadily grow globally.

We believe the steady reduction in the manufacturing cost of solar power products will stimulate demand for solar power and solar power products in the long term. In particular, decreases in the price of silicon feedstock, improvements in manufacturing techniques for solar power products and economies of scale have continually reduced the unit production costs of solar power products in recent years, which in turn have increased the competitiveness of solar power on an unsubsidized basis relative to conventional power and other renewable energy sources. We expect significant market opportunities to be created as demand continues to grow and the price of solar power approaches that of conventional energy in a number of markets. In the long term, we believe that solar power will continue to have significant growth potential and that demand for our products and services will continue to grow.

To proactively adapt to changes in the market, we implemented a number of strategic measures. Prior to the May 2018 policy announcement, we had already started reducing costs and improving efficiencies across our business. We are also shifting resources towards our high-efficiency mono-product in line to meet growing market demand. We began producing mono-wafers in 2016. Based on our continuous leading R&D capabilities and mass production experience started from 2019, we are expanding N-type cell production capacity. We made further progress in efficiency improvement and cost reduction for N-type products due to the continuous efforts of our R&D team, leveraging our accumulated industry knowledge and mass production experience. By the end of 2022, we had 35GW of N-type cell production capacity came on stream and the mass-produced efficiency for TOPCon cells reached approximately 25.1%. We achieved shipment of approximately 10.7GW for N-type modules in 2022. As our N-type modules continue to be well recognized in the market, we expect our market penetration increases.

Industry Trend for Credit Sales

Most of our sales are made on credit terms and we allow our customers to make payments after a certain period of time subsequent to the delivery of our products. We typically offer customers credit terms of 60 to 120 days. Selling products on credit terms has increased, and may continue to increase our working capital requirements and have a negative impact on our short-term liquidity. See “Item 3. Key Information—D. Risk Factors—Selling our products on credit terms may increase our working capital requirements and expose us to the credit risk of our customers.”

Under our continuous attention to the quality of collection of accounts receivables, our accounts receivable turnover has remained relatively stable since 2020. Our accounts receivable turnover were 68 days, 69 days and 74 days in 2020, 2021 and 2022, respectively. Allowances for credit losses receivable were RMB293.4 million, RMB323.1 million, and RMB584.1 million (US\$84.7 million) as of December 31, 2020, 2021 and 2022, respectively. Provision of allowance for credit losses receivable were RMB26.6 million, RMB91.9 million and RMB394.3 million (US\$57.2 million) in 2020, 2021 and 2022, respectively, and reversal of allowances for credit losses receivable were RMB20.5 million, RMB24.2 million and RMB114.8 million (US\$16.6 million) in 2020, 2021 and 2022, respectively. We made bad debt provisions for certain long-term receivables in prior years, which was in line with the adverse economic environment in solar industry. With the recovery of solar industry since 2013, we made efforts to improve the cash collection for the aged accounts receivable. We reversed allowance for credit losses receivable upon subsequent collections. We will continue to make assessment and properly provide the provision on credit losses.

Pricing of Solar Power Products

The price of our solar modules is influenced by a variety of factors, including polysilicon prices, supply and demand conditions, the competitive landscape and processing technologies.

The implementation of the capacity expansion plans by major solar power product manufacturers in 2009 and 2010 resulted in significant increases in the supply of solar power products in the global market, which contributed to a general decrease in the average selling prices of solar power products in recent years, including solar modules. The slowdown in the growth of demand for solar power products in recent years has further reduced the market prices of solar power products. In addition, decreases in the price of silicon feedstock, improvements in manufacturing techniques for solar power products and economies of scale have continually reduced the unit production costs of solar power products in recent years, which in turn have increased the competitiveness of solar power on an unsubsidized basis relative to conventional power and other renewable energy.

In spite of the price fluctuations caused by the international trade barriers such as EU anti-dumping tariff and Section 201 Investigation, as well as the inconsistent government policies towards PV industry such as the “May 31 policy”—in May 2018, the NDRC, Ministry of Finance, and NEA jointly announced a new policy to lower the solar feed-in-tariff, halt subsidized utility-scale development, and implement a quota for distributed projects which are eligible for subsidies in 2018. We expect the market prices of solar power products to continue to decline in the long term due to continued advancements in processing technologies. See “Item 3. Key Information—D. Risk Factors—Risks Relating to Our Business and Industry—Our future growth and profitability depend on the demand for and the prices of solar power products and the development of photovoltaic technologies.”

Government Subsidies, Policies and Economic Incentives

With a number of markets such as India, Australia, United Arab Emirates, and Mexico rapidly approaching solar grid parity or having already achieved it, we expect dependence on government incentives to continue in the near future until solar power becomes universally affordable when compared to the cost of conventional fossil fuels. Various governments have used policy initiatives to encourage or accelerate the development and adoption of solar power and other renewable energy sources.

Countries in Europe, notably Italy, Germany, France, Belgium and Spain, certain countries in Asia, including China, Japan and India, as well as Australia and the United States have adopted renewable energy policies. Examples of government sponsored financial incentives to promote solar power include capital cost rebates, FIT, tax credits, net metering and other incentives to end users, distributors, project developers, system integrators and manufacturers of solar power products.

Governments may reduce or eliminate existing incentive programs for political, financial or other reasons, which will be difficult for us to predict. Reductions in FIT programs may result in a significant fall in the price of and demand for solar power products. For example, subsidies have been reduced or eliminated in some countries such as China, Germany, Italy, Spain and Canada. In May 2018, the NDRC, the Ministry of Finance and the NEA issued a joint notice temporarily halting subsidies for utility-scale solar projects, slashing the quota on distributed solar projects which are eligible for subsidies in 2018 and greatly reducing FIT. The German market represents a major portion of the European solar market for ground-mounted systems and a stable residential and commercial rooftop market. The first subsidy-free grid parity projects of the industry were connected to the grid in 2020, which act as a driver for the additional market growth. Starting from 2011, major export markets for solar power and solar power products such as Japan, Germany, Italy, Spain and the United Kingdom continued to reduce their FIT as well as other incentive measures. For example, from 2012 to 2022, the Japanese government cut down its FIT from JPY 40 to JPY 17 for projects below 10 KW, from JPY 42 to JPY 11 for projects of 10 KW to 50 KW, and to JPY 10 for projects above 50 KW. In 2023, the Japanese government further cut down its FIT to JPY16 for projects below 10 KW and to JPY10 for certain projects of 10 KW or above.

Our revenue and operating results may be adversely impacted by unfavorable policy revisions if FIT in the United States, our largest export market, and certain other major markets for solar power and solar power products are further reduced. Electric utility companies or generators of electricity from fossil fuels or other renewable energy sources could also lobby for a change in the relevant legislation in their markets to protect their revenue streams. Government economic incentives could be reduced or eliminated altogether. A significant reduction in the scope or discontinuation of government incentive programs, especially those in our target markets, could cause demand for our products and solar power to decline and have a material adverse effect on our business, financial condition, results of operations and prospects. We believe that the growth of the solar power industry in the short term will continue to depend largely on the availability and effectiveness of government incentives for solar power products and the competitiveness of solar power in relation to conventional and other renewable energy resources in terms of cost.

Our business may also be affected by the trade policies of government or international trade bodies, particularly in our major export markets, such as the U.S. and Europe. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We are subject to anti-dumping and countervailing duties imposed by the U.S. government. We are also subject to safeguard investigation and other foreign trade investigations initiated by the U.S. government and anti-dumping investigation and safeguard investigations initiated by governments in our other markets.” We expect our exports to both the U.S. market and European market to be adversely affected by these duties or measures. Our direct sales to the North American market and European market accounted for 4.5% and 23.6% of our total revenue in 2022, respectively.

Changing Product and Service Mix

Our product mix has evolved rapidly since our inception, as we expanded our production capabilities to manufacture and sell downstream solar power products and to capture the efficiencies of our vertically-integrated production process. Before 2009, our sales consisted of silicon wafers, silicon ingots and recovered silicon materials. We commenced production and sale of solar cells and solar modules in the second half of 2009. In 2010, we successfully achieved fully vertically-integrated solar module production and made sales of solar modules our largest source of revenue. As of December 31, 2022, we had an integrated annual capacity of 65 GW for mono wafers, 55 GW for solar cells and 70 GW for solar modules. By creating a fully vertically-integrated production chain, we have succeeded in continually driving down average solar modules manufacturing cost per watt.

The following table presents our integrated annual capacity of silicon wafers and solar cells as of December 31, 2020, 2021 and 2022.

	Annual Production Capacity as of December 31,		
	2020	2021 (GW)	2022
Monocrystalline silicon wafers	22.0	32.5	65.0
P-type mono PERC solar cells	10.2	23.1	20.0
Normal monocrystalline solar cells	—	—	—
Multicrystalline solar cells	—	—	—
N-type solar cells	0.8	0.9	35.0

We expect annual mono wafer, solar cell and solar module production capacity to reach 75 GW, 75 GW and 90 GW, respectively, by the end of 2023.

Manufacturing Technologies

Solar modules are our principal products. As solar modules are priced based on the number of watts of electricity they generate, the advancement of manufacturing technologies in increasing the conversion efficiency of solar cells and production efficiency will enable us to improve our gross profit margin. We continually make efforts to develop advanced manufacturing technologies to increase the conversion efficiency of our solar cells while striving to reduce our average production cost. In addition to our own research and development team, we collaborate with third-party research institutes to improve our manufacturing technologies and the conversion efficiency of our solar cells. As a result of these efforts, in 2020, 2021 and 2022, the average conversion efficiency rate of our solar cells using our P-type monocrystalline silicon wafers was 22.9%, 23.3% and 23.6%, respectively, and, in 2021 and 2022, the conversion efficiency rate of our solar cells using our N-type monocrystalline silicon wafers was 25.4% and 26.4%, respectively. In 2022, our N-type Tiger Neo series products were officially released with lower degradation and enhanced reliability. The optimized energy generation of our N-type Tiger Neo products is over 3% higher than P-type products and the efficiency of mass-produced cells can reach 25.1%, and the module efficiency of these products is 22.45%.

Selected Statement of Operations Items

Revenues

Currently, we derive our revenues primarily from the sales of solar modules and, to a lesser extent, from the sales of silicon wafers and solar cells. We also derive a small portion of revenues from sales of other solar materials, generated electricity and processing service fees, as well as sales of two solar power plants in Mexico in 2020 and one solar power plant in Argentina in 2022. Our sales of other materials primarily consist of sales of raw materials and auxiliary materials. Our processing services primarily represent silicon material processing services. We expect the sales of solar modules to continue to be our primary source of revenues. The following table presents our revenues, net of VAT, by products and services, as sales amounts and as percentages of total revenues, for the periods indicated:

	2020		2021		2022		
	(RMB in thousands)	(%)	(RMB in thousands)	(%)	(RMB in thousands)	(US\$ in thousands)	(%)
Products							
Silicon wafers	452,141.4	1.3	1,152,055.5	2.8	466,553.0	67,643.8	0.6
Solar cells	344,509.5	1.0	606,581.8	1.5	1,024,113.7	148,482.5	1.2
Solar modules	32,556,394.4	92.7	37,737,382.6	92.4	80,224,353.8	11,631,437.9	96.5
Sales of other solar materials	478,184.0	1.3	1,043,759.6	2.6	1,380,875.0	200,208.1	1.7
Sales of solar projects	1,197,712.6	3.4	—	—	31,400.1	4,552.6	0.0
Processing service fees			186,045.2	0.5	—	—	—
Revenue from generated electricity	100,516.6	0.3	100,696.4	0.2	—	—	—
Total	35,129,458.6	100.0	40,826,521.1	100.0	83,127,295.6	12,052,324.9	100.0

Our revenues are affected by sales volumes, product mix and average selling prices. The following table sets forth, by products, the sales volumes for the periods indicated:

	2020	2021	2022
Sales volume:			
Silicon wafers (MW)	1,583.7	2,153.4	1,062.6
Solar cells (MW)	670.6	856.4	997.0
Solar modules (MW)	18,770.6	22,232.7	44,333.8

The following table presents the sales volumes by solar module types for the periods indicated:

	2020	2021	2022
Sales volume:			
Solar modules – Poly (MW)	385.0	40.8	1.3
Solar modules – Mono (MW)	115.2	7.3	13.0
Solar modules – N Type	—	—	10,684.0
Solar modules – Mono PERC (MW)	18,270.3	22,184.6	33,635.5
Total	18,770.6	22,232.7	44,333.8

Pursuant to our order book of 2023, we are well positioned with 60% of expected solar module shipments for full year 2023 secured as of March 31, 2023, compared to 50% of total solar module shipments for full year 2022 secured as of March 31, 2022.

Cost of Revenues

Cost of revenues primarily consists of: (i) raw materials, which primarily consist of both virgin polysilicon and recoverable silicon materials; (ii) consumables and components, which include crucibles for the production of monocrystalline and multicrystalline silicon ingots, steel alloy saw wires, slurry, chemicals for raw material cleaning and silicon wafer cleaning, and gases such as argon and silane, as well as silicon wafers and solar cells we procure from third parties for the production of solar modules; (iii) direct labor costs, which include salaries and benefits for employees directly involved in manufacturing activities; (iv) overhead costs, which consist of equipment maintenance costs, cost of utilities including electricity and water; (v) depreciation of property, plant, equipment and project assets; (vi) processing fees paid to third party factories relating to the outsourced production of solar cells and solar modules; and (vii) subcontractor cost and those indirect costs related to contract performance, such as indirect labor, supplies and tools. In 2020, 2021 and 2022, our cost of revenues was RMB28.96 billion, RMB34.17 billion and RMB70.85 billion (US\$10.27 billion), respectively.

Operating Expenses

Our operating expenses include selling and marketing expenses, general and administrative expenses, research and development expenses and impairment of long-lived assets.

Selling and Marketing Expenses. Our selling and marketing expenses consist primarily of shipping and handling expenses, warranty cost, exhibition costs, salaries, bonuses and other benefits for our sales personnel as well as sales-related travel and entertainment expenses. In 2020, 2021 and 2022, our selling and marketing expenses were RMB2.47 billion, RMB2.86 billion and RMB7.24 billion (US\$1.05 billion), respectively.

General and Administrative Expenses. General and administrative expenses consist primarily of salaries and benefits for our administrative, finance and human resources personnel, amortization of land use rights, office expenses, entertainment expenses, business travel expenses, professional service fees, disposal and impairment of long-lived assets as well as provision for bad debts. In 2020, 2021 and 2022, our general and administrative expenses were RMB1.41 billion, RMB1.96 billion and RMB3.51 billion (US\$508.7 million), respectively.

Research and Development Expenses. Research and development expenses consist primarily of silicon materials used in our research and development activities and salaries, bonuses and other benefits for research and development personnel, and depreciation of equipment for research and development. In 2020, 2021 and 2022, our research and development expenses were RMB389.2 million, RMB461.6 million and RMB724.8 million (US\$105.1 million), respectively.

Impairment of long-lived assets. Impairment of long-lived assets consist primarily as a result of the obsolescence of certain equipment for upgrade in our wafer and cell production line and impairment for one of our overseas solar power projects. In 2020, 2021 and 2022, we recognized impairment of long-lived assets of RMB114.2 million, RMB273.7 million and RMB373.7 million (US\$54.2 million), respectively.

Interest Expenses, Net

Our interest expenses consist primarily of interest expenses with respect to the issuance of convertible senior notes, long-term bonds, short-term and long-term borrowings from banks and other lenders. In 2020, 2021 and 2022, we incurred interest expenses of RMB705.2 million, RMB878.9 million and RMB1.15 billion (US\$166.8 million), net of interest income of RMB216.6 million, RMB214.3 million and RMB588.7 million (US\$85.4 million), respectively. Interest expense capitalized during the construction period of property, plant and equipment, and project assets in 2020, 2021 and 2022 were RMB29.3 million, RMB40.6 million and RMB70.7 million (US\$10.3 million), respectively.

Government Grants

From time to time we apply for and receive government incentives in the form of subsidies from local and provincial governments. Government grants which are not subject to any condition and are not related to assets are recognized as subsidy income when received. The governments grant subsidies to encourage and support large-scale enterprises and high technology enterprises based in the relevant locations to upgrade their technology and develop the overseas market. We record such subsidies as subsidy income as there are no further obligations on us. The amount of government subsidies we receive may vary from period to period and there is no assurance that we will continue to receive government subsidy in the future. In 2020, 2021 and 2022, our government subsidy income, which was not assets-related, was RMB192.0 million, RMB465.7 million and RMB1.09 billion (US\$158.0 million), respectively.

Government grants related to assets are initially recorded as other payables and accruals. These grants will be deducted from the carrying amount when the assets are ready for use and approved by related government. We received government grants related to assets of RMB20.0 million, RMB290.7 million and RMB1.47 billion (US\$212.9 million) in 2020, 2021 and 2022, respectively.

Exchange (Loss)/Gain, Net

In 2020, we incurred foreign exchange loss of RMB336.5 million (US\$51.6 million), primarily due to deprecation of the U.S. dollars against the Renminbi. In 2021, we incurred foreign exchange loss of RMB355.5 million (US\$55.8 million), primarily due to depreciation of the U.S. dollars against the Renminbi. In 2022, we incurred foreign exchange gain of RMB1.03 billion (US\$148.7 million), primarily due to appreciation of the U.S. dollars against the Renminbi.

Other Income/(Expenses), Net

Other income/(expenses) consists primarily of guarantee income from JinkoPower and expenses related to charitable donations in 2020, 2021 and 2022. We had net other income of RMB2.3 million, RMB1.9 million and RMB1.6 million (US\$227.8 thousand) in 2020, 2021 and 2022, respectively.

Change in Fair Value of Foreign Exchange Forward Contracts

We recognized a gain of RMB191.2 million in 2020, and a gain of RMB288.9 million in 2021. The gain from foreign exchange forward contracts was primary due to fluctuations in exchange rate of the Renminbi against the U.S. dollars. We recognized a loss of RMB164.4 million (US\$23.8 million) in 2022, primarily due to fluctuations in exchange rate of the Renminbi against the U.S. dollars.

Change in Fair Value of Foreign Exchange options

In 2020, we recognized a loss arising from change in fair value of foreign exchange options of RMB3.6 million. In 2021, we recognized a gain arising from change in fair value of foreign exchange options of RMB18.8 million. The gain from foreign exchange options was primarily due to the depreciation of the U.S. dollar against the Renminbi. In 2022, we recognized a loss arising from change in fair value of foreign exchange options of RMB4.2 million (US\$603.5 thousand), respectively, primarily due to the appreciation of the U.S. dollar against the Renminbi.

Change in Fair Value of Convertible Senior Notes and Call Option

We recognized a loss arising from change in fair value of convertible senior notes and call option of RMB725.8 million in 2020. In 2021, we recognized a gain arising from change in fair value of convertible senior notes and call option of RMB191.6 million. In 2022, we recognized a loss arising from change in fair value of convertible senior notes and call option of RMB12.1 million (US\$1.8 million). We issued convertible senior notes and call option in 2019, the loss arising from change in fair value of which was primarily due to a slight decrease in the price of the ADSs in 2022.

Change in Fair Value of Interest Rate Swap

We entered into Interest Rate Swap agreements with several banks for the purpose of reducing interest rate risk exposure. The rate swap is a derivative which needs to be fairly valued at each reporting period end. We recorded a loss in fair value of the Interest Rate Swap agreements of RMB78.9 million in 2020, primarily due to we applied hedge accounting for certain of Interest Rate Swap arrangements, and we recorded related change in fair value in other comprehensive income in 2021. We did not record change in fair value of the derivative hedging instruments in 2022 as we sold our solar power plant in Argentina in June 2022.

Change in Fair Value of Long-term Investment

We recognized a gain from change in fair value of RMB101.9 million (US\$14.8 million) in the fourth quarter of 2022. In June 2022, we acquired a 2.98% equity interest in a PV material supplier, which is accounted for using the fair value option and recorded as long-term investment.

Share-based Compensation

We adopted our 2009 Long Term Incentive Plan in July 2009, as amended, and as of the date of this annual report, share options with respect to 9,194,356 ordinary shares have been granted to our directors, officers and employees pursuant to our 2009 Long Term Incentive Plan. We adopted our 2014 Equity Incentive Plan in August 2014 and as of the date of this annual report, restricted shares with respect to 12,796,745 ordinary shares have been granted to our directors, officers and employees pursuant to our 2014 Equity Incentive Plan. We adopted our 2021 Equity Incentive Plan in March 2021 and as of the date of this annual report, 2,600,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2021 Equity Incentive Plan. We adopted our 2022 Equity Incentive Plan in February 2022 and as of the date of this annual report, 12,000,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2022 Equity Incentive Plan. We adopted our 2023 Equity Incentive Plan in January 2023 and as of the date of this annual report, 20,800,000 restricted shares have been granted to our directors, officers and employees pursuant to our 2023 Equity Incentive Plan. In October 2022, Jiangxi Jinko adopted its 2022 Equity Incentive Plan (the “Jiangxi Jinko 2022 Plan”), under which Jiangxi Jinko will grant share options to its employees. The total number of Jiangxi Jinko’s ordinary shares which may be issued under Jiangxi Jinko 2022 Plan is 40,187,375. All share-based payments to employees and directors, including grants of employee stock options, are measured based on the fair value of the stock options at the grant date. We have categorized these share-based compensation expenses in our (i) cost of revenues; (ii) selling and marketing expenses; (iii) general and administrative expenses; and (iv) research and development expenses, depending on the job functions of the grantees of our restricted shares and share options. The following table sets forth the allocation of our share-based compensation expenses both in terms of the amounts and as a percentage of total share-based compensation expenses in 2020, 2021 and 2022:

	2020		2021		2022		
	(RMB in thousands)	(%)	(RMB in thousands)	(%)	(RMB in thousands)	(US\$ in thousands)	(%)
Cost of revenues	328.6	35.6	131.0	1.3	17,676.3	2,562.8	1.8
Selling and marketing expense	461.6	50.0	131.0	1.3	7,101.5	1,029.6	0.7
General and administrative expense	145.8	15.8	9,622.2	97.4	974,563.0	141,298.4	97.4
Research and development expense	(13.1)*	(1.4)	—	—	1,527.8	221.5	0.1
Total share-based compensation expenses	922.9	100.0	9,884.2	100.0	1,000,868.6	145,112.3	100.0

* Research and development expense in 2020 were negative as certain employees departed from our Company and their respective share-based compensation awards were forfeited.

The increase in our share-based compensation expenses in 2021 was primarily due to the grants of restricted shares under our 2021 Equity Incentive Plan. The increase in our share-based compensation expenses in 2022 was primarily due to the grant of certain restricted shares under our 2022 Equity Incentive Plan.

Taxation

Under the CIT Law, which became effective on January 1, 2008 and was amended on February 24, 2017 and December 29, 2018, domestic and foreign invested companies in China are generally subject to corporate income tax at the rate of 25%. Jiangxi Jinko, Zhejiang Jinko, Haining Jinko and Yiwu Jinko were designated by the relevant local authorities as “High and New Technology Enterprises” under the CIT Law. Jiangxi Jinko, Yuhuan Jinko and Haining Jinko were subject to a preferential tax rate of 15% for 2019, 2020 and 2021. Yiwu Jinko has obtained this qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Zhejiang Jinko has successfully renewed this qualification to enjoy the preferential tax rate of 15% for 2021, 2022 and 2023. Jiangxi Jinko and Haining Jinko have successfully renewed this qualification in 2022. Shangrao Jinko and Zhejiang New Material obtained HNTE qualification in 2022 to enjoy the preferential tax rate of 15% for 2022, 2023 and 2024. Xinjiang Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% for 2020, 2021 and 2022. According to the “Announcement on Continuation of CIT Policies for Large-scale Development in the Western Region” published on April 23, 2020, enterprises established in the western region in encouraged industries can continue to enjoy the preferential tax rate of 15% till December 31, 2030. Sichuan Jinko, Leshan Jinko, Chuxiong Jinko and Qinghai Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% from 2022 till 2030.

Since Jiangxi Jinko’s initial public offering in 2022, the Group provided withholding income tax for the earnings of Jiangxi Jinko, which are expected to be distributed in the future based on its distribution plan. As of December 31, 2022, we recognized deferred tax liabilities of RMB52.2 million (US\$7.6 million), which was related to the cumulative undistributed earnings of Jiangxi Jinko.

In addition, under the CIT Law, an enterprise established outside China with “de facto management bodies” within China may be considered a PRC tax resident enterprise and will normally be subject to the PRC corporate income tax at the rate of 25% on its global income. Under the Implementation Rules of the CIT Law, the term “de facto management bodies” refers to management bodies which have, in substance, overall management and control over such aspects as the production and business, personnel, accounts, and properties of the enterprise. On April 22, 2009, the STA promulgated a circular that sets out procedures and specific criteria for determining whether “de facto management bodies” for overseas incorporated, domestically controlled enterprises are located in China. However, as this circular only applies to enterprises incorporated under laws of foreign jurisdictions 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 tax residents such as our company, JinkoSolar Investment and Wide Wealth Group Holdings Limited. As such, it is still unclear if the PRC tax authorities would subsequently determine that, notwithstanding our status as the Cayman Islands holding company of our operating business in China, we should be classified as a PRC tax resident enterprise, whereby our global income will be subject to PRC income tax at a tax rate of 25%.

Under the CIT Law and the Implementation Rules of the CIT Law, a withholding tax at the rate of 10% will normally be applicable to dividends payable to investors that are “non-resident enterprises,” to the extent such dividends have their source within China. Under the tax arrangement between Hong Kong and China, a reduced tax rate of 5% for dividends paid to a Hong Kong company will be applied provided that the beneficial owner of the dividends is a Hong Kong resident enterprise which directly owns at least a 25% equity interest in the PRC subsidiary. Both JinkoSolar Investment and Wide Wealth Group Holdings Limited are our Hong Kong subsidiaries. 100% of the equity interests in Jiangxi Jinko, 25% of the equity interests in Zhejiang Jinko and 100% of the equity interests in JinkoSolar (Shanghai) Management Co., Ltd. are owned directly by JinkoSolar Investment. If neither JinkoSolar Investment nor Wide Wealth Group Holdings Limited is deemed a PRC tax resident enterprise and they have obtained the tax resident certificate of Hong Kong, are treated as the beneficial owner of the dividends paid by Jiangxi Jinko, Zhejiang Jinko and JinkoSolar (Shanghai) Management Co., Ltd. to JinkoSolar Investment, as the case may be, and own such equity for at least 12 consecutive months before receiving such dividends, such dividends could be subject to a 5% withholding tax pursuant to the tax arrangement between Hong Kong and China as discussed above. According to the Notice of the State Taxation Administration on the Issues concerning the Application of the Dividend Clauses of Tax Agreements issued on February 20, 2009, a non-resident enterprise that intends to enjoy the preferential treatment under the relevant tax agreement is required to own the requisite amount of equity of a PRC enterprise specified by the relevant tax agreement for at least 12 consecutive months before obtaining the dividends. According to the Administrative Measures for Non-Residents Enjoying Tax Treaty Benefits (Trial Implementation) issued by the STA on August 24, 2009 which became effective on October 1, 2009, the application of the preferential withholding tax rate under a bilateral tax treaty is subject to the approval of competent PRC tax authorities. According to the Circular of the State Taxation Administration on How to Understand and Identify a “Beneficial Owner” under Tax Treaties which became effective on October 27, 2009, and the Announcement of the State Taxation Administration on the Determination of “Beneficial Owners” in the Tax Treaties, effective on June 29, 2012, the PRC tax authorities must evaluate whether an applicant for treaty benefits in respect of dividends, interest and royalties qualifies as a “beneficial owner” on a case-by-case basis and following the “substance over form” principle. The circular sets forth the criteria to identify a “beneficial owner” and provides that an applicant that does not carry out substantial business activities, or is an agent or conduit company may not be deemed a “beneficial owner” of the PRC subsidiary and therefore may not enjoy tax treaty benefits. According to Announcement of the State Taxation Administration on Issues Concerning the Recognition of Beneficial Owners in Entrusted Investments, effective on June 1, 2014, non-residents may be recognized as “beneficial owners” and enjoy the treaty benefits for the income derived from the PRC from certain investments. According to the Announcement of the State Taxation Administration on Issues concerning the “Beneficial Owner” in Tax Treaties, which became effective in April 2018, a resident enterprise is determined as a “beneficial owner” that can apply for a low tax rate under tax treaties based on an overall assessment of several factors. Furthermore, the Administrative Measures for Non-Resident Enterprises to Enjoy Treatments under Tax Treaties, which became effective in November 2015 and was amended in June 2018, require non-resident enterprises to determine whether they are qualified to enjoy the preferential tax treatment under the tax treaties and file relevant report and materials with the tax authorities.

Pursuant to the Provisional Regulation of the PRC on Value Added Tax issued by the State Council, effective on January 1, 1994 and lately amended and effective on February 6, 2016, or the Provisional Regulation, and its Implementing Rules, all entities and individuals that are engaged in the sale of goods, the provision of processing, repairs and installation services, the sale of services, intangible assets and real property in China and the importation of goods in China are required to pay VAT. According to the Provisional Regulation, gross proceeds from sales and importation of goods and provision of services are generally subject to a VAT rate of 17% with exceptions for certain categories of goods that are taxed at a VAT rate of 13%. The Provisional Regulation was further amended on November 19, 2017, in which gross proceeds from sales and importation of goods and provision of services and tangible personal property leasing services are generally subject to a VAT rate of 17%, with exceptions for certain categories of goods that are taxed at a VAT rate of 11%. On April 4, 2018, the Circular of the MOF and the STA on Adjusting Value-added Tax Rates was promulgated, in which gross proceeds from sales and importation of goods and provision of services and tangible personal property leasing services are generally subject to a VAT rate of 16%, with exceptions for certain categories of goods that are taxed at a VAT rate of 10%. On March 20, 2019, the Announcement on Relevant Policies for Deepening Value-Added Tax Reform was jointly promulgated by the Ministry of Finance, the STA and the General Administration of Customs, which provides that, effective April 1, 2019, the VAT rate of gross proceeds from sales and importation of goods and provision of services was adjusted from 16% to 13%, with the VAT rate of certain categories of goods adjusted from 10% to 9%. In addition, under the Provisional Regulation, the input VAT for the purchase of fixed assets is deductible from the output VAT, except for goods or services that are used in non-VAT taxable items, VAT exempted items and welfare activities, or for personal consumption. According to former VAT levy rules, equipment imported for qualified projects is entitled to import VAT exemption and the domestic equipment purchased for qualified projects is entitled to VAT refund. However, such import VAT exemption and VAT refund were both eliminated as of January 1, 2009. On the other hand, if a foreign-invested enterprise obtained the confirmation letter of Domestic or Foreign Invested Project Encouraged by the State before November 10, 2008 and declared importation of equipment for qualified projects before June 30, 2009, it may still be qualified for the exemption of import VAT. The importation of equipment declared after July 1, 2009 will be subject to the import VAT.

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Effective on January 1, 2012, the MOF and the STA launched the VAT Pilot Program in Shanghai. On April 10, 2013, the State Council announced the nationwide implementation of the Pilot Program, which took effect from August 1, 2013. VAT payable on taxable services provided by a general VAT taxpayer for a taxable period is the net balance of the output VAT for the period after crediting the input VAT for the period. The amount of VAT payable does not result directly from output VAT generated from taxable services provided. In addition, the MOF and the STA released a notice, which further expanded the scope of taxable services subject to VAT on December 12, 2013, effective from January 1, 2014, replacing the Business Tax to Value Added Tax Circular 37 released by the MOF and the STA on May 24, 2013. On March 23, 2016, the MOF and the STA issued a notice, pursuant to which, effective from May 1, 2016, pilot program of replacing the business tax with VAT will be implemented nationwide, and the industry of construction, real estate, finance, life services will fall within the scope of taxable services subject to VAT instead of the business tax.

Under the current law of the Cayman Islands, we are not subject to any income or capital gains tax. In addition, dividend payments made by us are not subject to any withholding tax in the Cayman Islands.

Subsequent Events

We adopted our 2023 Equity Incentive Plan on January 5, 2023 which provided for the issuance of option, restricted share or other share-based award of 20,800,000 ordinary shares.

On April 23, 2023, Jiangxi Jinko completed the registration process with the CSRC for the issuance of convertible bonds in the principal amount of up to RMB10.00 billion (US\$1.45 billion). Such convertible bonds, which will be listed on the STAR Market, have a term of six years and are convertible into Jiangxi Jinko's ordinary shares. We have the special preemptive rights to subscribe for a portion of the convertible bonds.

Results of Operations

The following table sets forth a summary, for the periods indicated, of our consolidated results of operations and each item expressed as a percentage of our total net revenues. Our historical results presented below are not necessarily indicative of the results that may be expected for any future period.

	2020		2021		2022		
	(RMB)	(%)	(RMB)	(%)	(RMB)	US\$	(%)
	(in thousands, except percentage)						
Consolidated Statement of Operations							
Revenues	35,129,458.6	100.0	40,826,521.1	100.0	83,127,295.6	12,052,324.9	100.0
Sales of solar modules	32,556,394.4	92.7	37,737,382.6	92.4	80,224,353.8	11,631,437.9	96.5
Sales of silicon wafers	452,141.4	1.3	1,152,055.5	2.8	466,553.0	67,643.8	0.6
Sales of solar cells	344,509.5	1.0	606,581.8	1.5	1,024,113.7	148,482.5	1.2
Sales of solar projects	1,197,712.6	3.4	—	—	31,400.1	4,552.6	0.0
Processing service fees	—	—	186,045.2	0.5	—	—	—
Revenue from generated electricity	100,516.6	0.3	100,696.4	0.2	—	—	—
Sales of other solar materials	478,184.0	1.3	1,043,759.6	2.6	1,380,875.0	200,208.1	1.7
Cost of revenues	(28,957,798.1)	(82.4)	(34,168,686.1)	(83.7)	(70,848,983.0)	(10,272,137.0)	(85.2)
Gross profit	6,171,660.5	17.6	6,657,835.0	16.3	12,278,312.6	1,780,187.9	14.8
	(4,386,731.1)	(12.5)	(5,555,330.3)	(13.6)	(11,849,067.0)	(1,717,953.0)	(14.3)
Total operating expenses							
Income from operations	1,784,947.4	5.1	1,102,504.7	2.7	429,245.6	62,234.9	0.5
Interest expenses, net	(459,233.9)	(1.3)	(624,029.4)	(1.5)	(490,703.0)	(71,145.0)	(0.6)
Subsidy income	191,980.7	0.6	465,685.2	1.1	1,089,435.0	157,953.0	1.3
Exchange (loss)/gain	(336,522.9)	(1.0)	(355,498.8)	(0.9)	1,025,891.0	148,740.0	1.2
Other income, net	2,292.2	0.0	1,911.1	0.0	1,571.0	228.0	0.0
(Loss)/gain on disposal of subsidiaries	—	—	—	—	—	—	—
Change in fair value of foreign exchange forward contracts	191,185.8	0.6	288,880.3	0.7	(164,356.0)	(23,829.0)	(0.2)
Change in fair value of foreign exchange options	(3,607.8)	(0.0)	18,808.8	0.0	(4,163.0)	(604.0)	0.0
Change in fair value of interest rate swap	(78,878.1)	(0.2)	—	—	—	—	—
Change in fair value of convertible senior notes and call option	(725,791.5)	(2.1)	191,640.8	0.5	(12,083.0)	(1,752.0)	(0.0)
Change in fair value of Long-term Investment	—	—	—	—	101,871.0	14,770.0	0.1
Convertible senior notes issuance costs	—	—	—	—	—	—	—
Income tax expenses	(178,410.8)	(0.5)	(194,140.1)	(0.5)	(605,278.0)	(87,757.0)	(0.7)
Equity in income/(loss) of affiliated companies	(52,705.8)	(0.2)	59,808.9	0.1	193,708.0	28,085.0	0.2

Income from continuing operations, net of tax	335,255.3	1.0	955,571.5	2.3	1,565,138.6	226,923.9	1.9
Net income	335,255.3	1.0	955,571.5	2.3	1,565,138.6	226,923.9	1.9
Less: Net income/(loss) attributable to the non-controlling interests from continuing operations	(104,870.6)	(0.3)	(234,553.6)	(0.6)	944,633.0	136,959.0	1.1
Net income attributable to JinkoSolar Holding Co., Ltd.'s ordinary shareholders	<u>230,384.7</u>	<u>0.7</u>	<u>721,017.9</u>	<u>1.8</u>	<u>620,505.6</u>	<u>89,964.9</u>	<u>0.7</u>

Reportable Segments

Based on the criteria established by ASC 280 “Segment Reporting”, our chief operating decision maker has been identified as the Chairman of the Board of Directors as well as the CEO, who only review our consolidated results when making decisions about allocating resources and assessing performance.

Hence, we have only one operating segment which is vertically integrated solar power products manufacturing business from silicon ingots, wafers, cells to solar modules.

Before the disposition of downstream solar projects segment in the fourth quarter of 2016, it was also a reportable segment.

2022 compared with 2021

Revenues. Our revenues increased by 103.6% from RMB40.83 billion in 2021 to RMB83.13 billion (US\$12.05 billion) in 2022. The increase in total revenues was mainly attributable to an increase in the shipment of solar modules due to increasing demand in the global market.

Our revenue from sales of solar modules increased by 112.6% from RMB37.74 billion in 2021 to RMB80.22 billion (US\$11.63 billion) in 2022, primarily due to a significant increase in the shipment of solar modules. The sales volume of our solar modules increased by 99.4% from 22.2 GW in 2021 to 44.3 GW in 2022.

Our revenue from sales of silicon wafers decreased by 59.5% from RMB1.15 billion in 2021 to RMB466.6 million (US\$67.6 million) in 2022. The sales volume of our silicon wafers decreased by 50.7% from 2,153.4 MW in 2021 to 1,062.6 MW in 2022.

Our revenue from sales of solar cells increased by 68.8% from RMB606.6 million in 2021 to RMB1.02 billion (US\$148.5 million) in 2022. The sales volume of our solar cells increased by 16.4% from 856.4 MW in 2021 to 997.0 MW in 2022.

We generated revenues from sales of solar projects of RMB31.4 million (US\$4.6 million) in 2022.

We did not generate any revenues from processing service fees in 2022 as we did not provide silicon material processing services in this year.

We did not generate any revenues from electricity generation in 2022, attributable to the disposal of solar power plant in Argentina in 2022.

Our revenue from sales of other solar materials increased by 32.3% from RMB1.04 billion in 2021 to RMB1.38 billion (US\$200.2 million) in 2022.

Cost of Revenues. Our cost of revenues increased by 107.4% from RMB34.17 billion in 2021 to RMB70.85 billion (US\$10.27 billion) in 2022, primarily due to an increase in the shipment of solar modules.

Gross Profit. Our gross profit increased by 84.4% from RMB6.66 billion in 2021 to RMB12.28 billion (US\$1.78 billion) in 2022, mainly attributable to an increase in the shipment of solar modules in 2022.

Our gross margin decreased from 16.3% in 2021 to 14.8% in 2022, primarily due to an increase in the material cost of solar modules.

Operating Expenses. Our operating expenses increased by 113.3% from RMB5.56 billion in 2021 to RMB11.85 billion (US\$1.72 billion) in 2022, primarily due to (i) an increase in shipping cost, (ii) an increase in impairment loss and the disposal of property, plant and equipment and (iii) an increase in share-based compensation expenses.

Our selling and marketing expenses increased by 153.5% from RMB2.86 billion in 2021 to RMB7.24 billion (US\$1.05 billion) in 2022, primarily due to an increase in shipping cost as a result of an increase in sales volume of solar modules in 2022.

Our general and administrative expenses increased by 78.7% from RMB1.96 billion in 2021 to RMB3.51 billion (US\$508.7 million) in 2022, primarily due to an increase in disposal of property, plant and equipment and an increase in share-based compensation expenses.

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Our impairment of long-lived assets increased by 36.5% from RMB273.7 million in 2021 to RMB373.7 million (US\$54.2 million) in 2022, due to an increase in impairment loss on property, plant and equipment as a result of the upgrade of certain equipment used in our wafer production line.

Our research and development expenses increased by 57.0% from RMB461.6 million in 2021 to RMB724.8 million (US\$105.1 million) in 2022, as we devoted more efforts on our research and development in 2022 .

Income from Operations. As a result of the foregoing, our income from operations decreased by 61.1% from RMB1.10 billion in 2021 to RMB429.2 million (US\$62.2 million) in 2022. Our operating profit margin decreased from 2.7% in 2021 to 0.5% in 2022.

Interest Expenses, Net. Our net interest expenses decreased by 21.4% from RMB624.0 million in 2021 to RMB490.7 million (US\$71.1 million) in 2022 due to an increase in interest income.

Subsidy Income. Our subsidy income increased by 133.9% from RMB465.7 million in 2021 to RMB1.09 billion (US\$158.0 million) in 2022, primarily due to an increase in the cash receipt of subsidies from local governments in China which are non-recurring, not refundable and with no conditions.

Exchange Loss. We recognized a foreign exchange loss of RMB355.5 million in 2021 and a foreign exchange gain of RMB1.03 billion (US\$148.7 million) in 2022, primary due to the fluctuation in the exchange rate fluctuation of the U.S. dollars against the Renminbi in 2022.

Other Income, Net. We had net other income of RMB1.9 million in 2021, compared with net other income of RMB1.6 million (US\$227.8 thousand) in 2022.

Change in Fair Value of Foreign Exchange Forward Contracts. We recognized a gain arising from change in fair value of foreign currency forward contracts of RMB288.9 million in 2021, compared with a loss of RMB164.4 million (US\$23.8 million) in 2022, primarily due to fluctuations in exchange rate of the Renminbi against the U.S. dollars.

Change in Fair Value of Foreign Exchange Options. We recognized a gain arising from change in fair value of foreign exchange options of RMB18.8 million in 2021, compared with a loss of RMB4.2 million (US\$604.0 thousand) in 2022. The gain from foreign exchange options was primarily due to the appreciation of the U.S. dollars against the Renminbi.

Change in fair value of convertible senior notes and call option. We recorded a gain arising from change in fair value of convertible senior notes and call option of RMB191.6 million in 2021, compared to a loss of RMB12.1 million (US\$1.8 million) in 2022. The change was primarily due to changes in our stock price in 2022.

Change in fair value of long-term investment. We recognized a gain from change in fair value of RMB101.9 million (US\$14.8 million) in the fourth quarter of 2022. In June 2022, we acquired a 2.98% equity interest in a PV material supplier, which is accounted for using the fair value option and recorded as long-term investment.

Income Tax Expense. We recorded an income tax expense of RMB194.1 million in 2021, compared with an income tax expense of RMB605.3 million (US\$87.8 million) in 2022. The effective tax rate was 17.8% in 2021 and 30.6% in 2022.

Net Income attributable to JinkoSolar Holding Co., Ltd. As a result of the foregoing, our net income attributable to JinkoSolar Holding Co., Ltd. increased from RMB721.0 million in 2021 to RMB620.5 million (US\$90.0 million) in 2022. Our net profit margin decreased from 1.8% in 2021 to 0.7% in 2022.

2021 compared with 2020

Revenues. Our revenues increased by 16.2% from RMB35.13 billion in 2020 to RMB40.83 billion in 2021. The increase in total revenues was mainly attributable to an increase in the shipment of solar modules, which was mainly attributable to China's favorable policies on renewable energy and the growth of global market demand.

Our revenue from sales of solar modules increased by 15.9% from RMB32.56 billion in 2020 to RMB37.74 billion in 2021, primarily due to the significant increase in sales volume of solar modules. The sales volume of our solar modules increased by 18.3 % from 18.8 GW in 2020 to 22.2 GW in 2021.

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Our revenue from sales of silicon wafers increased by 154.8% from RMB452.1 million in 2020 to RMB1.15 billion in 2021. The sales volume of our silicon wafers increased by 36.0% from 1,583.7 MW in 2020 to 2,153.4 MW in 2021.

Our revenue from sales of solar cells increased by 76.1% from RMB344.5 million in 2020 to RMB606.6 million in 2021. The sales volume of our solar cells increased by 27.7% from 670.6 MW in 2020 to 856.4 MW in 2021.

We did not generate any revenue from sales of solar projects in 2021 while we generated revenue from sales of solar projects of RMB1.20 billion in 2020, as we completed the sale of two solar power plants in Mexico with a combined capacity of 155 MW to an independent third party in March 2020.

Our revenue from electricity generation increased from RMB100.5 million in 2020 to RMB100.7 million in 2021, primarily attributable to the increased volume of electricity generation of our solar power plant in Argentina.

Our revenue from sales of other solar materials increased by 118.3% from RMB478.2 million in 2020 to RMB1.04 billion in 2021.

We generated revenue from processing service fees of RMB186.0 million in 2021. Our revenue of processing service primarily consists of revenue from silicon material processing services.

Cost of Revenues. Our cost of revenues increased by 18.0% from RMB28.96 billion to RMB34.17 billion in 2021, primarily due to an increase in shipments of solar modules.

Gross Profit. Our gross profit increased by 7.9% from RMB6.17 billion in 2020 to RMB6.66 billion in 2021, mainly attributable to an increase in the shipments of solar modules in 2021.

Our gross margin decreased from 17.6% in 2020 to 16.3% in 2021. Excluding the CVD and ADD reversal benefits based on the amended final results published by the U.S. Department of Commerce, our gross margin decreased from 17.1% in 2020 to 16.3% in 2021, primarily due to an increase in the cost of raw materials.

Operating Expenses. Our operating expenses increased by 26.6% from RMB4.39 billion in 2020 to RMB5.56 billion in 2021, primarily due to (i) an increase in shipping cost, (ii) an increase in disposal loss on property, plant and equipment as a result of our upgrade of production equipment, and (iii) an increase in impairment loss on property, plant and equipment.

Our selling and marketing expenses increased by 15.5% from RMB2.47 billion in 2020 to RMB2.86 billion in 2021, primarily due to the increase in shipping cost as a result of increase in sales volume of solar modules in 2021.

Our general and administrative expenses increased by 39.3% from RMB1.41 billion in 2020 to RMB1.96 billion in 2021, primarily due to an increase in disposal loss on property, plant and equipment as a result of the upgrade of production equipment.

Our impairment of long-lived assets increased by 139.7% from RMB114.2 million in 2020 to RMB273.7 million in 2021, as a result of the obsolescence of certain equipment for upgrade in our wafer production line and impairment for one of our overseas solar power projects.

Our research and development expenses increased by 18.6% from RMB389.2 million in 2020 to RMB461.6 million in 2021, as we strengthened our research and development efforts in 2021.

Income from Operations. As a result of the foregoing, our income from operations decreased by 38.2% from RMB1.78 billion in 2020 to RMB1.10 billion in 2021. Our operating profit margin decreased from 5.1% in 2020 to 2.7% in 2021.

Interest Expenses, Net. Our net interest expenses increased by 35.9% from RMB459.2 million in 2020 to RMB624.0 million in 2021 due to an increase in interest expense with the increase of interest-bearing debts.

Subsidy Income. Our subsidy income increased by 142.6% from RMB192.0 million in 2020 to RMB465.7 million in 2021, primarily due to an increase in the cash

receipt of subsidies from local governments in China which are non-recurring, non-refundable and without conditions.

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Exchange Loss. We recognized a foreign exchange loss of RMB336.5 million in 2020 and a foreign exchange loss of RMB355.5 million in 2021, primary due to the depreciation of the U.S. dollars against the Renminbi.

Other Income, Net. We had net other income of RMB1.9 million in 2021, compared with net other income of RMB2.3 million in 2020, which was primarily attributable to guarantee income from JinkoPower and expenses related to charitable donations in 2020 and 2021.

Change in Fair Value of Foreign Exchange Forward Contracts. We recognized a gain arising from change in fair value of foreign currency forward contracts of RMB288.9 million in 2021, compared with a gain of RMB191.2 million in 2020, primarily due to fluctuation in the Renminbi exchange rate against the U.S. dollars. With the rapid increase in overseas orders, we increased our foreign currency hedge ratio to hedge against anticipated cash flow denominated in U.S. dollars over the next six months.

Change in Fair Value of Foreign Exchange Options. We recognized a gain arising from change in fair value of foreign exchange options of RMB18.8 million in 2021, compared with a loss of RMB3.6 million in 2020. The loss from foreign exchange options was primarily due to the depreciation of the U.S. dollar against the Renminbi.

Change in Fair Value of Interest Rate Swap. We entered into Interest Rate Swap agreements with several banks for the purpose of reducing interest rate risk exposure. We recorded nil in change in fair value of the Interest Rate Swap agreements for 2021, compared to a loss of RMB78.9 million for 2020. We applied hedge accounting for certain of our interest swap arrangement and recorded related change in fair value in other comprehensive income in 2021.

Change in fair value of convertible senior notes and call option. We recorded a gain arising from change in fair value of convertible senior notes and call option of RMB191.6 million in 2021, compared to a loss of RMB725.8 million in 2020. The change in 2021 was primarily due to a significant decrease in our stock price in 2021.

Income Tax Expense. We recorded an income tax expense of RMB194.1 million in 2021, compared with an income tax expense of RMB178.4 million in 2020. The effective tax rate was 17.8% in 2021, compared with 31.5% in 2020, which was mainly attributable to the higher profit generated by our subsidiaries with lower income tax rates.

Net Income attributable to JinkoSolar Holding Co., Ltd. As a result of the foregoing, our net income attributable to JinkoSolar Holding Co., Ltd. increased from RMB230.4 million in 2020 to RMB721.0 million in 2021. Our net profit margin increased from 0.7% in 2020 to 1.8% in 2021.

B. Liquidity and Capital Resources

We have financed our operations and capital expenditures primarily through equity contributions from our shareholders, the net proceeds of our equity and debt securities offerings, cash flow generated from operations, as well as short-term and long-term debt financing.

As of December 31, 2022, we had RMB10.24 billion (US\$1.49 billion) in cash and cash equivalents and RMB1.03 billion (US\$149.0 million) in restricted cash. Our cash and cash equivalents represent cash on hand and demand deposits with original maturities of three months or less that are placed with banks and other financial institutions. Our restricted cash represents deposits legally held by banks which are not available for general use. These deposits are held as collateral for issuance of letters of credit and bank acceptable notes to vendors for purchase of machinery and equipment and raw materials.

We have entered into purchase agreements and other agreements for (i) expanding the high-efficiency mono wafer production capacity of our factories in Leshan, Sichuan Province, Yili, the XUAR, Xining, Qinghai Province, Jinchang, Gansu Province and Vietnam, (ii) expanding our mono wafer and solar cells production capacity through the construction of production facilities in Shangrao, Jiangxi Province, Hefei, Anhui Province, Chuxiong, Yunnan Province, and Malaysia, (iii) expanding the solar module production capacity of our factories in Yiwu, Haining, Zhejiang Province, Shangrao, Jiangxi Province and Malaysia, and (iv) upgrading our production equipment. Our capital commitments under these agreements amounted to RMB13.59 billion (US\$1.97 billion) as of December 31, 2022, of which RMB6.36 billion (US\$921.8 million) will be due in 2023. We anticipate to use funds from bank borrowings, finance leasing, and capital contribution from other shareholders of our subsidiaries, as the case may be, to fulfil these capital commitments. We plan to use the remaining available cash for research and development and for working capital and other day-to-day operating purposes.

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As of December 31, 2022, we had total credit facilities available of RMB59.82 billion (US\$8.67 billion) with various banks, of which RMB32.68 billion (US\$4.74 billion) were drawn down and RMB27.13 billion (US\$3.93 billion) were available.

As of December 31, 2022, we had short-term borrowings (including the current portion of long-term bank borrowings and failed sale-leaseback financing) of RMB12.42 billion (US\$1.80 billion). As of December 31, 2022, we had short-term borrowings outstanding of RMB9.11 billion (US\$1.32 billion), RMB2.19 billion (US\$316.9 million), RMB120.0 million (US\$17.4 million), RMB1.00 billion (US\$145.3 million), which were denominated in RMB, Euros, JPY and USD, respectively, and bearing a weighted average interest rate of 3.11%, 2.09%, 1.25%, 2.53%, per annum, respectively.

As of December 31, 2022, we pledged property, plant and equipment of a total net book value of RMB4.14 billion (US\$600.6 million), land use rights of a total net book value of RMB164.4 million (US\$23.8 million), inventories of a total net book value of RMB2.11 billion (US\$305.4 million), account receivables of a total net book value of RMB392.2 million (US\$56.9 million) and bank deposits of a total net book value of RMBnil million (US\$nil million) to secure repayment of our short-term borrowings of RMB647.6 million (US\$93.0 million). Although we have increased our level of short-term bank borrowings to meet our working capital, capital expenditures and other needs, we have not experienced any difficulties in repaying our borrowings. Two of our subsidiaries had a revolving loan facility from Wells Fargo Bank, National Association as of December 31, 2021 and 2022.

Obligations under the loan facility were secured by substantially all of the assets of the two subsidiaries, including account receivables, bank balances, inventories, property and plants etc. (the “Pledged Assets”) as of December 31, 2021 and 2022, and the amount of available facilities is generally determined and updated from time to time based on certain percentage of the Pledged Assets balances. As of December 31, 2022, no borrowings were drawn down from such revolving loan facility.

We have long-term borrowings (excluding the current portion of long-term bank borrowings and failed sale-leaseback financing) of RMB13.02 billion (US\$1.89 billion), which bore interest at an average annual rate of 4.45% as of December 31, 2022. In connection with most of our long-term borrowings, we have granted security interests over significant amounts of our assets. As of December 31, 2022, we pledged property of a net book value of RMB6.81 billion (US\$977.8 million) to secure repayment of borrowings of RMB2.79 billion (US\$405.1 million). As of December 31, 2022, our long-term loans in the amount of RMB10.70 billion (US\$1.55 billion) will be due for repayment after one year, but within five years.

In addition, we have repayment obligations under our convertible notes. As of December 31, 2022, we had outstanding convertible notes in the principal amount of US\$69.3 million.

The relevant PRC laws and regulations permit payments of dividends by our PRC subsidiaries only out of their retained earnings, if any, as determined in accordance with PRC GAAP. In addition, the statutory general reserve fund requires annual appropriations of 10% of net after-tax income to be set aside prior to payment of any dividends by our PRC subsidiaries that are registered as wholly-owned foreign investment enterprises or domestic enterprises. As a result of these and other restrictions under PRC laws and regulations, the PRC subsidiaries are restricted in their ability to transfer a portion of their net assets to us either in the form of dividends, loans or advances. Even though we do not currently require any such dividends, loans or advances from our PRC subsidiaries for working capital or other funding purposes, it may in the future require additional cash resources from the PRC subsidiaries due to changes in business conditions, to fund future acquisitions and development, or merely declare dividends or make distributions to our shareholders. Our net assets subject to the above restrictions were RMB24.3 billion (US\$3.52 billion), representing 89.8% of our total consolidated net assets as of December 31, 2022.

Furthermore, cash transfers from our PRC subsidiaries to their parent companies outside of China are subject to PRC government’s control of currency conversion. Shortages in the availability of foreign currency may temporarily delay the ability of our PRC subsidiaries and consolidated affiliated entities to remit sufficient foreign currency to pay dividends or other payments to us, or otherwise satisfy their foreign currency denominated obligations.

On September 25, 2013, we completed an offering of 4,370,000 ADSs, receiving aggregate net proceeds of US\$67.8 million, after deducting discounts and commissions and offering expenses.

On January 22, 2014, we completed an offering of 3,750,000 ADSs representing 15,000,000 ordinary shares, receiving aggregate net proceeds of US\$126.2 million after deducting discounts and commissions and offering expenses. On the same date, we issued convertible senior notes in the principal amount of US\$150.0 million due 2019, bearing an annual interest rate of 4.0% and with an option for holders to require us to repurchase their notes in February 2017 for the principal of the notes plus accrued and unpaid interest, to qualified institutional buyers under Rule 144A and in reliance upon Regulation S of the Securities Act. We had repurchased all of such notes as of December 31, 2019.

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In November 2014, we signed a US\$20.0 million two-year credit agreement with Wells Fargo, the term of which was later extended to November 2024. The credit limit was raised to US\$40.0 million in June 2015, to US\$60.0 million in July 2016 and further to US\$90.0 million in January 2020 through amendments to the credit agreement. Borrowings under the credit agreement would be used to support our working capital and business operations in the United States.

In May 2015, we signed a US\$20.0 million three-year bank facility agreement with Barclay Bank, which was subsequently raised to US\$40.0 million, to support our working capital and business operations. The term of this bank facility has been extended to 2022.

In September 2016, we signed a US\$25.0 million two-year bank facility agreement with Malayan Banking Berhad, the term of which was extended to September 2022, to support our working capital and business operations in Malaysia.

In July 2017, we entered into a four-year financial lease in the amount of RMB600.0 million to support the improvement of our production efficiency.

In September 2017, we filed a prospectus supplement to sell up to an aggregate of US\$100 million of the ADSs through the 2017 ATM Program. In January 2018, we terminated the 2017 ATM Program and did not sell any ADSs under the 2017 ATM Program.

In February 2018, we closed an offering of 4,140,000 ADSs, each representing four of our ordinary shares, par value US\$0.00002 per share, at US\$18.15 per ADS. The net proceeds of the offering to us, after deducting underwriting commissions and fees and estimated offering expenses, was US\$71.1 million. Concurrently with the offering, we completed the private placement with Tanka International Limited, an exempted company incorporated in the Cayman Islands held by Mr. Xiande Li, our chairman, and Mr. Kangping Chen, our former chief executive officer, of its purchase of US\$35 million of our ordinary shares.

In July 2018, we signed a JPY5.30 billion syndicated loan agreement with a bank consortium led by Sumitomo Mitsui Banking Corporation to provide working capital and support for our business operations in Japan. The loan was downsized to JPY3.00 billion after annual review in December 2021.

In May 2019, we completed a follow-on public offering of 4,671,875 ADSs, each representing four of our ordinary shares, at US\$16.00 per ADS. Concurrently with the offering, we issued convertible senior notes of US\$85 million due 2024 to support capital expenditure and supplement working capital. The notes will mature on June 1, 2024 and the holders will have the right to require us to repurchase for cash all or any portion of their notes on June 1, 2021. The interest rate is 4.5% per annum payable semi-annually, in arrears. As of the date of this annual report, the convertible notes of US\$29.75 million in aggregate have been converted. In connection with the issuance of the convertible notes, we entered into a zero strike call option transaction with an affiliate of Credit Suisse Securities (USA) LLC, whom we refer to as the option counterparty. The zero strike call option transaction was completed in July 2021.

In September 2019, we signed an RMB100 million one-year bank facility agreement with Malayan Banking Berhad, the term of which is renewable annually, to supplement our working capital. As of the date of this annual report, the term of this bank facility has been extended to September 2023.

In December 2020, we filed a prospectus supplement to sell up to an aggregate of US\$100 million of the ADSs through the 2020 ATM Program. In January 2021, we completed the 2020 ATM Program, under which we sold 1,494,068 ADSs and received US\$98.25 million after deducting commissions and offering expenses.

In January 2022, Jiangxi Jinko had completed the STAR Listing and started trading on the Star Market (SSE, code: 988223) Jiangxi Jinko has issued 2,000,000,000 shares representing approximately 20% of the total 10,000,000,000 shares outstanding after the STAR Listing. The shares were issued at a public offering price of RMB5.00 per share and the total gross proceeds of the STAR Listing were approximately RMB10.00 billion. After the STAR Listing, we own approximately 58.62% of Jiangxi Jinko.

Our working capital was RMB3.39 billion (US\$491.7 million) as of December 31, 2022. As a result, some of our customers delayed their payments, which temporarily affected our cash flow. Our management believes that our cash position as of December 31, 2022, the cash expected to be generated from operations, and funds available from borrowings under our credit facilities will be sufficient to meet our working capital and capital expenditure requirements for at least the next 12 months from the date of issuance of our consolidated financial statements for 2022 included in this annual report.

Cash Flows and Working Capital

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

	2020 (RMB)	2021 (RMB)	2022 (RMB)	(US\$)
	(in thousands)			
Net cash (used)/ provided by operating activities	591,486.3	430,646.3	(5,800,784.0)	(841,035.0)
Net cash used in investing activities	(4,918,689.7)	(11,309,232.7)	(12,272,387.0)	(1,779,329.0)
Net cash provided by financing activities	6,297,278.6	12,017,851.0	20,018,922.0	2,902,472.0
Net increase in cash, cash equivalents, and restricted cash	1,800,813.4	1,022,474.7	2,173,708.0	315,158.0
Cash, cash equivalents and restricted cash, beginning of the year	6,273,958.4	8,074,771.8	9,097,246.0	1,318,977.0
Cash and cash equivalents, restricted cash, end of the year	8,074,771.8	9,097,246.4	11,270,954.0	1,634,135.0

Our net cash, cash equivalents and restricted cash increased by RMB1.80 billion, RMB1.02 billion and RMB2.17 billion (US\$315.2 million) during 2020, 2021 and 2022, respectively. As of December 31, 2022, we had RMB11.27 billion (US\$1.63 billion) in cash, cash equivalents and restricted cash for continuing operations. As of December 31, 2022, we had a total capital commitment of RMB13.59 billion (US\$1.97 billion). We believe that our cash and cash equivalents, cash flows from operating activities and our subsidiary Jiangxi Jinko's equity offerings will be sufficient to meet our working capital, capital expenditure needs that will arise in 2023 and beyond.

We are a holding company incorporated in the Cayman Islands. We may rely on dividends from our subsidiaries in China for our cash needs. Current PRC regulations restrict the ability of our subsidiaries to pay dividends to us. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We rely principally on dividends and other distributions on equity paid by our principal operating subsidiary, and limitations on their ability to pay dividends to us could have a material adverse effect on our business and results of operations." and "Item 8. Financial Information—Dividend Policy" for more information.

Operating Activities

Net cash used by operating activities in 2022 was RMB5.80 billion, consisting primarily of (i) an increase in advances from third party customers of RMB3.29 billion, which was in line with our increased business scale globally, and (ii) an increase in accounts payable of RMB3.59 billion, which was primarily in relation to our increased production capacity and the rising price of raw materials, partially offset by (i) an increase in accounts receivable from third party of RMB8.61 billion, which was in line with our increased business scale globally, (ii) an increase in inventories of RMB6.05 billion due to our expanding production capacity and business scale, and (iii) an increase in advances to suppliers of RMB1.71 billion due to our increased procurement of raw materials.

Net cash provided by operating activities in 2021 was RMB430.6 million, consisting primarily of (i) an increase in advances from third party customers of RMB3.53 billion, which was in line with our increased business scale globally, and (ii) an increase in accounts payable of RMB2.64 billion, which was primarily in relation to our increased production capacity and the rising price of raw materials, partially offset by (i) an increase in inventories of RMB5.70 billion due to our expanding production capacity and business scale, (ii) an increase in accounts receivable from third party of RMB3.67 billion, which was in line with our increased business scale globally, and (iii) an increase in advances to suppliers of RMB856.6 million due to our increased procurement of raw materials.

Net cash provided by operating activities in 2020 was RMB591.5 million, consisting primarily of (i) an decrease in advance to third-parties suppliers of RMB1.54 billion mainly due to the acceptance of large volume of goods in 2020, and (ii) decrease in project assets of constructed for sale, net of incremental revenue of RMB976.7 million due to the disposal of two solar power plants in Mexico, partially offset by (i) an increase in inventories of RMB2.82 billion, due to our expanding production capacity and business scale, (ii) a decrease in advances from third parties of RMB1.79 billion as a result of fluctuations in demand of our major overseas customers, and (iii) an increase in prepayments and other current assets of RMB1.11 billion due to the increased value-added tax deductible resulting from our increased procurement of raw materials.

Investing Activities

Net cash used in investing activities in 2022 was RMB12.27 billion, consisting primarily of (i) the purchase of property, plant and equipment of RMB12.25 billion, (ii) the purchase of restricted short-term investments of RMB8.18 billion and (iii) purchase of restricted long term investments of RMB1.41 billion, partially offset by (i) cash collected from restricted short term investments of RMB8.49 billion, and (ii) cash collected from restricted long-term investments of RMB1.23 billion.

Net cash used in investing activities in 2021 was RMB11.31 billion, consisting primarily of (i) the purchase of restricted short-term investments of RMB13.36 billion, (ii) the purchase of property, plant and equipment of RMB8.65 billion, and (iii) purchase of restricted long term investments of RMB1.46 billion, partially offset by (i) cash collected from restricted short term investments of RMB10.50 billion, and (ii) cash collected from restricted long-term investments of RMB 1.65 billion.

Net cash used in investing activities in 2020 was RMB4.92 billion, consisting primarily of (i) the purchase of restricted short-term investments of RMB9.55 billion, (ii) the purchase of property, plant and equipment of RMB4.06 billion, and (iii) purchase of restricted long term investments of RMB1.65 billion, partially offset by (i) cash collected from restricted short term investments of RMB10.08 billion, and (ii) cash collected from restricted long-term investments of RMB 790.4 million.

Financing Activities

Net cash provided by financing activities in 2022 was RMB20.02 billion, consisting primarily of (i) borrowings of RMB29.66 billion and (ii) proceeds from Follow-on offering of RMB9.77 billion, partially offset by repayment of borrowings of RMB27.62 billion.

Net cash provided by financing activities in 2021 was RMB12.02 billion, consisting primarily of (i) borrowings of RMB30.45 billion, (ii) Proceeds from At-The-Market offering of RMB641.1 million, (iii) Proceeds from exercise of call option of RMB621.1 million, and borrowing from government background funds of RMB2.13 billion, partially offset by (i) repayment of borrowings of RMB24.28 billion.

Net cash provided by financing activities in 2020 was RMB6.30 billion, consisting primarily of (i) borrowings of RMB24.10 billion, (ii) equity financing in a subsidiary of RMB3.10 billion, (iii) borrowing from government background funds of RMB2.20 billion, and capital contributions by non-controlling interest holder of RMB865million, partially offset by (i) repayment of borrowings of RMB25.34 billion.

Restrictions on Cash Dividends

For a discussion on the ability of our subsidiaries to transfer funds to our company and the impact this has on our ability to meet our cash obligations, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We rely principally on dividends and other distributions on equity paid by our principal operating subsidiary, and limitations on their ability to pay dividends to us could have a material adverse effect on our business and results of operations,” and “Item 4. Information on the Company—B. Business Overview— Regulation—Dividend Distribution.”

Capital Expenditures

We had capital expenditures, representing the payments that we had made, of RMB4.31 billion, RMB8.69 billion and RMB12.29 billion (US\$1.78 billion) in 2020, 2021 and 2022, respectively. Our capital expenditures were used primarily to construct our manufacturing facilities and purchase equipment for the production of silicon wafers, solar cells and solar modules, acquire land use rights, and construction of project assets. We have entered into purchase agreements and other agreements for (i) expanding our high-efficiency mono wafer production capacity of factories in Leshan, Sichuan Province, Yili, the XUAR, and Vietnam, (ii) expanding our mono wafer and solar cells production capacity through the construction of production facilities in Shangrao, Jiangxi Province, Hefei, Anhui Province, Chuxiong, Yunnan Province, and Malaysia (iii) expanding our solar module production capacity in factories in Yiwu Haining, Zhejiang Province, and Malaysia, and (iv) upgrading our production equipment. Our capital commitments under these agreements amounted to RMB13.59 billion (US\$1.97 billion) as of December 31, 2022, of which RMB6.36 billion (US\$921.8 million) will be due in 2023. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We may face termination and late charges and risks relating to the termination and amendment of certain equipment purchases contracts.”

Recent Accounting Pronouncements

New Accounting Standards Adopted

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting", which provides optional expedients and exceptions for applying U.S. GAAP on contract modifications and hedge accounting to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform, if certain criteria are met. These optional expedients and exceptions provided in ASU 2020-04 are effective for us as of March 12, 2020 through December 31, 2022. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

In August 2020, the FASB issued ASU 2020-06, "Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)," which removes certain separation models for convertible debt instruments and convertible preferred stock that require the separation of a convertible debt instrument into a debt component and an equity or derivative component. The ASU also expands disclosure requirements for convertible instruments and simplifies areas of the guidance for diluted earnings-per-share calculations that are impacted by the amendments. The standard is effective for interim and annual periods beginning after December 15, 2021, with early adoption permitted. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

In May 2021, the FASB issued ASU No. 2021-04, Earnings Per Share (Topic 260), Debt — Modifications and Extinguishments (Subtopic 470-50), Compensation — Stock Compensation (Topic 718), and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40) to clarify and reduce diversity in an issuer's accounting for modifications or exchanges of freestanding equity classified written call options (for example, warrants) that remain equity classified after modification or exchange. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. An entity should apply the amendments prospectively to modifications or exchanges occurring on or after the effective date of the amendments. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

New Accounting Standards Not Yet Adopted

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which require that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606. At the acquisition date, an acquirer should account for the related revenue contracts in accordance with Topic 606 as if it had originated the contracts. The amendments in this Update also provide certain practical expedients for acquirers when recognizing and measuring acquired contract assets and contract liabilities from revenue contracts in a business combination. The amendments should be applied prospectively to business combinations occurring on or after the effective date of the amendments, with early adoption permitted. We will adopt this update in the first quarter of 2023 and we are currently evaluating the impact.

In March 2022, the FASB issued ASU 2022-02, Troubled Debt Restructurings and Vintage Disclosures. This ASU eliminates the accounting guidance for troubled debt restructurings by creditors that have adopted ASU 2016-13, Measurement of Credit Losses on Financial Instruments, which the Company adopted on January 1, 2020. This ASU also enhances the disclosure requirements for certain loan refinancing and restructurings by creditors when a borrower is experiencing financial difficulty. In addition, the ASU amends the guidance on vintage disclosures to require entities to disclose current period gross write-offs by year of origination for financing receivables and net investments in leases within the scope of ASC 326-20. The ASU is effective for annual periods beginning after December 15, 2022, including interim periods within those fiscal years. Adoption of the ASU would be applied prospectively. Early adoption is also permitted, including adoption in an interim period. We will adopt this update in the first quarter of 2023 and we are currently evaluating the impact.

In June 2022, the FASB issued ASU 2022-02 Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions. The update clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The update also clarifies that an entity cannot, as a separate unit of account, recognize and measure a contractual sale restriction. The update also requires certain additional disclosures for equity securities subject to contractual sale restrictions. The amendments in this update are effective for the Company beginning January 1, 2024 on a prospective basis. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance. We are in the process of evaluating the impact of the new guidance on our consolidated financial statements.

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

Research and Development

We focus our research and development efforts on improving our manufacturing efficiency, the quality of our products and next generation PV technology. In July 2012, we were selected as a finalist for the “Solar power projects in North America” category of the Intersolar Award 2012, which is presented each year to award innovation in the international solar industry. In January 2013, we were honored as the most promising enterprise by China Energy News and the China Institute of Energy Economics Research. In 2019, we were awarded the “best performance” of reliability scorecard for the fifth consecutive time by DNY-GL, and won the 5th All Quality Matters Award for PV Module Energy Yield Simulation (Mono Group) at the Solar Congress 2019 organized by TÜV Rheinland and ranked first in testing conducted for the mono group. In 2020, we won the 6th All Quality Matters Award for PV Module Energy Yield Simulation (Mono Group) at the Solar Congress 2020 organized by TÜV Rheinland. In March 2021, our R&D Center module laboratory obtained satisfactory results in the latest national assessment of PV Modules Testing Accuracy. In December 2022, we launched our industry-leading 182 mm N-type TOPCon TigerNeo family, achieving the highest solar conversion efficiency of 23.86% for N-type TOPCon modules and the highest solar conversion efficiency of 26.4% for N-type TOPCon solar cells in the industry.

In addition to our full-time research and development team, we also involve employees from our manufacturing department to work on our research and development projects on a part-time basis. We plan to enhance our research and development capability by recruiting additional experienced engineers specialized in the solar power industry. Certain members of our senior management spearhead our research and development efforts and set strategic directions for the advancement of our products and manufacturing processes.

We have entered into a cooperative agreement with Nanchang University in Jiangxi Province, China and established a joint PV materials research center on the campus of Nanchang University. Under the terms of the agreement, the research center is staffed with faculty members and students in doctoral and master programs from the material science and engineering department of Nanchang University as well as our technical personnel. The research center focuses on the improvement of our manufacturing process, solution of technical problems in our silicon wafer and solar module production process and the research and development of new materials and technologies. The research center also provides on-site technical support to us and training for our employees. Under the agreement, any intellectual property developed by the research center will belong to us. The research center has assisted us in improving the quality of our silicon wafers, including the conversion efficiency of our silicon wafers, as well as our silicon wafer production process. We also engage other universities in our research and development efforts. For example, in December 2013, we announced that we would partner with Beijing University's Solar Power Engineering Center to construct the university's first experimental PV power plant on campus, which would be used for collecting and analyzing data the power generation capabilities of PV modules when exposed to various conditions. In 2014, we established a long-term cooperative relationship with the State Key Laboratory of Silicon Materials of Zhejiang University and have launched a number of research and development projects since then. In 2015, we started to work with the Australian National University to explore certain cutting-edge cell technologies. In 2016, we established cooperative relationship with Sun Yat-Sen University and the National University of Singapore in the research of solar modules and solar cells, respectively. In 2017, we partnered with TÜV Rheinland, an independent provider of technical services for testing, inspection, certification, consultation and training, to develop standardized testing methods for bifacial PV technology. In 2018, we participated in three projects cooperating with Institute of Electrical Engineering of the Chinese Academy of Sciences of Zhejiang University and Nanchang University in module recycling, high-efficiency P-type poly, and N-type bifacial cell. In 2019, we signed a memorandum of understanding with Shanghai Institute of Space Power Sources to co-develop high efficiency solar cell technology for space and terrestrial applications. In the same year, we also lead two national key R&D programs of China relating to the decline of the N-type multicrystalline cell industry and the recycle of end-of-life solar products. As of the date of this annual report, we have published 4 article regarding international standard and 53 articles regarding domestic standard. We have several national R&D platforms, including national enterprise technology centers, national post-doctoral research stations and national intellectual property demonstration enterprises.

We believe that the continual improvement of our research and development capability is vital to maintaining our long-term competitiveness. In 2020, 2021 and 2022, our research and development expenses were RMB389.2 million, RMB461.6 million and RMB724.8 million (US\$105.1 million), respectively. We intend to continue to devote management and financial resources to research and development as well as to seek cooperative relationships with other academic institutions to further lower our overall production costs, increase the conversion efficiency rate of our solar power products and improve our product quality.

Intellectual Property

As of December 31, 2022, we have been granted 1,461 patents, including 1,101 utility model patents, 323 invention patent and 37 design patents. We also have 496 pending patent applications. These patents and patent applications relate to the technologies utilized in our manufacturing processes. We intend to continue to assess appropriate opportunities for patent protection of critical aspects of our technologies. We also rely on a combination of trade secrets and employee and third-party confidentiality agreements to safeguard our intellectual property. Our research and development employees are required to enter into agreements that require them to assign to us all inventions, designs and technologies that they develop during the terms of their employment with us. For information related to intellectual property claims that we have involved, see "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal and Administrative Proceedings."

We filed trademark registration applications with the PRC Trademark Office, World Intellectual Property Organization, or WIPO and trademark authorities in other countries and regions. As of December 31, 2022, we have been granted 435 trademarks in the PRC, such as "Jinko", "Jinko" and "Jinko", and 27 trademarks in Hong Kong and Taiwan, including "Jinko", and "Jinko". We also have 125 trademarks registered in WIPO. We have pending trademark applications of 155 trademarks in 24 countries and regions, including Brazil, Qatar, Saudi Arabia, Thailand, Indonesia, the United Arab Emirates, Australia, Singapore, Panama, Kazakhstan, Kenya, South Africa, Nicaraguan, El Salvador, Sri Lanka, India, Chile, the United States, European Union, Israel. In addition, we have registered 8 trademarks in the United States, 16 trademarks in Canada and 18 trademarks in Europe.

D. Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for 2022 that are reasonably likely to have a material effect on our net revenues, income, profitability, liquidity or capital resources, or that would cause reported consolidated financial information not necessarily to be indicative of future operating results or financial conditions.

E. Critical Accounting Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We evaluate our judgments and estimates on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates.

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. For a detailed discussion of our significant accounting policies and related judgments, see "Notes to Consolidated Financial Statements - Note 2 Principal Accounting Policies."

Expected Credit Losses

On January 1, 2020, we adopted Accounting Standards Update (ASU) No. 2016-13, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", which requires us to record the full amount of expected credit losses for the life of a financial asset at the time it is originated or acquired, and adjusted for changes in expected lifetime credit losses subsequently, which requires earlier recognition of credit losses.

The allowance for credit losses represents our estimate of the expected lifetime credit losses inherent in finance receivables as of the balance sheet date. The adequacy of our allowance for credit losses is assessed quarterly, and the assumptions and models used in establishing the allowance are evaluated regularly. Because credit losses can vary substantially over time, estimating credit losses requires a number of assumptions about matters that are uncertain. Changes in assumptions affect the allowance for credit losses contained within finance receivables, net on our consolidated balance sheets.

The provision for credit losses is estimated mainly based on past collection experience as well as consideration of current and future economic conditions and changes in our collection trends. We estimate the expected credit losses for financial assets with similar credit risk characteristics on a pool basis taking into consideration the size, type of the services and products the we provided. The key assumptions used in the process of estimating the provision for credit losses include credit risk characteristics, lifetime for debt recovery, current and future economic conditions. The estimate of expected credit losses is sensitive to our assumptions in these factors.

As of December 31, 2022, when the forward-looking factors based on the assumption of current and future economic conditions increased by 5% while holding all other estimates constant, our expected credit losses would increase by RMB2.3 million.

Accrued Warranty

Our major products Solar modules are typically sold with either a 5-year or 10-year warranty for product defects, and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. Therefore, we are exposed to potential liabilities that could arise from these warranties. The potential liability is generally in the form of product replacement or repair.

We accrue liabilities for the estimated future costs of meeting our warranty obligations and apply significant judgements in estimating the expected failure rate of solar module products and the replacement costs associated with fulfilling our warranty obligations when measuring the warranty costs.

We have established detailed policies and control procedures to monitor the trend of replacement cost, failure rate or any changes in circumstances that may give rise to revise the existing accounting estimates. We also monitor our expected future module performance through certain quality and reliability testing and actual performance in certain field installation sites.

Based on the historical actual claims incurred during the past years, we project the expected failure rate as 1% for the whole warranty period. With respect to the replacement cost, based on our actual claim experiences in the historical periods as well as our current best estimation, we believe that the average selling price of solar modules over the past two years may appropriately reflect the cost of product replacement.

As of December 31, 2022, when one of the key assumptions used in estimating the future costs of our warranty obligations, including the expected failure rate and the replacement cost, increased by 5% while holding the other estimate constant, our accrued warranty liability would be increased by RMB38.4 million.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information regarding our directors and executive officers:

Name	Age	Position
Xiande Li	48	Chairman of the board of directors and chief executive officer
Xianhua Li	49	Director
Wing Keong Siew	72	Independent director
Steven Markscheid	69	Independent director
Yingqiu Liu	73	Independent director
Haiyun (Charlie) Cao	46	Director
Mengmeng (Pan) Li	42	Chief financial officer

Mr. Xiande Li is a founder of our company, the chairman of our board of directors and our chief executive officer. Prior to founding our company, he served as the marketing manager at Zhejiang Yuhuan Solar Energy Source Co., Ltd. from 2003 to 2004, where his responsibilities included overseeing and optimizing day-to-day operations. From 2005 to 2006, he was the chief operations supervisor of ReneSola, a related company listed on the AIM market of the London Stock Exchange in 2006, then dual listed on the NYSE in 2008, where he was in charge of marketing and operation management. Mr. Li is a brother of Mr. Xianhua Li.

Mr. Xianhua Li is a founder and director of our company. He was our vice president from June 2006 to March 2020. Prior to founding our company, Mr. Li served as the chief engineer of Yuhuan Automobile Company, where his major responsibilities included conducting and managing technology research and development activities and supervising production activities, from 1995 to 2000. From 2000 to 2006, he was the factory director of Zhejiang Yuhuan Solar Energy Source Co., Ltd., where he was responsible for managing its research and development activities. Mr. Li is a brother of Mr. Xiande Li.

Mr. Wing Keong Siew has been a director of our company since May 2008. Mr. Siew has been in venture capital/private equity management since 1989 when he was Senior Vice President of H&Q Singapore. In 1995, he formed a joint venture with UBS AG to raise a China Private Equity Fund. He rejoined as the president of H&Q Asia Pacific China and Hong Kong from 1998 to 2003. Mr. Siew then founded Hupomone Capital Partners in 2003. Before joining the investment service industry, he was managing three high-technology multinational companies in Asia between 1978 to 1989, being the General Manager of Fairchild Systems for Asia, the Managing Director of Mentor Graphics Asia Pacific and the Managing Director of Compaq Computer Asia Corporation. Mr. Siew received his bachelor's degree in electrical and electronics engineering from Singapore University in 1975 and his presidential/key executive MBA from Pepperdine University in 1999.

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Mr. Steven Markscheid has been an independent director of the Company since September 15, 2009. Mr. Markscheid is Chairman of Still Waters Green Technology, a UK based battery energy storage project developer. He serves as an independent non-executive director of Xiaobai Maimai Inc., Fanhua Inc., Zhongjin Technology Services Group Company Limited, UGE Inc., and also a trustee-emeritus of Princeton in Asia. From 1998 to 2006, Mr. Markscheid worked for GE Capital. During his time with GE, he led GE Capital's business development activities in China and Asia Pacific, primarily acquisitions and direct investments. Prior to GE, he worked with the Boston Consulting Group throughout Asia. Mr. Markscheid was a commercial banker for ten years in London, Chicago, New York, Hong Kong and Beijing with Chase Manhattan Bank and First National Bank of Chicago. He began his career with the US China Business Council, in Washington D.C. and Beijing. He received his bachelor's degree in East Asian Studies from Princeton University in 1976, his master's degree in international affairs from Johns Hopkins University in 1980 and an MBA from Columbia University in 1991.

Mr. Yingqiu Liu has been an independent director of our company since April 2015. Mr. Liu is a researcher and doctoral supervisor of the Chinese Academy of Social Sciences ("CASS"), a member of the All-China Federation of Industry and Commerce Think Tank Committee, a member of expert group of the Fifth the China Economic and Social Development Council of the CPPCC National Committee, and the director of Institute of Private economy, China Urban Development. Mr. Liu was previously the President of the University of Chinese Academy of Social Sciences, the Director General of the Center for Private Economic Studies in CASS, the Director of Socialist economic theory Research Department in Nankai University. Mr. Liu graduated from Nankai University with a doctor's degree in economics in April 1991. In 1993, Mr. Liu was recognized as an expert who enjoys the life-time special allowance by the State Council. In 1996, Mr. Liu was recognized as an expert with outstanding contributions by CASS.

Mr. Haiyun (Charlie) Cao has been our director since December 2020. He was our chief financial officer from September 2014 to May 2021 and our financial controller from February 2012 to September 2014. Prior to joining us, Mr. Cao served as a senior audit manager at PricewaterhouseCoopers from 2002 to 2012. Mr. Cao holds professional accounting qualifications, including AICPA and CICPA. He has a master's degree in management science and engineering from Shanghai University of Finance and Economics in 2002 and a bachelor's degree in accounting from Jiangxi University in 1999.

Mr. Mengmeng (Pan) Li has been our chief financial officer since May 2021. He was our deputy director of finance since 2021. Before that, he served as the senior internal audit manager of the Company from July 2017 to 2021. Prior to joining the Company, Mr. Li served as an internal control manager of Hi-P International Limited, an SGX listed company, from 2016 to 2017, and an internal audit manager of Canadian Solar Inc., a Nasdaq listed company, from 2010 to 2015. Prior to 2010, he served at Ernst & Young and KPMG. Mr. Li is a Certified Internal Auditor. He received his bachelor's degree in economics from Shanghai University of Finance and Economics in 2003.

The business address of our directors and executive officers is c/o JinkoSolar Holding Co., Ltd., 1 Yingbin Road, Shangrao Economic Development Zone, Jiangxi Province, 334100, People's Republic of China.

B. Compensation of Directors and Executive Officers

All directors receive reimbursements from us for expenses necessarily and reasonably incurred by them for providing services to us or in the performance of their duties. Our directors who are also our employees receive compensation in the form of salaries in their capacity as our employees.

In 2022, we paid cash compensation in the aggregate amount of RMB12.0 million (US\$1.7 million) to our executive officers and directors. The total amount we set aside for the pension or retirement or other benefits of our executive officers and directors was RMB749.8 thousand (US\$108.7 thousand) in 2022.

Share Incentive Plans

2009 Long Term Incentive Plan

We adopted our 2009 Long Term Incentive Plan on July 10, 2009, which was subsequently amended and restated. Our 2009 Long Term Incentive Plan provides for the grant of incentive plan options, restricted shares, restricted share units, share appreciation rights and other share-based awards, referred to as the "Awards." The purpose of the 2009 Long Term Incentive Plan is to attract, retain and motivate key directors, officers and employees responsible for the success and growth of our company by providing them with appropriate incentives and rewards and enabling them to participate in the growth of our company. We have reserved 9,194,356 ordinary shares for issuance under our 2009 Long Term Incentive Plan.

Plan Administration. Our 2009 Long Term Incentive Plan is administered by a committee appointed by our board of directors or in the absence of a committee, our board of directors. In each case, our board of directors or the committee will determine the provisions and terms and conditions of each award grant, including, but not limited to, the exercise price, time at which each of the Awards will be granted, number of shares subject to each Award, vesting schedule, form of payment of exercise price and other applicable terms. The plan administrator may also grant Awards in substitution for options or other equity interests held by individuals who become employees of our company as a result of our acquisition or merger with the individual's employer. If necessary to conform the Awards to the interests for which they are substitutes, the plan administrator may grant substitute Awards under terms and conditions that vary from those that the 2009 Long Term Incentive Plan otherwise requires. Notwithstanding anything in the foregoing to the contrary, any Award to any participant who is a U.S. taxpayer will be adjusted appropriately to comply with Code Section 409A or 424, if applicable.

Award Agreement. Awards granted under our 2009 Long Term Incentive Plan are evidenced by an Award Agreement that sets forth the terms, conditions and limitations for each award grant, which includes, among other things, the vesting schedule, exercise price, type of option and expiration date of each award grant.

Eligibility. We may grant awards to an employee, director or consultant of our company, or any business, corporation, partnership, limited liability company or other entity in which our company holds a substantial ownership interest, directly or indirectly, but which is not a subsidiary and which in each case our board of directors designates as a related entity for purposes of the 2009 Long Term Incentive Plan.

Option Term. The term of each option granted under the 2009 Long Term Incentive Plan may not exceed ten years from the date of grant. If an incentive stock option is granted to an eligible participant who owns more than 10% of the voting power of all classes of our share capital, the term of such option shall not exceed five years from the date of grant.

Exercise Price. In the case of non-qualified stock option, the per share exercise price of shares purchasable under an option shall be determined by our board of directors and specified in the Award Agreement. In the case of incentive stock option, the per share exercise price of shares purchasable under an option shall not be less than 100% of the fair market value per share at the time of grant. However, if we grant an incentive stock option to an employee, who at the time of that grant owns shares representing more than 10% of the total combined voting power of all classes of our share capital, the exercise price is at least 110% of the fair market value of our ordinary shares on the date of that grant.

Amendment and Termination. Our board of directors may amend, suspend or terminate the 2009 Long Term Incentive Plan at any time and for any reason, provided that no amendment, suspension, or termination shall be made that would alter or impair any rights and obligations of a participant under any award theretofore granted without such participant's consent. Unless terminated earlier, our 2009 Long Term Incentive Plan shall continue in effect for a term of ten years from the effective date of the 2009 Long Term Incentive Plan, the term of which has been extended to October 1, 2023.

2014 Equity Incentive Plan

We adopted our 2014 Equity Incentive Plan in August 2014. Our 2014 Equity Incentive Plan provides for the grant of options, share appreciation rights and other share-based awards such as restricted shares, referred to as "Awards," to our directors, key employees or consultants up to 12,796,745 of our ordinary shares. The purpose of the plan is to aid us and our affiliates in recruiting and retaining key employees, directors or consultants of outstanding ability and to motivate such employees, directors or consultants to exert their best efforts on behalf of us and our affiliates by providing incentives through the granting of awards. Our board of directors expects that it will benefit from the added interest which such key employees, directors or consultants will have in our welfare as a result of their proprietary interest in our success. The following paragraphs summarize the terms of the 2014 Equity Incentive Plan.

Types of Awards. The 2014 Equity Incentive Plan permits the awards of options, share appreciation rights or other share-based awards.

Administration. Our 2014 Equity Incentive Plan is administered by our compensation committee. The compensation committee is authorized to interpret the plan, to establish, amend and rescind any rules and regulations relating to the plan, and to make any other determinations that it deems necessary or desirable for the administration of the plan. The compensation committee will determine the provisions, terms and conditions of each award consistent with the provisions of our 2014 Equity Incentive Plan, including, but not limited to, the exercise price for an option, vesting schedule of options and restricted shares, forfeiture provisions, form of payment of exercise price and other applicable terms.

Option Exercise. The term of options granted under the 2014 Equity Incentive Plan may not exceed ten years from the date of grant. The consideration to be paid for our ordinary shares upon exercise of an option or purchase of shares underlying the option may include cash, or its equivalent, ordinary shares of our company, or any combination of the foregoing methods of payment, or consideration received by us in a cashless exercise.

Change in Control. In the case of a change in control event, which is the sale or disposal of all, or substantially all of our assets, the acquisition by a third party of more than 50% of the voting power in our company by way of a merger, consolidation, tender or exchange offer or otherwise, the compensation committee may decide that all outstanding awards that are unexercisable or otherwise unvested or subject to lapse restrictions will automatically be deemed exercisable or otherwise vested or no longer subject to lapse restrictions, as the case may be, as of immediately prior to such change in control event. The compensation committee may also decide to cancel such awards for fair value (as determined in its sole discretion), provide for the issuance of substitute awards that will substantially preserve the otherwise applicable terms of any affected awards previously granted, or provide that affected options will be exercisable for a period of at least 15 days prior to the change in control event but not thereafter.

Amendment and Termination of Plan. Our board of directors may at any time amend, alter or discontinue our 2014 Equity Incentive Plan. Amendments or alterations to our 2014 Equity Incentive Plan are subject to shareholder approval if they increase the total number of shares reserved for the purposes of the plan or change the maximum number of shares for which awards may be granted to any participant, provided in each case only to the extent such shareholder approval is required by stock exchange rules. Amendment, alteration or discontinuation of our 2014 Equity Incentive Plan cannot be made without the consent of a recipient of awards if such action would diminish the rights of that recipient under the awards, provided that the board may amend the plan as it deems necessary to permit the granting of awards to meet the requirements of applicable laws and stock exchange rules.

Unless terminated earlier, our 2014 Equity Incentive Plan shall continue in effect for a term of ten years from the date of adoption.

2021 Equity Incentive Plan

We adopted our 2021 Equity Incentive Plan in March 2021. Our 2021 Equity Incentive Plan provides for the grant of options, restricted shares and other share-based awards, referred to as “Awards,” to our directors, key employees or consultants up to 2,600,000 of our ordinary shares. The purpose of the plan is to aid us in recruiting and retaining key employees, directors or consultants of outstanding ability and to motivate such employees, directors or consultants to exert their best efforts on behalf of us by providing incentives through the granting of awards. Our board of directors expects that it will benefit from the added interest which such key employees, directors or consultants will have in our welfare as a result of their proprietary interest in our success. The following paragraphs summarize the terms of the 2021 Equity Incentive Plan.

Types of Awards. The 2021 Equity Incentive Plan permits the awards of options, restricted shares or other share-based awards.

Administration. Our 2021 Equity Incentive Plan is administered by our compensation committee. The compensation committee is authorized to interpret the plan, to establish, amend and rescind any rules and regulations relating to the plan, and to make any other determinations that it deems necessary or desirable for the administration of the plan. The compensation committee will determine the provisions, terms and conditions of each award consistent with the provisions of our 2021 Equity Incentive Plan, including, but not limited to, the exercise price for an option, vesting schedule of options and restricted shares, forfeiture provisions, form of payment of exercise price and other applicable terms.

Option Exercise. The term of options granted under the 2021 Equity Incentive Plan may not exceed ten years from the date of grant. The consideration to be paid for our ordinary shares upon exercise of an option or purchase of shares underlying the option may include cash, or its equivalent, ordinary shares of our company, or any combination of the foregoing methods of payment, or consideration received by us in a cashless exercise.

Change in Control. In the case of a change in control event, which is the sale or disposal of all, or substantially all of our assets, the acquisition by a third party of more than 50% of the voting power in our company by way of a merger, consolidation, tender or exchange offer or otherwise, the compensation committee may decide that all outstanding awards that are unexercisable or otherwise unvested or subject to lapse restrictions will automatically be deemed exercisable or otherwise vested or no longer subject to lapse restrictions, as the case may be, as of immediately prior to such change in control event. The compensation committee may also decide to cancel such awards for fair value (as determined in its sole discretion), provide for the issuance of substitute awards that will substantially preserve the otherwise applicable terms of any affected awards previously granted, or provide that affected options will be exercisable for a period of at least 15 days prior to the change in control event but not thereafter.

Amendment and Termination of Plan. Our board of directors may at any time amend, alter or discontinue our 2021 Equity Incentive Plan. Amendments or alterations to our 2021 Equity Incentive Plan are subject to shareholder approval if they increase the total number of shares reserved for the purposes of the plan or change the maximum number of shares for which awards may be granted to any participant, provided in each case only to the extent such shareholder approval is required by stock exchange rules. Amendment, alteration or discontinuation of our 2021 Equity Incentive Plan cannot be made without the consent of a recipient of awards if such action would diminish the rights of that recipient under the awards, provided that the board may amend the plan as it deems necessary to permit the granting of awards to meet the requirements of applicable laws and stock exchange rules.

Unless terminated earlier, our 2021 Equity Incentive Plan shall continue in effect for a term of ten years from the date of adoption.

2022 Equity Incentive Plan

We adopted our 2022 Equity Incentive Plan in March 2022. Our 2022 Equity Incentive Plan provides for the grant of options, restricted shares and other share-based awards, referred to as “Awards,” to our directors, key employees or consultants up to 12,000,000 of our ordinary shares. The purpose of this plan is to aid us in recruiting and retaining directors, consultants or key employees of outstanding ability and to motivate such directors, consultants or key employees to exert their best efforts on our behalf by providing incentives through the granting of Awards in recognition of their past and future services. We expect that we will benefit from the added interest which such key employees, directors or consultants will have in our welfare as a result of their proprietary interest in our success.

The following paragraphs summarize the terms of the 2022 Equity Incentive Plan.

Types of Awards. The 2022 Equity Incentive Plan permits the awards of options, restricted shares or other share-based awards.

Administration. Our 2022 Equity Incentive Plan is administered by our compensation committee. The compensation committee is authorized to interpret the plan, to establish, amend and rescind any rules and regulations relating to the plan, and to make any other determinations that it deems necessary or desirable for the administration of the plan. The compensation committee will determine the provisions, terms and conditions of each award consistent with the provisions of our 2022 Equity Incentive Plan, including, but not limited to, the exercise price for an option, vesting schedule of options and restricted shares, forfeiture provisions, form of payment of exercise price and other applicable terms.

Option Exercise. The term of options granted under the 2022 Equity Incentive Plan may not exceed ten years from the date of grant. The consideration to be paid for our ordinary shares upon exercise of an option or purchase of shares underlying the option may include cash, or its equivalent, ordinary shares of our company, or any combination of the foregoing methods of payment, or consideration received by us in a cashless exercise.

Change in Control. In the case of a change in control event, which is the sale or disposal of all, or substantially all of our assets, the acquisition of more than 50% of the voting power in our company by way of a merger, consolidation, tender or exchange offer or otherwise, the compensation committee may decide that all outstanding awards that are unexercisable or otherwise unvested or subject to lapse restrictions will automatically be deemed exercisable or otherwise vested or no longer subject to lapse restrictions, as the case may be, as of immediately prior to such change in control event. The compensation committee may also decide to cancel such awards for fair value (as determined in its sole discretion), provide for the issuance of substitute awards that will substantially preserve the otherwise applicable terms of any affected awards previously granted, or provide that affected options will be exercisable for a period of at least 15 days prior to the change in control event but not thereafter.

Amendment and Termination of Plan. Our board of directors may at any time amend, alter or discontinue our 2022 Equity Incentive Plan. Amendments or alterations to our 2022 Equity Incentive Plan are subject to shareholder approval by an ordinary resolution if they increase the total number of shares reserved for the purposes of the plan or change the maximum number of shares for which awards may be granted to any participant, provided in each case only to the extent such shareholder approval is required by stock exchange rules. Amendment, alteration or discontinuation of our 2022 Equity Incentive Plan cannot be made without the consent of a recipient of awards if such action would diminish the rights of that recipient under the awards, provided that the board may amend the plan as it deems necessary to permit the granting of awards to meet the requirements of applicable laws and stock exchange rules.

Unless terminated earlier, our 2022 Equity Incentive Plan shall continue in effect for a term of ten years from the date of adoption.

2023 Equity Incentive Plan

We adopted our 2023 Equity Incentive Plan in January 2023. Our 2023 Equity Incentive Plan provides for the grant of options, restricted shares and other share-based awards, referred to as “Awards,” to our directors, key employees or consultants up to 20,800,000 of our ordinary shares. The purpose of this plan is to aid us in recruiting and retaining directors, consultants or key employees of outstanding ability and to motivate such directors, consultants or key employees to exert their best efforts on our behalf by providing incentives through the granting of Awards in recognition of their past and future services. We expect that we will benefit from the added interest which such key employees, directors or consultants will have in our welfare as a result of their proprietary interest in our success.

The following paragraphs summarize the terms of the 2023 Equity Incentive Plan.

Types of Awards. The 2023 Equity Incentive Plan permits the awards of options, restricted shares or other share-based awards.

Administration. Our 2023 Equity Incentive Plan is administered by our compensation committee. The compensation committee is authorized to interpret the plan, to establish, amend and rescind any rules and regulations relating to the plan, and to make any other determinations that it deems necessary or desirable for the administration of the plan. The compensation committee will determine the provisions, terms and conditions of each award consistent with the provisions of our 2023 Equity Incentive Plan, including, but not limited to, the exercise price for an option, vesting schedule of options and restricted shares, forfeiture provisions, form of payment of exercise price and other applicable terms.

Option Exercise. The term of options granted under the 2023 Equity Incentive Plan may not exceed ten years from the date of grant. The consideration to be paid for our ordinary shares upon exercise of an option or purchase of shares underlying the option may include cash, or its equivalent, ordinary shares of our company, or any combination of the foregoing methods of payment, or consideration received by us in a cashless exercise.

Vesting Condition. The vesting of the Awards is subject to (i) the participants’ continued service with the Company, and (ii) the Company meeting certain financial performance targets and investment targets.

Change in Control. In the case of a change in control event, which is (i) the sale or disposal of all, or substantially all of our assets, or (ii) the acquisition of more than 50% of the voting power in our company by way of a merger, consolidation, tender or exchange offer or otherwise, and the acquirer has made its the intention to cause the Company to cease to be a public company known to the public, the compensation committee may decide that all outstanding awards that are unexercisable or otherwise unvested or subject to lapse restrictions will automatically be deemed exercisable or otherwise vested or no longer subject to lapse restrictions, as the case may be, as of immediately prior to such change in control event. The compensation committee may also decide to cancel such awards for fair value (as determined in its sole discretion), provide for the issuance of substitute awards that will substantially preserve the otherwise applicable terms of any affected awards previously granted, or provide that affected options will be exercisable for a period of at least 15 days prior to the change in control event but not thereafter.

Amendment and Termination of Plan. Our board of directors may at any time amend, alter or discontinue our 2023 Equity Incentive Plan. Amendments or alterations to our 2023 Equity Incentive Plan are subject to shareholder approval by an ordinary resolution if they increase the total number of shares reserved for the purposes of the plan or change the maximum number of shares for which awards may be granted to any participant, provided in each case only to the extent such shareholder approval is required by stock exchange rules. Amendment, alteration or discontinuation of our 2023 Equity Incentive Plan cannot be made without the consent of a recipient of awards if such action would diminish the rights of that recipient under the awards, provided that the board may amend the plan as it deems necessary to permit the granting of awards to meet the requirements of applicable laws and stock exchange rules.

Unless terminated earlier, our 2023 Equity Incentive Plan shall continue in effect for a term of ten years from the date of adoption.

Share Options

As of the date of this annual report, options to purchase 172,000 ordinary shares are outstanding. The following table summarizes the outstanding options that we granted to our directors and executive officers and to other individuals as a group under our share incentive plans as of the date of this annual report. We did not grant our directors and executive officers any outstanding options other than the individuals named below.

Name	Number of Shares	Exercise Price (US\$)	Grant Date	Expiration Date
Wing Keong Siew	*	3.2875	October 10, 2014	October 9, 2024
Other Employees	172,000	3.2875	October 10, 2014	October 9, 2024
	0	4.3775	October 1, 2013	October 1, 2023

* Upon exercise of all share options, would beneficially own less than 1.0% of our then outstanding share capital.

C. Board Practices

Board of Directors

Our board of directors currently consists of six directors. The law of our home country, which is the Cayman Islands, does not require a majority of the board of directors of our company to be composed of independent directors, nor does the Cayman Islands law require that of a compensation committee or a nominating committee. We intend to follow our home country practice with regard to composition of the board of directors. A director is not required to hold any shares in our company by way of qualification. A director who is in any way, whether directly or indirectly, interested in a contract or transaction or proposed contract or transaction with our company must declare the nature of his interest at a meeting of the directors. Subject to the NYSE rules and disqualification by the chairman of the relevant board meeting, a director may vote in respect of any contract or transaction or proposed contract or transaction notwithstanding that he may be interested therein and if he does so his vote shall be counted and he may be counted in the quorum at the relevant board meeting at which such contract or transaction or proposed contract or transaction is considered. Our board of directors may exercise all of the powers of our company to borrow money, and to mortgage or charge our undertakings, property and uncalled capital, and to issue debentures or other securities whenever money is borrowed or pledged as security for any debt, liability or obligation of our company or of any third party.

Committees of the Board of Directors

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

Audit Committee

Our audit committee consists of Steven Markscheid, Yingqiu Liu and Wing Keong Siew, and is chaired by Steven Markscheid. All of the members of the audit committee satisfy the "independence" requirements of the NYSE Listed Company Manual, Section 303A, and meet the criteria for "independence" under Rule 10A-3 under the Exchange Act. The audit committee oversees our accounting and financial reporting processes and the audits of the financial statements of our company. The audit committee is responsible for, among other things:

- selecting the independent auditors and pre-approving all auditing and non-auditing services permitted to be performed by the independent auditors;
- reviewing with the independent auditors any audit problems or difficulties and management's response;
- reviewing and approving all proposed related-party transactions, as defined in Item 404 of Regulation S-K under the Securities Act;
- discussing the annual audited financial statements with management and the independent auditors;
- reviewing major issues as to the adequacy of our internal controls and any special audit steps adopted in light of material control deficiencies;
- meeting separately and periodically with management and the independent auditors; and
- reporting regularly to the full board of directors.

Compensation Committee

Our compensation committee consists of Xiande Li and Steven Markscheid, and is chaired by Xiande Li. Steven Markscheid satisfies the "independence" requirements of the NYSE Listed Company Manual, Section 303A, and meets the criteria for "independence" under Rule 10A-3 under the Exchange Act. Our home country practice differs from the NYSE rules that require the compensation committees of listed companies to be comprised solely of independent directors. There are, however, no specific requirements under Cayman Islands law on the composition of compensation committees. The compensation committee assists the board in reviewing and approving the compensation structure, including all forms of compensation, relating to our executives. The compensation committee is responsible for, among other things:

- reviewing and evaluating and if necessary, revising our company's compensation policy, amending, or recommending that the board amend, these goals and objectives if the compensation committee deems it appropriate;
- evaluating annually the performance of our chief executive officer in light of the goals and objectives of our company's executive plans, and either as a committee or together with the other independent directors (as directed by the board), determining and approving the compensation level of our chief executive officer based on this evaluation;
- determining, or recommending to the board for determination, the annual base and incentive compensation of the chief financial officer;
- reviewing and recommending to the board the compensation of our directors;
- reviewing periodically and making recommendations to the board regarding any long-term incentive compensation or equity plans, programs or similar arrangements, annual bonuses, employee pension and welfare benefit plans; and
- reporting regularly to the full board of directors.



Nominating Committee

Our nominating and corporate governance committee consists of Yingqiu Liu, Xiande Li and Steven Markscheid, and is chaired by Xiande Li., Yingqiu Liu and Steven Markscheid satisfy the “independence” requirements of the NYSE Listed Company Manual, Section 303A, and meet the criteria for “independence” under Rule 10A-3 under the Exchange Act. Our home country practice differs from the NYSE rules that require the nominating committees of listed companies to be comprised solely of independent directors. There are, however, no specific requirements under Cayman Islands law on the composition of nominating committees. The nominating and corporate governance committee assists the board of directors in selecting individuals qualified to become our directors and in determining the composition of the board and its committees. The nominating and corporate governance committee is responsible for, among other things:

- identifying and recommending to the board nominees for election by the shareholders or appointment by the board, or for appointment to fill any vacancy;
- reviewing annually with the board the current composition of the board with regard to characteristics such as knowledge, skills, experience, expertise and diversity required for the board as a whole;
- identifying and recommending to the board the directors to serve as members of the board’s committees;
- developing and recommending to the board of directors a set of corporate governance guidelines and principles applicable to our company;
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance; and
- reporting regularly to the full board of directors.

Duties of Directors

Under Cayman Islands law, our directors owe to us fiduciary duties, including a duty of loyalty, a duty to act honestly and a duty to act in good faith and in what they consider to be our best interests. Our directors also have a duty to exercise the skill they actually possess and such care and diligence that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association, as amended and restated from time to time. Our company has the right to seek damages if a duty owed by our directors is breached.

Terms of Directors and Executive Officers

One-third of our directors for the time being (or, if the number of our directors is not a multiple of three, the number nearest to but not greater than one-third) will retire from office by rotation at each annual general meeting. However, the chairman of our board of directors will not be subject to retirement by rotation or be taken into account in determining the number of our directors to retire in each year. A director will cease to be a director if, among other things, the director (i) becomes bankrupt or has a receiving order made against him or suspends payment or compounds with his creditors, (ii) dies or is found by our company to be or becomes of unsound mind, (iii) resigns his office by notice in writing to our company, (iv) without special leave of absence from our board of directors, is absent from meetings of our board of directors for six consecutive months and the board resolves that his office be vacated, (v) is prohibited by law from being a director or (vi) ceases to be a director by virtue of any provision of the Companies Act (As Revised) of the Cayman Islands or is removed from office pursuant to any other provision of our memorandum and articles of association.

Our officers are appointed by and serve at the discretion of the board of directors.

Employment Agreements

We have entered into employment agreements with each of our executive officers. These employment agreements became effective on the signing date and will remain effective through 2020. We may terminate an executive officer's employment for cause, at any time, without prior notice or remuneration, for certain acts of the officer, including, but not limited to, failure to satisfy our job requirements during the probation period, a material violation of our regulations, failure to perform agreed duties, embezzlement that causes material damage to us, or conviction of a crime. An executive officer may terminate his or her employment for cause at any time, including, but not limited to, our failure to pay remuneration and benefits or to provide a safe working environment pursuant to the employment agreement, or our engagement in deceptive or coercive conduct that causes him or her to sign the agreement. If an executive officer breaches any terms of the agreement, which leads to, including, but not limited to, termination of the agreement, resignation without notice, or failure to complete resignation procedures within the stipulated period, he or she shall be responsible for our economic losses and shall compensate us for such losses. We may renew the employment agreements with our executive officers.

D. Employees

As of December 31, 2020, 2021 and 2022, we had a total of 24,361, 31,030 and 46,511 employees, respectively. The increase in our number of employees in 2022 was mainly attributable to the expansion of our manufacturing facilities in China. As of December 31, 2022, we had 46,511 full-time employees, including 30,948 in manufacturing, 1,902 in research and development, 811 in sales and marketing and 12,850 in administration. Substantially all of these employees are located in China with a small portion of employees based in the United States, Europe and other countries and regions.

We believe we maintain a good working relationship with our employees, and we have not experienced any labor disputes or any difficulty in recruiting staff for our operations. In October 2013 and 2014, we were named one of the Top 100 Best Employers in China in 2013 by the World Executive Journal in conjunction with the World HR Laboratory, Bossline and CEO-ZINE. JinkoSolar was awarded HR Asia Best Companies to Work for in Asia Awards – China Edition, in 2019, 2020 and 2021. With the corporate culture of equality, accountability, commitment, and driving excellence, we were acknowledged for the best practices in human resource management. In April 2021, we won the award for "Asia's Best Employer" for the third consecutive year. In November 2022, Jiangxi Jinko won the award for "Best Campus Project" in Employer Branding Festival 2022 organized by Employer Branding Institute, and was awarded as one of the Best Employers of the Year in China by Zhaopin.com. In December 2022, Jiangxi Jinko was awarded as one of the winners of LinkedIn MostIn Awards for 2022 and one of the Most Influential Employers in 2023 by Haitou.cc.

Our employees are not covered by any collective bargaining agreement. In line with the expansion of our operations, we plan to hire additional employees, including additional accounting, finance and sales, marketing personnel as well as manufacturing and engineering employees.

In line with local customary practices, we have made contributions to the social insurance funds which met the requirement of the local minimum wage standard, instead of the employees' actual salaries as required, and have not made full contribution to the housing funds. We estimate the aggregate amount of unpaid social security benefits and housing funds to be RMB605.8 million, RMB740.5 million and RMB1.07 million (US\$155.3 million), respectively, as of December 31, 2020, 2021 and 2022. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Our failure to make payments of statutory social welfare and housing funds to our employees could adversely and materially affect our financial condition and results of operations."

E. Share Ownership

The following table sets forth information with respect to the beneficial ownership of our shares as of March 31, 2023 by:

- each of our directors and executive officers; and

- each person known to us to own beneficially more than 5.0% of our shares.

	Ordinary Shares Number	Beneficially Owned ⁽¹⁾⁽²⁾ %
Directors and Executive Officers:		
Xiande Li ⁽³⁾⁽⁷⁾	31,488,428	15.5
Xianhua Li ⁽⁴⁾⁽⁷⁾	7,782,612	3.8
Wing Keong Siew	*	*
Steven Markscheid	*	*
Yingqiu Liu	*	*
Haiyun (Charlie) Cao	*	*
Mengmeng (Pan) Li	*	*
All Directors and Executive Officers as a group	40,782,804	20.1
Principal Shareholders:		
Brilliant Win Holdings Limited ⁽³⁾	31,488,428	15.5
Yale Pride Limited ⁽⁵⁾	15,438,996	7.6
Zhuoling International Limited ⁽⁶⁾	12,800,000	6.3

* Less than 1%.

- (1) Beneficial ownership is determined in accordance with Rule 13d-3 of the General Rules and Regulations under the Exchange Act, and includes voting or investment power with respect to the securities.
- (2) The percentage of beneficial ownership is calculated by dividing the number of shares beneficially owned by such person or group by 202,614,901 ordinary shares, being the number of shares outstanding as of March 31, 2023 (excluding 607,989 ADSs representing 2,431,956 ordinary shares reserved for future grants under our share incentive plans, and 2,945,840 ordinary shares as treasury stock), and the number of ordinary shares that such person or group has the right to require within 60 days as of March 31, 2023 by option or other agreement (these shares are also included in the computation of the percentage ownership of any other person or group).
- (3) Represents 31,488,428 ordinary shares (including certain ordinary shares in the form of ADSs and restricted ADSs) held by Brilliant Win Holdings Limited. Brilliant Win Holdings Limited is a British Virgin Islands company wholly owned by Cypress Hope Limited, a British Virgin Islands company wholly owned by Mr. Li Xiande. Mr. Xiande Li is the sole director of Brilliant Win Holdings Limited and as such has the power to vote and dispose of the ordinary shares held by Brilliant Win Holdings Limited. Therefore, Mr. Xiande Li is the beneficial owner of all our ordinary shares held by Brilliant Win Holdings Limited. The registered address of Brilliant Win Holdings Limited is Commerce House, Wickhams Cay 1, P. O. Box 3140, Road Town, Tortola, British Virgin Islands VG1110. Mr. Xiande Li is a brother of Mr. Xianhua Li.
- (4) Represents 7,782,612 ordinary shares (including certain ordinary shares in the form of ADSs) held by Peaky Investments Limited. Peaky Investments Limited is a British Virgin Islands company which is wholly owned by Talent Galaxy Limited, a British Virgin Islands company wholly owned by Mr. Xianhua Li. Mr. Xianhua Li is the sole director of Peaky Investments Limited and as such has the power to vote and dispose of the ordinary shares held by Peaky Investments Limited. Therefore, Mr. Xianhua Li is the beneficial owner of all our ordinary shares held by Peaky Investments Limited. The registered address of Peaky Investments Limited is Commerce House, Wickhams Cay 1, P. O. Box 3140, Road Town, Tortola, British Virgin Islands VG1110. Mr. Xianhua Li is a brother of Mr. Xiande Li.

- (5) Represents 15,438,996 ordinary shares (including certain ordinary shares in the form of ADSs and restricted ADSs) held by Yale Pride Limited. Yale Pride Limited is a British Virgin Islands company wholly owned by Charming Grade Limited, which is in turn wholly owned by Mr. Kangping Chen. Mr. Kangping Chen is the sole director of Yale Pride Limited and as such has the power to vote and dispose of the ordinary shares held by Yale Pride Limited. Therefore, Mr. Kangping Chen is the beneficial owner of all our ordinary shares held by Yale Pride Limited. The registered address of Yale Pride Limited is Commerce House, Wickhams Cay 1, P. O. Box 3140, Road Town, Tortola, British Virgin Islands VG1110. Mr. Chen is the brother-in-law of Mr. Xiande Li.
- (6) Represents 12,800,000 ordinary shares in the form of ADSs held by Zhuoling International Limited. Zhuoling International Limited is a British Virgin Islands company wholly owned by Shangrao Zhuoling No. 2 Enterprise Development Center (Limited Partnership), 99.99% and 0.01% equity interest of which is in turn owned by Mr. Kangping Chen and his wife, respectively. Mr. Kangping Chen is the sole director of Zhuoling International Limited and as such has the power to vote and dispose of the ordinary shares held by Zhuoling International Limited. Therefore, Mr. Kangping Chen is the beneficial owner of all our ordinary shares held by Zhuoling International Limited. The registered address of Zhuoling International Limited is OMC Chambers, Wickhams Cay 1, Road Town, Tortola, British Virgin Islands.
- (7) In June 2021, Mr. Xiande Li, Mr. Kangping Chen and Mr. Xianhua Li (each, the “Concert Person,” collectively, the “Concert Persons”) entered into an acting-in-concert agreement (the “Acting-in-Concert Agreement”), which is filed as an exhibit to this annual report. According to the Acting-in-Concert Agreement, the Concert Persons agree to reach a common decision and act in concert on each matter with respect to business strategy, appointment/removal of directors and management, organizational operation and business operation of the Company, JinkoSolar Investment and Jiangxi Jinko. The Acting-in-Concert Agreement further provides that each of the Concert Persons agrees to vote (or cause to be voted) all of the shares that they have the power to vote or to direct the vote of in the manner agreed by the Concert Persons, or otherwise in certain circumstances that no prior agreement could be reached, designated by Mr. Xiande Li at any shareholder meeting. The Concert Persons may be deemed as a “group” for purposes of Section 13(d)(3) of the Exchange Act and Rule 13d-5 thereunder, and as a result such “group” would beneficially own 67,510,036 ordinary shares, which represent 33.3% of the Company’s ordinary shares outstanding as of March 31, 2023.

The ADSs are traded on the NYSE and brokers or other nominees may hold ADSs in “street name” for customers who are the beneficial owners of the ADSs. As a result, we may not be aware of each person or group of affiliated persons who beneficially own more than 5.0% of our ordinary shares.

As of March 31, 2023, we had one record shareholder in the United States, our depository. We cannot ascertain the exact number of beneficial shareholders with addresses in the United States.

None of our shareholders has different voting rights from other shareholders as of March 31, 2023. We are currently not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

F. Disclosure of a Registrant’s Action to Recover Erroneously Awarded Compensation

Not applicable.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

Please refer to “Item 6. Directors, Senior Management and Employees—E. Share Ownership.”

B. Related Party Transactions

Related party balances

The following table sets forth the outstanding amounts due from/to related parties as of December 31, 2022.

	As of December 31, 2022
	RMB
Accounts receivable from related parties:	
Accounts receivable from JinkoPower for sales of solar modules and others	139,713,488.0
Accounts receivable from Sweihan PV Power Company P.S.J.C (“Sweihan PV”, which develops and operates solar power projects in Dubai)	—
Advances to Suppliers from related parties:	
Advances to Suppliers from Inner Mongolia Xinte Silicon Materials Co., Ltd for purchase of silicon	56,859,689.0
Notes receivables from related parties:	
Notes receivables from JinkoPower	282,823,842.0
Prepayment and Other receivables from related parties:	
Prepayments to JinkoPower for outsourcing services	5,663,521.0
Other receivables due from JinkoPower for disposal of solar power projects	12,953,307.5
Other receivables due from Sweihan PV Power Company P.S.J.C (“Sweihan PV”, which develops and operates solar power projects in Dubai) for technical services	1,075,253.2
Other receivables from JinkoPower for miscellaneous transactions	3,412,938.0
Other assets from a related party:	
Accounts receivable from JinkoPower for sales of solar modules and others	14,602,865.0
Guarantee receivables due from JinkoPower	—
Long-term receivables due from Sweihan PV Power Company P.S.J.C for DSRA deposit	37,760,174.0
Accounts payable due to a related party:	
Accounts payable due to Jiangsu Jinko-Tiansheng Co., Ltd.	—
Advance from customers due to a related party:	
Advance from customers due to JinkoPower for sales of solar modules and others	3,828,559.0
Notes Payable from related parties:	
Notes Payable due to Inner Mongolia Xinte Silicon Materials Co., Ltd	419,500,000.0
Other payables due to a related party:	
Other payables due to JinkoPower for payments on behalf of our company	5,964,014.0
Other payables to Jiangxi Desun for leasing of land and buildings	—

- (1) Advances of travelling and other business expenses to executive directors who are also shareholders represent the amounts we advanced to them for expected expenses, charges and incidentals relating to their business development activities.
- (2) Balances due to related parties are interest-free, not collateralized, and have no definitive repayment terms.
- (3) On March 30, 2021, we signed an agreement to offset the debts and receivables between JinkoPower and us with the aggregate amount of RMB71.0 million.



Related party transactions

Related party transactions for the year ended December 31, 2022 were as follows:

	2022
	RMB
Revenue from sales of products and providing services to related parties	
Revenue from sales of products to Sweihan PV	—
Income of financing guarantees	—
Revenue from sales of products to JinkoPower	325,175,512.0
Income of project management provided to Sweihan PV	2,978,766.0
Rental services provided to JinkoPower	5,040,724.0
Service expenses provided by related parties	
Processing fee of OEM service charged by Jiangsu Jinko-Tiansheng	—
Solar project management service provided by JinkoPower	7,133,498.0
Rental services provided by Jiangxi Desun	—
Electricity fee charged by JinkoPower	27,465,021.0
Other fees charged by JinkoPower	—
Silicon procurement from Xinte Silicon	824,784,723.1

In connection with our disposal of JinkoSolar Power downstream business in 2016, we entered into a master service agreement with JinkoPower under which we agreed to provide a guarantee for JinkoPower's financing obligations under its separate loan agreements. In the event that JinkoPower fails to perform its obligations under the loan agreements or otherwise defaults thereunder, we will become liable for JinkoPower's obligations under the loan agreements. We charge JinkoPower service fees for the debt payment guarantee service according the master service agreement.

Pursuant to the master service agreement, guarantee service fee is to be settled annually, and the management of us believes the guarantee fee charges are at market rates. The guarantee receivables were settled upon the receipt of guarantee fees from JinkoPower. We have received nil guarantee fees from JinkoPower in 2022.

In 2022, we and JinkoPower entered into an agreement to cancel the above guarantee arrangement.

As of December 31, 2022, we recorded the guarantee fee income receivable amounted to RMB3.5 million (US\$500.8 thousand) and did not record any guarantee liability. Other income from JinkoPower for the guarantee fee amortized in 2022 amounted to nil, respectively.

In 2022, sales of solar module products to subsidiaries of JinkoPower amounted to RMB325.2 million (US\$47.1 million). As of December 31, 2022, outstanding receivables due from JinkoPower were RMB422.5million (US\$61.3 million), among which nil was overdue over one year. We did not charged JinkoPower interest on the overdue receivables.

In 2022, we did not record any sales of solar module products to Sweihan PV.

In 2022, rental services provided to subsidiaries of JinkoPower amounted to RMB5.0 million (US\$730.8 thousand).

In 2022, we did not record any processing service fee due from Jinko-Tiansheng. Jinko-Tiansheng is an OEM service provider which provided PV module processing and assembling services to us. We disposed all of our equity interest in Jinko-Tiansheng in 2022 and Jinko-Tiansheng is not our related party any more.

In November 2017, we entered into an agreement with JinkoPower, which entrusted JinkoPower to exercise certain shareholders' rights (other than right of profit distribution, right of residual property distribution and right of disposition) in five operating entities of overseas power stations which were then wholly-owned by us, enabling JinkoPower to monitor the construction and daily operations of these power stations. We retain ownership of these power stations and there exists no call or other rights of JinkoPower. We agree to pay service fees calculated based on the actual costs incurred by JinkoPower during the power stations' construction period and a fixed amount fee during the operation period. We had paid RMB5.6 million (US\$821.1 thousand) in advance as of December 31, 2022 and recorded service expenses incurred in 2020, 2021 and 2022, amounted to RMB9.4 million, RMB8.8 million and RMB7.1 million (US\$1.0 million), respectively, as cost of project assets.

On January 1, 2008, Jiangxi Desun and us entered into an operating lease agreement pursuant to which Jiangxi Desun leased its buildings and land use rights to us for a ten-year period from January 1, 2008 to December 31, 2017. In 2018, the agreement was extended for another 10 years from January 1, 2018 to December 31, 2027. Jiangxi Desun did not charged us in rent for 2022.

In 2022, electricity fee charged by subsidiaries of JinkoPower amounted to RMB27.5 million (US\$4.0 million).

JinkoSolar jointly invested in Xinte Silicon in 2021 which was accounted for under the equity method. JinkoSolar purchased polysilicon of nil and RMB824.8 million (US\$119.6 million) from Xinte Silicon during the years ended December 31, 2021 and 2022, respectively.

Employment Agreements

See “Item 6. Directors, Senior Management and Employees—C. Board Practices” for details regarding employment agreements with our senior executive officers.

Share Incentives

See “Item 6. Directors, Senior Management and Employees—B. Compensation” for a description of share options and stock purchase rights we have granted to our directors, officers and other individuals as a group.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

We have appended consolidated financial statements filed as part of this annual report. See “Item 18 Financial Statements”.

Legal and Administrative Proceedings

In 2011, SolarWorld Industries America Inc., a solar panel manufacturing company in the United States, filed anti-dumping and countervailing duty petitions with the United States Department of Commerce (the “U.S. Department of Commerce”) and United States International Trade Commission (the “U.S. International Trade Commission”) against the Chinese solar industry, accusing Chinese producers of crystalline silicon photovoltaic (“CSPV”) cells, whether or not assembled into modules, of selling their products (i.e., CSPV cells or modules incorporating these cells) in the United States at less than fair value, and of receiving financial assistance from the Chinese governments that benefited the production, manufacture, or exportation of such products. JinkoSolar was on the list of the solar companies subject to such investigations by the U.S. Department of Commerce. On November 9, 2011, the U.S. Department of Commerce announced that it launched the anti-dumping duty and countervailing duty investigation into the accusations. On December 7, 2012, the U.S. Department of Commerce issued the anti-dumping duty order and countervailing duty order. As a result, cash deposits were required to pay on import into the United States of the CSPV cells, whether or not assembled into modules from China. The announced cash deposit rates applicable to us were 13.94% (for anti-dumping) and 15.24% (for countervailing). The actual anti-dumping duty and countervailing duty rates at which entries of covered merchandise are finally assessed may differ from the announced deposit rates because they are subject to the subsequent administrative reviews by U.S. Department of Commerce.

In January 2014, the U.S. Department of Commerce initiated the first administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July 2015, the U.S. Department of Commerce issued the final results of this first administrative review, according to which, the anti-dumping and countervailing rates applicable to us were 9.67% and 20.94%, respectively. Such rates apply as the final rates on the import into the United States of the CSPV cells, whether or not assembled into modules from China, from May 25, 2012 to November 30, 2013 for dumping, and from March 26, 2012 to December 31, 2012 for countervailing, respectively. Such rates were the cash deposit rates applicable to us from July 14, 2015. In February 2015 and February 2016, the U.S. Department of Commerce initiated the second administrative and the third administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China, respectively. The U.S. Department of Commerce issued the final results of the second administrative review in June and July of 2016 and the final results of the third administrative review in July 2017. As we were not included in the second and the third administrative review, the rates applicable to us remained at 9.67% (for anti-dumping) and 20.94% (for countervailing) after this review. In February 2017, the U.S. Department of Commerce initiated the fourth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July 2018, the U.S. Department of Commerce published the final results of the fourth administrative review. As we were not included in this anti-dumping administrative review, the anti-dumping deposit rates applicable to us remained at 9.67%. The countervailing deposit rates applicable to us were 13.20% after this review. On October 30, 2018, the U.S. Department of Commerce amended the final results of the fourth countervailing administrative review. As a result, the countervailing deposit rates applicable to us were 10.64% after this amendment. On October 29, 2020, the U.S. Department of Commerce amended the final results of the fourth countervailing administrative review pursuant to the final judgement of the United States Court of International Trade; the final subsidy rate applicable to us for the entries made during the period from January 1, 2015 through December 31, 2015 was changed to 4.22%. In November 2017, the U.S. Department of Commerce and the U.S. International Trade Commission initiated five-year reviews to determine whether revocation of the anti-dumping and countervailing duty orders with respect to CSPV cells, whether or not assembled into modules from China, would likely lead to continuation or recurrence of material injury. In March 2018, the U.S. Department of Commerce determined that revocation of the countervailing order would likely lead to continuation or recurrence of a net countervailable subsidy. In March 2019, the U.S. International Trade Commission's determined that revocation of the countervailing order would likely lead to the continuation or recurrence of countervailable subsidies. In February 2018, the U.S. Department of Commerce initiated the fifth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In July and August 2019, the U.S. Department of Commerce issued the final results of the fifth administrative review, according to which the anti-dumping and countervailing deposit rates applicable to us were 4.06% and 12.76%, respectively. In December 2019, the U.S. Department of Commerce amended the final results of the fifth countervailing administrative review. As a result, the countervailing deposit rate applicable to us was 12.7% after this amendment. In March 2019, the U.S. Department of Commerce initiated the sixth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In October 2020, the U.S. Department of Commerce issued the final result of the sixth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 68.93%. In December 2020, the U.S. Department of Commerce amended the final result of the sixth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 95.5% after such amendment. In December 2020, the U.S. Department of Commerce issued the final result of the sixth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 12.67%. In April 2021, the U.S. Department of Commerce amended the final result of the sixth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 11.97% after such amendment. In February 2020, the U.S. Department of Commerce initiated the seventh administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In August and October 2021, the U.S. Department of Commerce issued the final results of the seventh administrative review, according to which the anti-dumping and countervailing deposit rates applicable to us were 0% and 19.28%, respectively. In February 2021, the U.S. Department of Commerce initiated the eighth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. In June 2022, the U.S. Department of Commerce issued the final result of the eighth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 15.71%. In August 2022, the U.S. Department of Commerce amended the final result of the eighth anti-dumping administrative review, according to which the anti-dumping deposit rate applicable to us was 20.99% after such amendment. In June 2022, the U.S. Department of Commerce issued the final result of the eighth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 15.75%. In August 2022, the U.S. Department of Commerce amended the final result of the eighth countervailing administrative review, according to which the countervailing deposit rate applicable to us was 15.87% after such amendment. In February 2022, the U.S. Department of Commerce initiated the ninth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. The ninth administrative review is pending as of the date of this annual report. In February 2023, the U.S. Department of Commerce initiated the tenth administrative review of the anti-dumping duty order and countervailing duty order with respect to CSPV cells, whether or not assembled into modules, from China. The tenth administrative review is pending as of the date of this annual report, and therefore, the final anti-dumping and countervailing rates applicable to us are subject to change.

On February 8, 2022, Auxin Solar Inc. (“Auxin”), a U.S. manufacturer of solar modules, requested that the U.S. Department of Commerce initiate country-wide inquiries into whether crystalline silicon photovoltaic cells, and modules containing such cells (solar cells and modules), that are produced/assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China are circumventing the anti-dumping and countervailing orders on solar cells and modules from China. On March 25, 2022, the U.S. Department of Commerce determined to initiate the circumvention inquiries (the “Anti-Circumvention Case”). Such Anti-Circumvention Case is pending as of the date of this annual report.

In 2013, SolarWorld Industries America Inc. filed a separate petition with the U.S. Department of Commerce and the U.S. International Trade Commission resulting in the institution of new anti-dumping and countervailing duty investigations against import of certain CSPV products from China. The petitions accused Chinese producers of such certain CSPV modules of dumping their products in the United States and receiving countervailable subsidies from the Chinese government. This action excluded from its scope the CSPV cells, whether or not assembled into modules, from China. In February 2015, following the affirmative injury determination made by U.S. International Trade Commission, the U.S. Department of Commerce issued the anti-dumping duty order and countervailing duty order. As a result, the final cash deposits were required to pay on import into the United States of the CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The announced cash deposit rates applicable to us were 65.36% (for anti-dumping) and 38.43% (for countervailing). The actual anti-dumping duty and countervailing duty rates at which entries of covered merchandise are finally assessed may differ from the announced deposit rates because they are subject to the administrative reviews by the U.S. Department of Commerce. In April 2016 and April 2017, the U.S. Department of Commerce initiated the first and the second administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China, respectively. In July and September 2017, the U.S. Department of Commerce issued the final results of this first administrative review. The second administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in August 2017 and November 2017, respectively. In April 2018, the U.S. Department of Commerce initiated the third administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final results of the third administrative reviews were 165.04% (for anti-dumping) and 94.83% (for countervailing). We were not included in this third administrative reviews, therefore, the cash deposit rates applicable to us remained at 65.36% (for anti-dumping) and 38.43% (for countervailing). In May 2019, the U.S. Department of Commerce initiated the fourth administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The fourth administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in September and October 2019, respectively. In April 2020, the U.S. Department of Commerce initiated the fifth administrative reviews of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The fifth administrative reviews of the anti-dumping duty order and countervailing duty order were rescinded by the U.S. Department of Commerce in August 2020. In January 2020, the U.S. Department of Commerce and the U.S. International Trade Commission initiated five-year reviews to determine whether revocation of the anti-dumping and countervailing duty orders with respect to CSPV modules assembled in China, consisting of CSPV cells produced in a customs territory other than China, would likely lead to continuation or recurrence of material injury. In September 2020, the U.S. International Trade Commission determined that revocation of the countervailing and antidumping duty orders would likely lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time and as a result the U.S. Department of Commerce hereby ordered the continuation of the AD and CVD orders on crystalline silicon photovoltaic products from China. The U.S. Customs and Border Protection will continue to collect AD and CVD cash deposits at the rates in effect at the time of entry for all imports of subject merchandise. In February 2021, the U.S. Department of Commerce announced the opportunity for interested parties to request the sixth administrative review and the due date for such request was the last day of February 2021. The sixth administrative review has not yet been initiated as of the date of this annual report. In March 2021, the U.S. Department of Commerce revoked, in part, the antidumping duty and countervailing duty orders on CSPV products from China with respect to certain off-grid portable small panels. In April 2022, the U.S. Department of Commerce initiated the seventh administrative review (review period from February 1, 2021 to January 31, 2022) of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final result of the seventh administrative review is pending as of the date of this annual report. In April 2023, the U.S. Department of Commerce initiated the eighth administrative review (review period from February 1, 2022 to January 31, 2023) of the anti-dumping duty order and countervailing duty order with respect to CSPV modules assembled in China consisting of CSPV cells produced in a customs territory other than China. The final result of the eighth administrative review is pending as of the date of this annual report.

In May 2017, U.S. International Trade Commission initiated global safeguard investigation to determine whether CSPV cells (whether or not partially or fully assembled into other products) were being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported articles ("Section 201 Investigation"). The Section 201 Investigation was not country specific. They involved imports of the products under investigation from all sources, including China. In September 2017, the U.S. International Trade Commission voted affirmatively in respect of whether imports of CSPV cells (whether or not partially or fully assembled into other products) were causing serious injury to domestic producers of CSPV products. On January 22, 2018, the U.S. President made the final decision to provide a remedy to the U.S. industry, and the CSPV cells/modules concerned were subject to the safeguard measures established in the U.S. President's final result, which included that the CSPV cells and modules imported would be subject to additional duties of 30%, 25%, 20% and 15% from the first year to the fourth year, respectively, except for the first 2.5 GW of all imported CSPV cells concerned in each of those four years, which are excluded from the additional tariff. On October 10, 2020, the U.S. President issued a proclamation and determined that the section 201 duty of the fourth year beginning in February 2021 will be 18%, instead of 15%. In August 2021, a joint petition seeking an extension of the safeguard measure was filed. On December 8, 2021, in response to petitions by representatives of the domestic industry, U.S. International Trade Commission issued its determination and report, finding that safeguard action on CSPV cells (whether or not partially or fully assembled into other products) continues to be necessary to prevent or remedy the serious injury to the domestic industry, and that there is evidence that the domestic industry is making a positive adjustment to import competition. On February 4, 2022, the U.S. President determined to extend the safeguard measure for another four years and made the final decision, which included that the CSPV cells and modules imported would be subject to additional duties of 14.75%, 14.5%, 14.25% and 14% from through the first year to the fourth year, respectively, except for bifacial modules and the first 5 GW of all imported CSPV cells concerned in each of those four years, which are excluded from the additional tariff. It is believed that the costs of solar power projects in the United States may increase and the demand for solar PV products in the United States may be adversely impacted due to the decision of the White House under the Section 201 Investigation. Although we opened our manufacturing facility in the United States, and the products manufactured in such facility will not be subject to tariffs, we will still be subject to tariffs if we ship our products from our manufacturing facilities overseas into the United States. Our imports of solar cells and modules into the United States were subject to the duties imposed by Section 201 Investigation starting from February 2018. Accordingly, our business and profitability of these products may be materially and adversely impacted by the decision of the White House under the Section 201 Investigation.

In August 2017, the United States Trade Representative initiated an investigation pursuant to the Trade Act of 1974, as amended (the "Trade Act"), to determine whether acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation were actionable under the Trade Act ("Section 301 Investigation"). The findings from the United States Trade Representative with the assistance of the interagency Section 301 committee showed that the acts, policies, and practices of the Chinese government related to technology transfer, intellectual property and innovation were unreasonable or discriminatory and burdened or restricted the U.S. commerce. On March 22, 2018, the U.S. President directed his administration to take a range of actions responding to China's acts, policies, and practices involving the unfair and harmful acquisition of U.S. technology. These actions included imposing an additional duty of 25% on products from China in aerospace, information and communication technology, and machinery. On April 3, 2018, the United States Trade Representative proposed a list of products from China which would be subject to the additional duty. In June and July 2018, the United States Trade Representative proposed three lists of products from China which were worth approximately US\$250 billion (US\$34 billion for List 1, US\$16 billion for List 2 and US\$200 billion for List 3), among which, products on List 1 and List 2 would be imposed a 25% additional duty and products on List 3 would be imposed a 10% additional duty. Certain of our production equipment and raw materials exported from China to be used in our new manufacturing facility in the United States and our solar PV products exported from China were covered by these three lists. In July, August and September 2018, the United States Trade Representative published that the Customs and Border Protection would begin to collect additional duties on the products exported from China on List 1 on July 6, 2018, those on List 2 on August 23, 2018 and those on List 3 on September 24, 2018, respectively. On March 5, 2019, the United States Trade Representative determined that the rates of additional duty for the products on List 3 would remained at 10% until further notice. On May 9, 2019, the United States Trade Representative determined to increase the rates of additional duty for the products on List 3 from 10% to 25% with an effective date on May 10, 2019. In August 2019, the United States Trade Representative determined to impose an additional 10% duty on the fourth list of products of Chinese origin with an annual aggregate trade value of approximately US\$300 billion ("List 4"). Certain of our production equipment and raw materials of Chinese origin to be used in our new manufacturing facility in the United States were covered by List 4. The tariff subheadings under List 4 were separated into two lists with different effective dates: the list set forth in annex A of the notice issued by the United States Trade Representative became effective on September 1, 2019; and the list set forth in annex C of the notice became effective on December 15, 2019. On August 30, 2019, the United States Trade Representative determined to increase the rate of additional duty for the products covered by List 4 from 10% to 15%. On December 18, 2019, the United States Trade Representative determined to suspend indefinitely the imposition of additional 15% duty on products covered by annex C of List 4. On January 15, 2020, the United States Trade Representative determined to reduce the rate of the additional duty on products covered by annex A of List 4 from 15% to 7.5%, which became effective on February 14, 2020. The lists of products, which the United States Trade Representative may further revise, may affect the solar industry and the operation of our new manufacturing facility in the United States.

Our sales in the United States may be adversely affected by these anti-dumping and countervailing duties, which may in turn materially adversely affect our business, financial condition and results of operations. We did not make provisions for preliminary U.S. countervailing and anti-dumping duties in 2020. However, as the final anti-dumping and countervailing rates applicable to us are subject to the outcome of the administrative reviews which may be substantially increased by the U.S. Department of Commerce, we cannot assure you that our provision made is sufficient and our business and results of operations may be materially adversely affected if the outcome of the administrative reviews turn out to be negative.

In November 2018, one of our customers in Singapore (the “Singapore Customer”) filed two Notices of Arbitration (“NoAs”) in two arbitrations with Arbitration No. ARB374/18/PPD (“ARB 374”) and Arbitration No. ARB375/18/PPD (“ARB 375”), respectively, against Jinko Solar Import & Export Co., Ltd. (“Jinko IE”) at Singapore International Arbitration Centre. These NoAs were subsequently amended by the Singapore Customer, and Jinko IE received the amended Notices of Arbitration from the Singapore Customer on December 20, 2018. The Singapore Customer claimed respectively in ARB 374 and ARB 375 that the photovoltaic solar modules supplied by Jinko IE to the Singapore Customer under the purchase agreement dated December 25, 2012 (“2012 Contract”) and January 28, 2013 (“2013 Contract”) were defective. The Singapore Customer sought, inter alia, orders that Jinko IE replace the modules and/or that Jinko IE compensate the Singapore Customer for any and all losses sustained by the Singapore Customer as a result of the supply of allegedly defective modules. In January 2019, Jinko IE issued its responses to the NoAs in ARB 374 and ARB 375, disputing the Singapore Customer’s reliance on the arbitration clauses in the 2012 Contract and the 2013 Contract, denying all claims raised by the Singapore Customer, and disputing that the Singapore Customer was entitled to the reliefs claimed in the arbitrations. Arbitration tribunals in both ARB 374 and ARB 375 were constituted on September 5, 2019, which directed on January 14, 2020 that (i) the Singapore Customer shall submit its statement of claim in both ARB 374 and ARB 375 and Jinko IE shall submit its statement of defense no later than five months after Singapore Customer’s submission of statement of claim; and (ii) the hearing of the arbitrations shall be bifurcated with the liability issue to be first determined by the tribunals, and then depending on the outcome of the liability issue, the issue of remedies/damages payable to be determined in the subsequent proceedings in such manner as may be directed by the tribunals. On August 7, 2020, the Singapore Customer submitted its statement of claim in both ARB 374 and ARB 375. In the statement of claim, the Singapore Customer maintained its claim that the photovoltaic solar modules supplied by Jinko IE to them under the 2012 Contract and the 2013 Contract were defective, and that Jinko IE should be liable in respect of all the modules supplied under the 2012 Contract and the 2013 Contract. On December 16, 2020, following Jinko IE’s request, the tribunals in both ARB 374 and ARB 375 directed that Jinko IE’s statement of defense should be submitted by February 11, 2021. On February 11, 2021, Jinko IE submitted its statement of defense and relevant evidence. In the statement of defense, Jinko IE (i) requested the tribunal to declare that it lacks jurisdiction over the dispute; and (ii) denied all the Singapore Customer claims and requested the same be dismissed by the tribunal. On February 22, 2021, upon mutual agreement by Jinko IE and the Singapore Customer, the tribunal directed that ARB 374 and ARB 375 should be consolidated. On August 24, 2021, the tribunal decided Jinko IE and the Singapore Customer’s respective Redfern Schedules. On October 5, 2021, Jinko IE and the Singapore Customer exchanged documents pursuant to the tribunal’s decision on the Redfern Schedules. On February 19, the Singapore Customer filed its Reply Memorial accompanied by all evidence, including factual exhibits, written witness statements, expert reports and legal authorities relied upon. On July 17, 2022, Jinko IE submitted its Rejoinder Memorial with all evidence correspondingly in reply to Reply Memorial. From October 10 to 21, 2022, the hearing for liability issue was held in Singapore, during which the tribunal heard the parties’ oral opening statements, evidence from the parties’ factual and expert witnesses, and oral closing statements. According to the tribunal’s directions, the parties submitted Post-hearing Briefs on January 20, 2023 and the Reply Post-hearing Briefs on March 3, 2023. Furthermore, in the event Jinko IE is found liable on the liability issue, the issue of remedies / damages to be paid will be determined in a subsequent phase in the proceedings, with a separate procedural timeline for the provision of evidence (including expert evidence) and memorials on the appropriate remedy to be awarded by the tribunal. Based on the limited information currently available to us, it is difficult to provide an in-depth assessment of the Singapore Customer’s claims. We believe that Jinko IE has reasonable grounds to challenge the Singapore Customer’s claims in the arbitrations on jurisdiction and merits and will vigorously defend against the claims made by the Singapore Customer. Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and we are also unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

In March 2019, Hanwha Q CELLS (defined below) filed patent infringement lawsuits against our company and a number of our subsidiaries.

(i) On March 4, 2019, Hanwha Q CELLS USA Inc. and Hanwha Solutions Corporation (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation (registration no. 110111-0360935) during the course of the proceedings because of restructuring undertaken by its affiliate(s) in relation to ownership of the patent in suit) (collectively, "Plaintiffs A") filed suit against JinkoSolar Holding Co., Ltd and several of its subsidiary entities, i.e. JinkoSolar (U.S.) Inc, Jinko Solar (U.S.) Industries Inc, Jinko Solar Co., Ltd, Zhejiang Jinko Solar Co., Ltd and Jinko Solar Technology Sdn.Bhd (collectively "Respondents") at the U.S. International Trade Commission ("ITC"). In the complaint, it was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 purportedly owned by Hanwha Q CELLS & Advanced Materials Corporation and Plaintiffs A requested a permanent limited exclusion order and a cease and desist order be issued against the Respondents' allegedly infringing products. On March 5, 2019, Hanwha Q CELLS & Advanced Materials Corporation filed a suit against the Respondents before the U.S. District Court for the District of Delaware ("District Court") alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 allegedly owned by Hanwha Q CELLS & Advanced Materials Corporation and sought reliefs including compensation for alleged infringement activities, enhanced damages and reasonable attorney fees. On April 9, 2019, the ITC published the Notice of Institution on Federal Register. On April 15, 2019, the District Court granted our motion to stay the court litigation pending final resolution of the ITC. On May 3, 2019, the Respondents submitted their response to the complaint of Plaintiffs A to the ITC requesting ITC among other things to deny all relief requested by Plaintiffs A. On September 13, 2019, the Respondents filed motion for summary determination of non-infringement with ITC. On April 10, 2020, the administrative law judge issued the initial determination granting the Respondents' motion for summary determination of non-infringement. On June 3, 2020, the ITC determined to affirm the initial determination issued by the administrative law judge granting respondents' motions for summary determination of non-infringement and terminate the investigation (the "Final Determination"). On July 31, 2020, Plaintiffs A filed its petition to review with the United States Court of Appeals for the Federal Circuit against the ITC's Final Determination. On August 27, 2020, the Respondents filed the motion to intervene of such appeal. Plaintiffs A filed its opening appeal brief in November 2020. The Respondents filed the principal brief in February 2021. On July 12, 2021, the United States Court of Appeals for the Federal Circuit affirmed the ITC's findings that Respondents' products do not infringe U.S. Patent No. 9,893,215. On June 27, 2022, the District Court entered a joint motion to dismiss the said court litigation.

(ii) On March 4, 2019, Hanwha Q CELLS GmbH ("Plaintiff B"), filed a patent infringement claim against JinkoSolar GmbH before the Düsseldorf Regional Court in Germany alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by JinkoSolar GmbH infringed EP2 220 689 purportedly owned by Plaintiff B. On April 10, 2019, JinkoSolar GmbH filed the first brief with the court stating JinkoSolar GmbH would defend itself against the complaint. On September 9, 2019, JinkoSolar GmbH filed its statement of defense with the court (the "Statement of Defense"), requesting that the claim be dismissed and that Plaintiff B to bear the costs of the legal dispute. On March 3, 2020, Plaintiff B filed its reply to the Statement of Defense with the court. On April 20, 2020, JinkoSolar GmbH filed its rejoinder with the court commenting on Plaintiff B's reply on March 3, 2020. On May 5, 2020, the oral hearing regarding the validity of the EP2 220 689, Plaintiff B's entitlement to sue, and the infringement was held before the Düsseldorf Regional Court. On June 16, 2020, the Düsseldorf Regional Court sided with Plaintiff B and ordered that the third party cell technology contained in certain modules delivered by JinkoSolar GmbH infringes Plaintiff B's patent (the "Judgment"). JinkoSolar GmbH filed its notice of appeal on July 14, 2020. On October 16, 2020, JinkoSolar GmbH submitted grounds of appeal to the Düsseldorf Higher Regional Court. On March 1, 2021, JinkoSolar GmbH submitted appeal joinder to the Düsseldorf Higher Regional Court. On September 28, 2020, Plaintiff B has submitted the request for penalty to Düsseldorf Regional Court, claiming that JinkoSolar GmbH violated the Judgment by continuing to promote infringing products and requesting imposition of penalty for such violation. Though not specified in Plaintiff B's request, in general we do not expect the amount of such penalty to exceed €250,000. On November 30, 2020, JinkoSolar GmbH submitted its response to Plaintiff B's request for penalty. On April 6, 2021, JinkoSolar GmbH submitted its second response to Plaintiff B's request for penalty. On August 23, 2021, Düsseldorf Regional Court dismissed Plaintiff B's request for penalty. The oral proceedings at the Düsseldorf Higher Regional Court was held on March 30, 2023. Following this hearing, the Düsseldorf Higher Regional Court decided on 20 April 2023 that evidence should be taken by firstly hearing a witness and subsequently obtaining a written technical opinion from a court appointed expert. The outcome of the case is difficult to assess and predict. However, even if JinkoSolar GmbH failed and was ordered to stop distributing module cells using the third-party cell technology, it would not be subject to additional damages as it has already stopped delivering such module cells. Furthermore, the request for information and damages was withdrawn in the first instance and cannot be reinstated in the second instance at the court of appeals level. Therefore, there is no danger for payment of damages.

(iii) On March 12, 2019, Hanwha Solutions Corporation (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation during the course of the proceedings) and Hanwha Q CELLS Australia Pty Ltd (“Plaintiffs C”, together with Plaintiffs A and Plaintiff B, “Hanwha Q CELLS Plaintiffs”) filed suit at Federal Court of Australia (“FCA”) against Jinko Solar Australia Holdings Co. Pty Ltd (“Jinko AUS”). It was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by Jinko AUS infringed Australian Patent No. 2008323025 purportedly owned by Plaintiffs C. The relief sought by Plaintiffs C includes a declaration of infringement, injunctions restraining future acts of commercial exploitation by way of importing, offering to supply and supplying the relevant products; ancillary relief by way of delivery up for destruction of allegedly infringing product and pecuniary remedies by way of damages (including additional damages) or, at Hanwha’s election, an account of profits; and declarations and injunctions based on the misleading or deceptive conduct claim. It is expected that issues relating to pecuniary relief and their quantum will be separated and deferred for determination after the liability hearing. The FCA served Jinko AUS as the Respondent and the first case management hearing was held on April 12, 2019. The FCA heard the application, and made orders for the conduct of the proceeding at the first case management hearing, following which Jinko AUS submitted its defense and cross-claim to Plaintiffs C’s statement of claim on July 22, 2019. Shortly before the second case management hearing which was held on October 2, 2019, Plaintiffs C requested an amendment to Australian Patent No. 2008323025 (“Amendment Application”) on the stated basis of overcoming prior art relevant to validity and it also appeared that one of the amendments sought by Plaintiffs C was with a view to improving its position in relation to Jinko AUS’s defense to infringement. Plaintiffs C’s Amendment Application was opposed by Jinko AUS and the other Australian respondents and FCA directed Plaintiffs C to give discovery and produce documents in respect to the Amendment Application. The third case management hearing was held on December 13, 2019, after which Jinko AUS submitted particulars of opposition to the Amendment Application and requested for further and better discovery in respect to the Amendment Application. As a result, Hanwha subsequently dropped the amendment in relation to Jinko AUS’s defense to infringement and opposition to the remaining Amendment Application continued for some time but was ultimately not pursued by Jinko AUS and the other Australian respondents. The FCA granted Plaintiffs C’s Amendment Application on August 28, 2020. Following the order directed by FCA at the case management hearing held on November 16, 2020, Plaintiffs C’s has filed its infringement statement at FCA on December 17, 2020 and refers to certain testing undertaken in South Korea in 2018 prior to the commencement of the proceeding, and Jinko AUS has filed a precise non-infringement statement identifying the reasons why certain photovoltaic solar cells and modules supplied by Jinko AUS do not infringe Australian Patent No. 2008323025 on March 9, 2021. Since then, the parties have taken the various procedural steps required by the court’s directions in relation to infringement and validity claims and defences. The final was held from September 23 to 30 and October 10 to 14, 2022. As of the date of the issuance of the financial statements, the Judge has reserved its decision and based on the information currently available, there presently remains no indication that it is probable the court will award any liability for infringement against Jinko AUS and we are unable to estimate an amount of reasonably possible loss or range of loss.

We believe that Hanwha Q CELLS Plaintiffs’ claims in all the above-mentioned cases are lacking legal merit, and will vigorously defend against the claims made by them. We are considering all legal avenues including challenging the validity of the Asserted Patents, and demonstrating our non-infringement of the Asserted Patents. On June 3, 2019, we filed a petition for IPR of the ‘215 Patent with the PTAB. IPR is a trial proceeding conducted at the PTAB to review the patentability of one or more claims in a patent. On December 10, 2019, the PTAB instituted the IPR proceedings of the patentability of claims 12-14 of the ‘215 patent claims in view of prior art. On September 9, 2020, we attended the oral hearing of IPR of the ‘215 patent. On December 9, 2020, the PTAB issued the final decision on our petition for IPR, finding that all challenged claims 12-14 of the ‘215 patent are unpatentable. On February 8, 2021, the patent owner of ‘215 Patent, Hanwha Solutions Corporation, appealed to the United States Court of Appeals for the Federal Circuit against such final decision issued by the PTAB (“‘215 IPR Appeal”). On February 24, 2021, we have filed the certificate of interest to participate in ‘215 IPR Appeal. On May 28, 2021, Hanwha Solutions Corporation filed its opening appeal brief. On July 19, 2021, Hanwha Solutions Corporation filed a motion to remand the case to the United States Patent and Trademark Office. On October 4, 2021, the United States Court of Appeals for the Federal Circuit denied Hanwha Solutions Corporation’s motion to remand. On June 10, 2022, the United States Court of Appeals for the Federal Circuit affirmed the said final decision issued by PTAB that all challenged claims 12-14 of the ‘215 patent are unpatentable.

On June 24, 2019, Jinko filed with the European Patent Office a Notice of Intervention in the opposition proceeding regarding the validity of the EP 2 220 689. On March 25 and March 26, 2021, the opposition oral hearing regarding the validity of the EP2 220 689 was held before the European Patent Office. During the hearing, the European Patent Office held that the EP2 220 689 was maintained in amended form. An additional hearing is to be held on September 28 and 29, 2022, during which the opposition division finally decided to uphold the patent with the limited claims and an amended version of the patent description. Currently, the European Patent Office has not yet issued its decision including the grounds in writing.

On May 7, 2021, the Spanish Customer Energy, S.L. (the “Spanish Customer”) submitted a request for arbitration at International Chamber of Commerce (Case No. 26251/JPA) (the “Request”) against Jiangxi Jinko in connection with dispute arising out of a PV Module Sales Contract entered into in August, 2020 (the “Contract”). In the Request, the Spanish Customer’s claims are based on (i) Jiangxi Jinko’s alleged breaches of the Contract by being unable to deliver the goods at the initially agreed shipping dates and price; (ii) the subsequent termination of the Contract by the Spanish Customer; (ii) alleged replacement purchases the Spanish Customer has made to replace the goods originally ordered from Jiangxi Jinko; and (iv) alleged further costs and other indirect damages purportedly incurred by the Spanish Customer as a consequence of Jiangxi Jinko’s alleged breaches and relating to the PV plant in Australia for which the goods had been intended. On July 21, 2021, Jiangxi Jinko submitted an answer to the Request denying that the Spanish Customer is entitled to the relief it requests, and raised a counterclaim for damages for its loss of profit as well as wasted costs expended in reliance on the performance of the Contract. On January 28, 2022, the tribunal confirmed the Terms of Reference and Procedural Order No.1 signed by the Spanish Customer and Jiangxi Jinko, according to which, except any extension granted by the tribunal, (i) the Spanish Customer will submit Statement of Claim before April 6, 2022 and Jiangxi Jinko will submit Statement of Defense and Counterclaim before June 6, 2022, (ii) the Spanish Customer will submit Statement of Reply and Defense to Counterclaim before September 6, 2022, Jiangxi Jinko will submit Statement of Rejoinder and Reply on Counterclaim before November 4, 2022 and the Spanish Customer will submit Rejoinder on Counterclaim before December 19 2022, (iii) the hearing will be held during the week of April 17, 2023. On April 6, 2022, the Spanish Customer submitted Statement of Claim, which maintained the claims as the Request and additionally claimed the legal interest accrued on the amounts requested. On June 6, 2022, Jiangxi Jinko rejected the claims and brought the counterclaim for the wrongful termination in its submission of Statement of Defense and Counterclaim. On September 6, 2022, the Spanish Customer submitted Statement of Reply and Defense to Counterclaim to maintain its positions. On November 4, 2022, Jiangxi Jinko repeatedly denied the claims and claimed for the damgas in its submission of Statement of Rejoinder and Reply on Counterclaim. On December 19, 2022, the Spanish Customer submitted Rejoinder on Counterclaim. The hearing took place on from April 18 to 19, 2023 in Madrid. As of the date of this annual report, this case is still ongoing and based on the information currently available to us, it is difficult to draw a conclusion that is probable for the tribunal to award any liability against Jiangxi Jinko or to reasonably estimate the possible amount to be awarded.

On June 17, 2022, one of our Indian customers (the “Indian Customer”) submitted a Request for arbitration at International Chamber of Commerce (Case No. 27085/OSI) against Jiangxi Jinko in connection with dispute arising out of a project module supply agreement entered into in May 2017 (“Supply Agreement”). The Indian Customer further submitted Statement of Claim on December 9, 2022, in which the Indian Customer confirmed it does not pursue its claims requiring Jiangxi Jinko to repair or replace relevant modules under the warranty certificate and amended the amount of damages as follows: (i) delay Liquidated Damages in the amount of US\$363.3 million; (ii) costs arising from or in connection with the construction / installation of 32MW of additional capacity for the purpose of making up alleged shortfall in the performance of the plant due to allegedly deficient and/or defective modules in the amount of US\$14.1 million; and (iii) liquidated damages levied against the EPC Contractor by the owner of the plant in the amount of US\$14.6 million, together totalling US\$392.0 million. Jiangxi Jinko submitted Statement of Defence and Counterclaim on March 10, 2023, strongly defending itself and claiming that the Indian Customer failed to pay the invoices amounting to US\$5.3 million According to the current schedule of the arbitration procedure, the International Chamber of Commerce is expected to render the final award by July 30, 2024. As of the date of this annual report, the hearing has not yet commenced. As this case is still ongoing and based on the information currently available to us, it is uncertain at this stage of the arbitration to conclude that whether Jiangxi Jinko will have be subject to any liability or to reasonably estimate the possible amount to be awarded.

Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and we are also unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

Other than as disclosed above, we are currently not a party to any other material legal or administrative proceedings, and we are not aware of any other material legal or administrative proceedings threatened against us. We may from time to time become a party to various legal or administrative proceedings arising in the ordinary course of our business.

Dividend Policy and Dividend Distribution

We have never declared or paid dividends, nor do we have any present plan to pay any cash dividends on our ordinary shares or ADSs in the foreseeable future. We currently intend to retain our available funds and any future earnings to operate and expand our business.

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We are a holding company incorporated in the Cayman Islands. We rely principally on dividends paid to us by our majority-owned operating subsidiary in China, Jiangxi Jinko, to fund the payment of dividends, if any, to our shareholders. PRC regulations currently permit our PRC subsidiaries to pay dividends only out of their retained profits, if any, as determined in accordance with PRC accounting standards and regulations. In addition, our PRC subsidiaries are required to set aside a certain amount of their retained profits each year, if any, to fund certain statutory reserves. These reserves may not be distributed as cash dividends. Furthermore, when Jiangxi Jinko incurs debt on its own behalf, the instruments governing the debt may restrict its ability to pay dividends or make other distributions to us.

Subject to our memorandum and articles of association and applicable laws, our board of directors has complete discretion on whether to pay dividends. Even if our board of directors decides to pay dividends, the form, frequency and amount will depend upon our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the board of directors may deem relevant. If we pay any dividends, we will pay the 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 the ADSs, if any, will be paid in U.S. dollars.

The principal regulations governing distribution of dividends paid by wholly foreign owned enterprises include:

- Company Law of the PRC (1993), as amended;
- Foreign Investment Law of the PRC (2020); and
- Implementing Regulations on the Foreign Investment Law of the PRC (2020)

Under the new regime of foreign investment, foreign-invested enterprises in the PRC, being treated equally with domestic companies, may pay dividends only out of their accumulated profits, if any, as determined in accordance with the PRC accounting standards and regulations. When distributing its after-tax profit, a company in the PRC is required to set aside as statutory common reserves 10% of its after-tax profit, until the accumulative amount of such reserves reaches 50% of its registered capital. These reserves are not distributable as cash dividends. Where the aggregate balance of the company's statutory common reserve is insufficient to cover any loss the company made in the previous financial year, the current financial year's profits shall first be used to cover the loss before any statutory common reserve is drawn. In addition to the statutory common reserve, the company may draw a discretionary common reserve from its after-tax profits. Both the statutory common reserve and the discretionary common reserve may not be distributed to equity owners in the event of liquidation. A company is not permitted to distribute any profits until any losses from prior fiscal years have been offset and the common reserve is drawn. Profits retained from prior fiscal years may be distributed together with distributable profits from the current fiscal year.

B. Significant Changes

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

ITEM 9. THE OFFER AND LISTING

A. Offering and Listing Details

The ADSs, each representing four ordinary shares, have been listed on the NYSE since May 14, 2010. The ADSs trade under the symbol "JKS."

B. Plan of Distribution

Not Applicable.

C. Markets

The ADSs, each representing four ordinary shares, have been listed on the NYSE since May 14, 2010 under the symbol "JKS."

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 F-1 registration statement (File No. 333-164432), as amended, initially filed with the Commission on February 9, 2010. Our shareholders adopted our amended and restated memorandum and articles of association on January 8, 2010 and effective upon completion of our initial public offering of common shares represented by the ADSs.

C. Material Contracts

We have not entered into any material contracts other than in the ordinary course of business and other than those described in “Item 4. Information on the Company” or elsewhere in this annual report.

D. Exchange Controls

See “Item 4. Information on the Company—B. Business Overview—Regulation—Foreign Currency Exchange” and “—Dividend Distribution.”

E. Taxation

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

Cayman Islands Taxation

The Cayman Islands currently levy 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. No Cayman Islands stamp duty will be payable unless an instrument is executed in, or after execution, brought within the jurisdiction of the Cayman Islands, or produced before a court of the Cayman Islands. The Cayman Islands is not a party to any double tax treaties that are applicable to any payments made to or by our company. There are no exchange control regulations or currency restrictions in the Cayman Islands.

Hong Kong Taxation

The following is a summary of the material Hong Kong tax consequences of the ownership of the ADSs by an investor that either holds the ADSs (or recognizes gains on a mark-to-market basis for accounting purposes) or resells the ADSs. This summary does not purport to address all possible tax consequences of the ownership of the ADSs, and does not take into account the specific circumstances of any particular investors (such as tax-exempt entities, certain insurance companies, broker-dealers etc.), some of which may be subject to special rules. Accordingly, holders or prospective purchasers (particularly those subject to special tax rules, such as banks, dealers, insurance companies and tax-exempt entities) should consult their own tax advisers regarding the tax consequences of purchasing, holding or selling the ADSs. This summary is based on the tax laws of Hong Kong as in effect on the date of this annual report and is subject to changes and does not constitute legal or tax advice to you.

Under the current laws of Hong Kong:

- No profits tax is imposed in Hong Kong in respect of capital gains from the sale of the ADSs.
- Revenue gains from the sale of ADSs by persons carrying on a trade, profession or business in Hong Kong where the gains are derived from or arise in Hong Kong from the trade, profession or business will be chargeable to Hong Kong profits tax, which is currently imposed at the maximum rate of 16.5% on corporations and at the maximum rate of 15% on individuals and unincorporated businesses. From the year of assessment 2018/19, a concessionary tax rate (i.e. half of the current tax rate) can apply to corporations or unincorporated businesses for the first HK\$2 million of assessable profits subject to applicable conditions.
- Gains arising from the sale of ADSs, where the purchases and sales of ADSs are effected outside of Hong Kong (e.g., on the NYSE), should not be subject to Hong Kong profits tax.
- According to the current tax practice of the Hong Kong Inland Revenue Department, dividends paid by us on ADSs would not be subject to any Hong Kong tax, even if received by investors in Hong Kong.
- No Hong Kong stamp duty is payable on the transfers of the ADSs outside Hong Kong.

People's Republic of China Taxation

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

U.S. Federal Income Taxation

Introduction

The following discussion describes the material U.S. federal income tax consequences of the purchase, ownership and disposition of the ordinary shares or ADSs (evidenced by ADRs) by U.S. Holders (as defined below). This discussion applies only to U.S. Holders that hold the ordinary shares or ADSs as capital assets. This discussion is based on the Internal Revenue Code of 1986, as amended (the “Code”), Treasury regulations promulgated thereunder, and administrative and judicial interpretations thereof, as well as the Agreement Between the Government of the United States of America and the Government of the People’s Republic of China for the Avoidance of Double Taxation and the Prevention of Tax Evasion with Respect to Taxes on Income (“Tax Treaty”), all as in effect on the date hereof and all of which are subject to change, possibly with retroactive effect, or to different interpretation. This discussion is also based in part on representations by the depositary and assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms. This discussion does not address all of the tax considerations that may be relevant to specific U.S. Holders in light of their particular circumstances or to U.S. Holders subject to special treatment under U.S. federal income tax law (such as banks, other financial institutions, insurance companies, tax-exempt entities, retirement plans, regulated investment companies, partnerships, dealers in securities or currencies, brokers, traders in securities electing to mark to market, financial institutions, U.S. expatriates, persons who have acquired the shares or ADSs as part of a straddle, hedge, conversion transaction or other integrated investment, persons that have a “functional currency” other than the U.S. dollar or persons that own (or are deemed to own) 10% or more of our stock by vote or value). If a partnership holds ordinary shares or ADSs, the consequences to a partner will generally depend upon the status of the partner and upon the activities of the partnership. A partner of a partnership holding ordinary shares or ADSs should consult its own tax advisor regarding the U.S. tax consequences of its investment in the ordinary shares or ADSs through the partnership. This discussion does not address any U.S. state or local or non-U.S. tax considerations or any U.S. federal estate, gift, the Medicare contribution tax applicable to net investment income of certain non-corporate U.S. Holders or alternative minimum tax considerations.

As used in this discussion, the term “U.S. Holder” means a beneficial owner of the ordinary shares or ADSs, for U.S. federal income tax purposes, that is (i) an individual who is a citizen or resident of the United States, (ii) a corporation, or other entity classified as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States or of any state thereof, or the District of Columbia, (iii) an estate, the income of which is subject to U.S. federal income tax regardless of the source thereof, or (iv) a trust with respect to which a court within the United States is able to exercise primary supervision over its administration and one or more U.S. persons have the authority to control all of its substantial decisions, or certain electing trusts that were in existence on August 19, 1996 and were treated as domestic trusts on that date.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE PARTICULAR TAX CONSIDERATIONS APPLICABLE TO THEM RELATING TO THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE ORDINARY SHARES OR AMERICAN DEPOSITARY SHARES, INCLUDING THE APPLICABILITY OF U.S. FEDERAL, STATE AND LOCAL TAX LAWS OR NON-U.S. TAX LAWS, ANY CHANGES IN APPLICABLE TAX LAWS AND ANY PENDING OR PROPOSED LEGISLATION OR REGULATIONS.

ADSs

In general, for U.S. federal income tax purposes, a U.S. Holder of an ADS will be treated as the owner of the ordinary shares represented by the ADSs and exchanges of ordinary shares for ADSs, and ADSs for ordinary shares, will not be subject to U.S. federal income tax.

Dividends

Subject to the discussion below under “—Passive Foreign Investment Company,” the gross amount of any distribution made by us on the ordinary shares or ADSs generally will be treated as a dividend includible in the gross income of a U.S. Holder as ordinary income to the extent of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles, when received by the U.S. Holder, in the case of ordinary shares, or when actually or constructively received by the depositary, in the case of ADSs. To the extent the amount of such distribution exceeds our current and accumulated earnings and profits as so computed, it will be treated first as a non-taxable return of capital to the extent of such U.S. Holder’s adjusted tax basis in such ordinary shares or ADSs and, to the extent the amount of such distribution exceeds such adjusted tax basis, will be treated as gain from the sale of such ordinary shares or ADSs. We, however, may not calculate earnings and profits in accordance with U.S. tax principles. In this case, all distributions by us to U.S. Holders will generally be treated as dividends.

Subject to certain exceptions for short-term positions, certain dividends (“qualified dividends”) received by non-corporate U.S. Holders, including individuals, generally will be subject to reduced rates of taxation. This reduced income tax rate is applicable to dividends paid by “qualified foreign corporations” and only with respect to ordinary shares or ADSs held for a minimum holding period of at least 61 days during a specified 121-day period, and if certain other conditions are met. A non-U.S. corporation is treated as a qualified foreign corporation for this purpose if the dividends are paid with respect to shares (or ADSs backed by such shares) that are readily tradable on an established securities market in the United States and the non-U.S. corporation was not, in the year prior to the year in which the dividend was paid, and is not, in the year in which the dividend is paid, a passive foreign investment company (a “PFIC”). We should be treated as a qualified foreign corporation with respect to dividends paid on shares represented by the ADSs because the ADSs are listed on the NYSE and should be treated as readily tradable as long as they are so listed. Accordingly, subject to the conditions described above and the discussions below under “—Passive Foreign Investment Company,” dividends paid by us on shares represented by ADSs generally will be eligible for the reduced income tax rate. Because the ordinary shares are not themselves listed on a U.S. exchange, dividends received with respect to ordinary shares that are not represented by ADSs may not be treated as qualified dividends. A qualified foreign corporation also includes a foreign corporation that is eligible for the benefits of an income tax treaty with the United States, so long as the Secretary of the United States Treasury has determined such treaty is satisfactory for purposes of the reduced rate and such treaty includes an exchange of information program. The Secretary of the United States Treasury has determined that the U.S. income tax treaty with China satisfies these requirements. Accordingly, in the event that we are deemed to be a PRC tax resident enterprise under the CIT Law and if we are eligible for the benefits of the income tax treaty between the United States and China, dividends we pay on the ordinary shares, regardless of whether such shares are represented by ADSs, would be subject to the reduced rates of taxation described above (subject to the general conditions for the reduced tax rate on dividends described above). Dividends paid by us will not be eligible for the “dividends received” deduction generally allowed to corporate shareholders with respect to dividends received from U.S. corporations. U.S. Holders should consult their own tax advisors regarding the potential availability of the reduced dividend tax rate in respect of ordinary shares.

Dividends paid by us will constitute income from sources outside the United States for U.S. foreign tax credit limitation purposes and generally will be categorized as “passive category income” for U.S. foreign tax credit purposes. In the event that we are deemed to be a PRC tax resident enterprise under the CIT Law, PRC withholding taxes may be imposed on dividends paid with respect to the ordinary shares or ADSs. As a result of recent changes to U.S. foreign tax credit rules, for taxable years beginning after December 28, 2021, PRC taxes generally will need to satisfy certain additional requirements in order to be considered a creditable tax for a U.S. Holder, except in the case of a U.S. Holder that is eligible for, and properly claims, the benefits of the Tax Treaty. We have not determined whether the forgoing requirements have been met, and, accordingly, no assurance can be given that any PRC withholding tax will be creditable. Additionally, in certain circumstances, if U.S. Holders have held the ordinary shares or ADSs for less than a specified minimum period during which such U.S. Holders are not protected from risk of loss, or are obligated to make payments related to the dividends, such U.S. Holders will not be allowed a U.S. foreign tax credit for any PRC withholding taxes imposed on dividends paid on the ordinary shares or ADSs. Alternatively, a U.S. Holder may be able to elect to deduct such PRC withholding taxes from its U.S. federal taxable income, provided that the U.S. Holder also elects to deduct rather than credit all foreign income taxes paid or accrued for the relevant taxable year. The availability and calculation of foreign tax credits and, in the case of a U.S. Holder that elects to deduct foreign taxes, deductions for foreign tax credits, involves the application of complex rules that also depend on a U.S. Holder’s particular circumstances. U.S. Holders should consult their own tax advisors regarding the availability of a foreign tax credit or deductions in their particular circumstance.

A distribution of additional ordinary shares or ADSs or rights to subscribe for ordinary shares or ADSs to U.S. Holders with respect to their ordinary shares or ADSs that is made as part of a pro rata distribution to all shareholders generally will not be subject to U.S. federal income tax, unless the U.S. Holder has the right to receive cash or property, in which case the U.S. Holder will be treated as if it received cash equal to the fair market value of the distribution.

Sale or Other Disposition of Ordinary Shares or ADSs

A U.S. Holder generally will recognize gain or loss for U.S. federal income tax purposes upon a sale or other disposition of the ordinary shares or ADSs in an amount equal to the difference between the amount realized from such sale or disposition and the U.S. Holder's adjusted tax basis in such ordinary shares or ADSs. Subject to the discussion below under "—Passive Foreign Investment Company," such gain or loss generally will be a capital gain or loss and will be long-term capital gain (taxable at a reduced rate for non-corporate U.S. Holders, including individuals) or loss if, on the date of sale or disposition, such ordinary shares or ADSs were held by such U.S. Holder for more than one year. The deductibility of capital losses is subject to significant limitations.

In the event that we are treated as a PRC resident enterprise under the PRC CIT Law, and gain from the disposition of ADSs or ordinary shares may be subject to the tax in the PRC (see "People's Republic of China Taxation," above). In that case, a U.S. Holder's amount realized would include the gross amount of the proceeds from the sale or disposition before deduction for the PRC tax. Although capital gain or loss recognized by a U.S. Holder on the sale or other disposition of the ADSs or ordinary shares generally will be U.S. source gain or loss, a U.S. Holder that is eligible for, and properly elects to claim, the benefits of the Treaty, may be entitled to elect to treat the gain as foreign source income for U.S. foreign tax credit purposes. As a result of recent changes to the foreign tax credit rules, any PRC withholding tax is imposed on the sale or disposition of the ordinary shares or ADSs is unlikely to be treated as creditable, unless the U.S. Holder is eligible for and elects the benefits of the Tax Treaty. If the PRC tax is not a creditable tax or claimed as a credit by the U.S. Holder pursuant to the Treaty, the tax would reduce the amount realized on the sale or other disposition of the ADSs or ordinary shares even though the U.S. Holder has elected to claim a foreign tax credit for other taxes in the same year. U.S. Holders are urged to consult their tax advisors regarding the tax consequences if a foreign withholding tax is imposed on a disposition of the ordinary shares or ADSs, including the availability of the foreign tax credit under their particular circumstances.

Passive Foreign Investment Company

Based upon the composition of our current and projected assets, income and activities, we believe that we were not a PFIC for U.S. federal income tax purposes with respect to our 2021 or 2022 taxable years, and we do not currently anticipate becoming a PFIC for our 2023 taxable year or in the foreseeable future. The determination of PFIC status is a factual determination that must be made annually at the close of each taxable year. Changes in the nature of our income or assets, the manner and rate at which we spend cash that we hold, or a decrease in the trading price of the ADSs may cause us to be considered a PFIC in the current or any subsequent year. However, as noted above, there can be no certainty in this regard until the close of each taxable year.

In general, a non-U.S. corporation will be treated as a PFIC for U.S. federal income tax purposes in any taxable year in which either (i) at least 75% of its gross income is "passive income" or (ii) at least 50% of the value of its assets (generally determined on the basis of a quarterly average) is attributable to assets that produce passive income or are held for the production of passive income. Passive income for this purpose generally includes, among other things, dividends, interest, royalties, rents and gains from commodities and securities transactions. Passive income does not include rents and royalties derived from the active conduct of a trade or business. If we own at least 25% (by value) of the stock of another corporation, we will be treated, for purposes of the PFIC tests, as owning our proportionate share of the other corporation's assets and receiving our proportionate share of the other corporation's income.

If we are a PFIC in any year during which a U.S. Holder owns the ordinary shares or ADSs, such U.S. Holder may experience certain adverse tax consequences. Such U.S. Holder could be liable for additional taxes and interest charges upon (i) distributions received by the U.S. Holder on our ordinary shares or ADSs during the year, but only to the extent that the aggregate of the distributions for the taxable year exceeds 125% of the average amount of distributions received by the U.S. Holder during the shorter of the preceding three years or the U.S. Holder's holding period for the ordinary shares or ADSs, or (ii) upon a sale or other disposition of the ordinary shares or ADSs at a gain, whether or not we continue to be a PFIC (each an "excess distribution"). The tax will be determined by allocating the excess distribution ratably to each day of the U.S. Holder's holding period. The amount allocated to the current taxable year and any taxable year with respect to which we were not a PFIC will be taxed as ordinary income (rather than capital gain) earned in the current taxable year. The amount allocated to other taxable years will be taxed at the highest marginal rates applicable to ordinary income for such taxable years and, in addition, an interest charge will be imposed on the amount of such taxes.

The rules described above generally will not apply if the U.S. Holder is eligible to and does elect to annually mark-to-market the ordinary shares or ADSs. If a U.S. Holder makes a mark-to-market election, such holder will generally include as ordinary income the excess, if any, of the fair market value of the ordinary shares or ADSs at the end of each taxable year over their adjusted basis, and will be permitted an ordinary loss in respect of the excess, if any, of the adjusted basis of the ordinary shares or ADSs over their fair market value at the end of the taxable year (but only to the extent of the net amount of previously included income as a result of the mark-to-market election). Any gain recognized on the sale or other disposition of the ordinary shares or ADSs will be treated as ordinary income. The mark-to-market election is available only for “marketable stock,” which is stock that is regularly traded in other than *de minimis* quantities on at least 15 days during each calendar quarter on a qualified exchange or other market, as defined in the applicable Treasury regulations. We expect the ADSs to be “marketable stock” because the ADSs are listed on the NYSE, but it is unclear whether our ordinary shares would be so treated. Because a mark-to-market election cannot be made for equity interests in any lower-tier PFICs that we own, a U.S. Holder may continue to be subject to the PFIC rules with respect to its indirect interest in any investments or subsidiaries held by us that are treated as an equity interest in a PFIC for United States federal income tax purposes.

A U.S. Holder’s adjusted tax basis in the ordinary shares or 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. If a U.S. 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 ordinary shares or ADSs are no longer regularly traded on a qualified exchange or the Internal Revenue Service consents to the revocation of the election. U.S. Holders are urged to consult their tax advisors about the availability of the mark-to-market election, and whether making the election would be advisable in their particular circumstances.

The general PFIC tax treatment described above also would not apply if a U.S. Holder is eligible for and makes a valid qualified electing fund election, or QEF election. If a QEF election is made, such U.S. Holder generally will be required to include in income on a current basis its pro rata share of its ordinary income and its net capital gains. We do not intend to prepare or provide the information that would entitle U.S. Holders to make a QEF election.

If we are a PFIC for any taxable year during which you hold our ordinary shares or ADSs, we will continue to be treated as a PFIC with respect to you for all succeeding years during which you hold the ordinary shares or ADSs, unless we cease to be a PFIC and you make a “deemed sale” election with respect to the ordinary shares or ADSs, as applicable. If such election is made, you will be deemed to have sold the ordinary shares or ADSs you hold at their fair market value on the last day of the last taxable year for which we were a PFIC and any gain from such deemed sale would be subject to the excess distribution rules described above. After the deemed sale election, your ordinary shares or ADSs with respect to which such election was made will not be treated as shares in a PFIC unless we subsequently become a PFIC.

If we are regarded as a PFIC, a U.S. Holder of ordinary shares or ADSs must make an annual return containing such information as the Secretary of the United States Treasury may require. Additionally, the reduced tax rate for dividend income, as discussed above under “—Dividends” is not applicable to a dividend paid by us if we are a PFIC for either the year the dividend is paid or the preceding year.

Prospective investors should consult their own tax advisors regarding the U.S. federal income tax consequences of an investment in a PFIC.

Foreign Financial Asset Reporting

Certain U.S. Holders that own “specified foreign financial assets” with an aggregate value in excess of US\$50,000 on the last day of the taxable year or US\$75,000 at any time during the taxable year are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. “Specified foreign financial assets” include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer that are not held in accounts maintained by financial institutions. The understatement of income attributable to “specified foreign financial assets” in excess of U.S.\$5,000 extends the statute of limitations with respect to the tax return to six years after the return was filed. U.S. Holders who fail to report the required information could be subject to substantial penalties. Prospective investors are encouraged to consult with their own tax advisors regarding the possible application of these rules, including the application of the rules to their particular circumstances.

Backup Withholding Tax and Information Reporting Requirements

Dividend payments made to U.S. Holders and proceeds paid from the sale or other disposition of their ordinary shares or ADSs may be subject to information reporting to the Internal Revenue Service and, possibly, to U.S. federal backup withholding. Certain exempt recipients are not subject to these information reporting requirements. Backup withholding will not apply to a U.S. Holder who furnishes a correct taxpayer identification number and makes any other required certification, or who is otherwise exempt from backup withholding. U.S. Holders who are required to establish their exempt status generally must provide Internal Revenue Service Form W-9 (Request for Taxpayer Identification Number and Certification).

Backup withholding is not an additional tax. Amounts withheld as backup withholding may be credited against a U.S. Holder's U.S. federal income tax liability. A U.S. Holder may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the Internal Revenue Service in a timely manner and furnishing any required information.

Prospective investors should consult their own tax advisors as to their qualification for an exemption from backup withholding and the procedure for obtaining this exemption.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We have filed with the SEC registration statements on Form F-1 (File Number 333-164432 and File Number 333-170146). We also filed with the SEC a related registration statement on Form F-6 (File Number 333-164523) with respect to the ADSs. We have also filed with the SEC registration statements on Form F-3 (File Number 333-190273, File Number 333-193379, File Number 333-219925 and File Number 333-251377, and File Number 333-251377). With respect to our securities to be issued under our 2009 Long Term Incentive Plan, we have filed with the SEC registration statements on Form S-8 (File Number 333-170693 and 333-180787). With respect to our securities to be issued under our 2014 Equity Incentive Plan, we have filed with the SEC registration statement on Form S-8 (File Number 333-204082). With respect to our securities to be issued under our 2021 Equity Incentive Plan and our 2022 Equity Incentive Plan, we have filed with the SEC registration statement on Form S-8 (File Number 333-258999) and registration statement on Form S-8 (File Number 333-263307), respectively.

We are subject to the periodic reporting and other informational requirements of the Exchange Act as applicable to foreign private issuers. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F no later than four months after the close of each fiscal year, which is December 31. Copies of reports and other information, when so filed with the SEC, can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents, upon payment of a duplicating fee, by writing to the SEC. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the Commission at 1-800-SEC-0330. The SEC also maintains a web site at www.sec.gov that contains reports, proxy and information statements, and other information regarding registrants that make electronic filings with the SEC using its EDGAR system. As a foreign private issuer, we are exempt from the rules of the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and our executive officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file periodic reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act.

We will furnish JPMorgan Chase Bank, N.A., the depositary of the ADSs, with our annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP, and all notices of shareholders' meetings and other reports and communications that are made generally available to our shareholders. The depositary will make such notices, reports and communications available to holders of ADSs and, upon our request, will mail to all record holders of ADSs the information contained in any notice of a shareholders' meeting received by the depositary from us.

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I. Subsidiary Information

Not applicable.

J. Enforceability of Civil Liabilities

We are incorporated in the Cayman Islands as an exempted company with limited liability to take advantage of certain benefits associated with being a Cayman Islands exempted company, such as:

- political and economic stability;
- an effective judicial system;
- a favorable tax system;
- the absence of exchange control or currency restrictions; and
- the availability of professional and support services.

However, certain disadvantages accompany incorporation in the Cayman Islands. These disadvantages include, but are not limited to:

- the Cayman Islands has a less developed body of securities laws as compared to the U.S.; and these securities laws provide significantly less protection to investors as compared to the U.S.; and
- Cayman Islands companies may not have standing to sue before the federal courts of the U.S.

Our constituent documents do not contain provisions requiring that disputes, including those arising under the securities laws of the U.S., between us, our officers, directors and shareholders, be arbitrated.

A majority of our existing directors and senior management members reside in the PRC and a substantial part of our assets and the assets of such persons are located in the PRC. As a result, it may be difficult for a shareholder to effect service of process within the U.S. upon these individuals, or to bring an action against us or against these individuals in the U.S., in the event that you believe that your rights have been infringed under the securities laws of the U.S. or any state in the U.S. In particular, residence in China may make it even more difficult to enforce any judgments obtained from foreign courts (including from a U.S. state or federal court) against such persons compared to the circumstance of residence in another non-U.S. and non-China jurisdiction.

Maples and Calder (Hong Kong) LLP, our counsel as to Cayman Islands law, and King & Wood Mallesons, our counsel as to PRC law, have advised us, respectively, that there is uncertainty as to whether the courts of the Cayman Islands and China, respectively, would

- recognize or enforce judgments of U.S. courts obtained against us or our directors or officers predicated upon the civil liability provisions of the securities laws of the U.S. or any state in the U.S.; or
- entertain original actions brought in each respective jurisdiction against us or our directors or officers predicated upon the securities laws of the U.S. or any state in the U.S.

We have been informed by Maples and Calder (Hong Kong) LLP, our counsel as to Cayman Islands law, that there is uncertainty as to whether the courts of the Cayman Islands would (i) recognize or enforce judgments of U.S. courts obtained against us or our directors or officers that are predicated upon the civil liability provisions of the federal securities laws of the United States or the securities laws of any state in the United States, or (ii) entertain original actions brought in the Cayman Islands against us or our directors or officers that are predicated upon the federal securities laws of the United States or the securities laws of any state in the United States. We have also been advised by Maples and Calder (Hong Kong) LLP that although there is no statutory enforcement in the Cayman Islands of judgments obtained in the federal or state courts of the United States (and the Cayman Islands are not a party to any treaties for the reciprocal enforcement or recognition of such judgments), the courts of the Cayman Islands will, at common law, recognize and enforce a foreign monetary judgment of a foreign court of competent jurisdiction without any re-examination of the merits of the underlying dispute based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the liquidated sum for which such judgment has been given, provided such judgment (a) is given by a foreign court of competent jurisdiction, (b) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given, (c) is final and conclusive, (d) is not in respect of taxes, a fine or a penalty, (e) is not inconsistent with a Cayman Islands judgment in respect of the same matter, and (f) is not impeachable on the grounds of fraud and was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands. However, the Cayman Islands courts are unlikely to enforce a judgment obtained from the U.S. courts under civil liability provisions of the U.S. federal securities law if such judgment is determined by the courts of the Cayman Islands to give rise to obligations to make payments that are penal or punitive in nature. A Cayman Islands court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

The recognition and enforcement of foreign judgments are provided for under the PRC Civil Procedures Law. PRC courts may recognize and enforce foreign judgments in accordance with the requirements of the PRC Civil Procedures Law, based either on treaties between China and the country where the judgment is made or on principles of reciprocity between jurisdictions, as well as public policy considerations and conditions set forth in applicable provisions of other PRC laws relating to the enforcement of civil liability. In addition, according to the PRC Civil Procedures Law, the PRC courts will not enforce a foreign judgment against us or our directors and officers if they decide that the judgment violates the basic principles of PRC laws or national sovereignty, security or public interest. As a result, it is uncertain whether and on what basis a PRC court would enforce a judgment rendered by a court in the U.S. or the Cayman Islands.

Judgment of United States courts will not be directly enforced in Hong Kong. There are currently no treaties or other arrangements providing for reciprocal enforcement of foreign judgments between Hong Kong and the United States. However, the common law permits an action to be brought upon a foreign judgment. In other words, a foreign judgment itself may form the basis of a cause of action since the judgment may be regarded as creating a debt between the parties to it. In a common law action for enforcement of a foreign judgment in Hong Kong, the enforcement is subject to various conditions, including that the foreign judgment is a final judgment conclusive upon the merits of the claim, the judgment is for a liquidated amount in a civil matter and not in respect of taxes, fines, penalties, or similar charges, the proceedings in which the judgment was obtained were not contrary to natural justice, and the enforcement of the judgment is not contrary to public policy of Hong Kong. Such a judgment must be for a fixed sum and must also come from a “competent” court as determined by the private international law rules applied by the Hong Kong courts. The defenses that are available to a defendant in a common law action brought on the basis of a foreign judgment include lack of jurisdiction, breach of natural justice, fraud, and contrary to public policy. However, a separate legal action for debt must be commenced in Hong Kong in order to recover such debt from the judgment debtor.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Inflation

Since our inception, inflation in China has not materially impacted our results of operations. According to the National Bureau of Statistics of China, inflation as measured by the consumer price index in China was 2.5%, 0.9% and 2.0% in 2020, 2021 and 2022, respectively.

Foreign Exchange Risk

Our sales in China are denominated in Renminbi and our costs and capital expenditures are also largely denominated in Renminbi. Our sales outside China are generally denominated in U.S. dollars, Euros, AUD, and Japanese Yen and we also incur expenses in foreign currencies, including U.S. dollars, Japanese Yen and Euros, in relation to the procurement of silicon materials, equipment and consumables such as crucibles. In addition, we have outstanding debt obligations, and may continue to incur debts from time to time, denominated and repayable in foreign currencies. Accordingly, any significant fluctuations between the Renminbi and the U.S. dollar and other foreign currencies including Japanese Yen and Euro could expose us to foreign-exchange risk. In addition, as we expand our sales to major export markets, we expect our foreign-exchange exposures will increase.

We have entered into foreign exchange forward contracts with certain local banks to reduce volatility in our economic value caused by foreign currency fluctuations. These contracts are not designated as hedges and are marked to market at each reporting date, with changes in fair value recognized in the consolidated statements of operations. As of December 31, 2022, our foreign exchange forward contracts denominated in U.S. dollar and Euro and Japanese Yen had notional values of US\$540.0 million and €240.0 million, and JPY2.00 billion respectively. These contracts mature within 12 months. To determine fair value of these contracts, we use a discounted cash-flow methodology to measure fair value, which requires inputs such as interest yield curves and foreign exchange rates. We had a loss relating to change in fair value of foreign exchange forward contracts recognized in earnings of RMB164.4 million (US\$23.8 million) in 2022. However, we cannot predict the impact of future exchange rate fluctuations on our results of operations and may incur net foreign currency losses in the future in relation to unhedged foreign currency exposure or loss on our hedging instruments.

We provide credit to our overseas customers. We recorded a net foreign exchange gain of RMB1.03 billion (US\$148.7 million) in 2022 due to the appreciation of the U.S. dollars against the Renminbi. We recorded a net foreign exchange loss of RMB355.5 million in 2021 due to the depreciation of the U.S. dollars against the Renminbi. We recorded a net foreign exchange loss of RMB336.5 million in 2020 due to the depreciation of the U.S. dollars against the Renminbi.

The value of your investment in the ADSs will be primarily affected by the foreign-exchange rate between U.S. dollars and Renminbi. To the extent we hold assets denominated in U.S. dollars any appreciation of the Renminbi against the U.S. dollar could result in a change to our statement of operations and a reduction in the value of our U.S. dollar denominated assets. On the other hand, a decline in the value of the Renminbi against the U.S. dollar could reduce the U.S. dollar equivalent amounts of our financial results, the value of your investment in our company and the dividends we may pay in the future, if any, all of which may have a material adverse effect on the prices of ADSs. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Fluctuations in exchange rates could adversely affect our results of operations.”

As of December 31, 2022, we held RMB10.24 billion (US\$1.49 billion) in cash and cash equivalents, of which RMB4.12 billion (US\$598.1 million) were denominated in U.S. dollars, a 5% change in the exchange rates between the Renminbi and the U.S. dollar would result in an increase or decrease of RMB206.2 million (US\$29.9 million) in our cash and cash equivalents.

Interest Rate Risk

Our exposure to interest rate risks relates to interest expenses incurred in connection with our short-term and long-term borrowings, and interest income generated by excess cash invested in demand deposits and liquid investments with original maturities of three months or less.

As of December 31, 2022, we had short-term borrowings (including the current portion of long-term bank borrowings and failed sale-leaseback financing) of RMB12.42 billion (US\$1.80 billion). As of December 31, 2022, we had short-term borrowings outstanding of RMB2.19 billion (US\$316.9 million), RMB120.0 million (US\$17.4 million), RMB1.00 billion (US\$145.3 million), which were denominated in Euros, JPY and USD respectively, and bearing a weighted average interest rates of 2.09%, 1.25%, 2.53%, per annum, respectively. We have long-term borrowings (excluding the current portion of long-term bank borrowings and financing associated with failed sale-leaseback transactions due within one year) of RMB13.02 billion (US\$1.89 billion), which bore interest at an average annual rate of 4.45% as of December 31, 2022.

In November 2014, we signed a US\$20.0 million two-year credit agreement with Wells Fargo, the term of which was later extended to November 2024. The credit limit was raised to US\$40.0 million in June 2015, to US\$60.0 million in July 2016 and further to US\$90.0 million in January 2020 through amendments to the credit agreement. Borrowings under the credit agreement would be used to support our working capital and business operations in the United States.

In May 2015, we signed a US\$20.0 million three-year bank facility agreement with Barclay Bank, which was subsequently raised to US\$40.0 million, to support our working capital and business operations. The term of this bank facility has been extended to 2022.

In September 2016, we signed a US\$25.0 million two-year bank facility agreement with Malayan Banking Berhad, the term of which was extended to September 2022, to support our working capital and business operations in Malaysia.

In July 2017, we entered into a four-year financial lease in the amount of RMB600.0 million to support the improvement of our production efficiency.

In July 2018, we signed a JPY5.30 billion syndicated loan agreement with a bank consortium led by Sumitomo Mitsui Banking Corporation to provide working capital and support for our business operations in Japan. The loan was downsized to JPY3.00 billion after annual review in December 2021.

In May 2019, we issued convertible senior notes of US\$85 million in aggregate principal amount due 2024 to support capital expenditure and supplement working capital. The notes will mature on June 1, 2024 and the holders will have the right to require us to repurchase for cash all or any portion of their notes on June 1, 2021. The interest rate is 4.5% per annum payable semi-annually, in arrears. As of the date of this annual report, the convertible notes of US\$29.75 million in aggregate have been converted.

In September 2019, we signed an RMB100 million one-year bank facility agreement with Malayan Banking Berhad, the term of which is renewable annually, to supplement our working capital.

In light of the amount of bank borrowings and notes due in the near term future, sufficient funds may not be available to meet our payment obligations.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

Fees and Charges the ADS Holders May Have to Pay

The American depositary shares, each of which represents four ordinary shares, are listed on the NYSE. JPMorgan Chase Bank, N.A. is the depositary of the ADS program and its principal executive office is situated at 383 Madison Avenue, Floor 11, New York, New York, 10179. The depositary collects its fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deductions from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

<i>Persons depositing or withdrawing shares must pay:</i>	<i>For:</i>
\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	<ul style="list-style-type: none"> Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property
	<ul style="list-style-type: none"> Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
\$.05 (or less) per ADS (or portion of each ADS)	<ul style="list-style-type: none"> Any cash distribution to ADS registered holders
\$1.50 per ADR or ADRs	<ul style="list-style-type: none"> Transfer of ADRs
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	<ul style="list-style-type: none"> Distribution or sale of securities to holders of deposited securities that are distributed by the depositary to ADS registered holders
\$.05 per ADSs per calendar year (or portion of each ADS)	<ul style="list-style-type: none"> Depositary services
Registration or transfer fees	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Cable, telex and facsimile transmissions and deliveries (at the request of persons depositing or ADS registered holders delivering shares, ADRs and deposited securities)
	<ul style="list-style-type: none"> Converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian have to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	<ul style="list-style-type: none"> As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	<ul style="list-style-type: none"> As necessary

Fees and Other Payments Made by the Depositary to Us

The depositary has agreed to reimburse us for expenses we incur that are related to the administration and maintenance of the ADS facility including, but not limited to, investor relations expenses, the annual NYSE listing fees, ADS offering expenses or any other program related expenses. There are limits on the amount of expenses for which the depositary will reimburse us, but the amount of reimbursement available to us is not related to the amounts of fees the depositary collects from investors. The annual reimbursement is also conditioned on certain requirements and criteria and will be adjusted proportionately to the extent such requirements or criteria are not met. For 2022, we had an annual reimbursement due from the depositary of US\$707.5 thousand for legal and investor relations expenses.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

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

A.-D. Material Modifications to the Rights of Security Holders

None.

E. Use of Proceeds

2019 ADS Offering

The following “Use of Proceeds” information relates to the registration statement on Form F-3 (File Number 333-219925), together with the prospectus supplement to register additional securities that became effective on May 15, 2019, for our public offering of 4,062,500 ADSs, representing 16,250,000 and the underwriters’ full exercise of their over-allotment option to purchase an additional 609,375 ADSs representing 2,437,500 ordinary shares, or the 2019 ADS Offering. The net proceeds we received from the 2019 ADS Offering totaled US\$70.9 million, after deducting underwriting commissions and fees and offering expenses. Credit Suisse Securities (USA) LLC and Barclays Capital Inc. were the representatives of the underwriters for our 2019 ADS Offering. Concurrent with our 2019 ADS Offering, we offered US\$85.0 million aggregate principal amount of our convertible notes in a private placement, or the 2019 Private Placement. The net proceeds we received from the 2019 Private Placement totaled US\$82.2 million, after deducting the placement agent’s fees and other offering expenses.

For the period from May 15, 2019 to December 31, 2019, the total expenses incurred for our company’s account in connection with our 2019 ADS Offering was approximately US\$3.9 million, which included US\$3.4 million in underwriting discounts and commissions and approximately US\$0.5 million of other costs and expenses for our 2019 ADS Offering. For the period from May 15, 2019 to December 31, 2019, the total expenses incurred for our company’s account in connection with our 2019 Private Placement was approximately US\$2.8 million including the placement agent’s fees and other offering expenses. None of the transaction expenses included payments to directors or officers of our company or their associates, persons owning more than 10% or more of our equity securities or our affiliates. None of the net proceeds from the 2019 ADS Offering or 2019 Private Placement were paid, directly or indirectly, to any of our directors or officers or their associates, persons owning 10% or more of our equity securities or our affiliates.

For the period from May 15, 2019 to December 31, 2019, we used all of the net proceeds from our 2019 ADS Offering for (i) capital expenditure on procurement of manufacturing equipment and upgrades and expansion of our manufacturing facilities, and (ii) other day to day operating purposes. For the period from May 17, 2019 to December 31, 2019, we transferred US\$31.5 million of the net proceeds from our 2019 Private Placement to the option counterparty in connection with the zero strike call option transaction, and the remainder of the net proceeds from our 2019 Private Placement for (i) capital expenditure on procurement of manufacturing equipment and upgrades and expansion of our manufacturing facilities, and (ii) other day to day operating purposes.

2020 ATM Program

The following “Use of Proceeds” information relates to the registration statement on Form F-3 (File Number 333-251377), together with the prospectus supplement to register additional securities dated December 16, 2020, to sell up to an aggregate of US\$100 million of the ADSs through the 2020 ATM Program. On January 6, 2021, we completed the 2020 ATM Program, under which we sold 1,494,068 ADSs and received US\$98.25 million after deducting commissions and offering expenses. Credit Suisse Securities (USA) LLC and Barclays Capital Inc. acted as our sales agents for the 2020 ATM Program.

In the first quarter of 2021, we used all of the net proceeds from our 2020 ATM Program, respectively, for our production capacity expansion and other general corporate purposes. Our production capacity expansion has been conducted mainly through Jiangxi Jinko, a 73.3% owned subsidiary of ours in China, and therefore certain amount of the net proceeds from the 2020 ATM Program has been transferred to Jiangxi Jinko in the form of intercompany loans. In January 2021, we offered intercompany loans of US\$95.0 million in aggregate to Jiangxi Jinko through JinkoSolar Investment Limited, our wholly-owned subsidiary, for three years at an annual interest rate of 3.34%.

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our chief executive officer and our chief financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of December 31, 2022, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, for our company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with generally accepted accounting principles and includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of a company's assets, (2) 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 (3) 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.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance with respect to consolidated financial statement preparation and presentation and may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As required by Section 404 of the Sarbanes-Oxley Act of 2002 and related rules promulgated by the Securities and Exchange Commission, our management assessed the effectiveness of internal control over financial reporting as of December 31, 2022 using the criteria set forth in the report "Internal Control—Integrated Framework (2013)" published by the Committee of Sponsoring Organizations of the Treadway Commission (known as COSO). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Attestation Report of the Independent Registered Public Accounting Firm

PricewaterhouseCoopers Zhong Tian LLP, our independent registered public accounting firm, 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 Form 20-F.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the period covered by this annual report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that Mr. Steven Markscheid, an independent director, is our audit committee financial expert. Mr. Steven Markscheid satisfies the independent requirements of Section 303A of the Corporate Governance Roles of the NYSE and Rule 60A-3 under the Exchange Act.

ITEM 16B. CODE OF ETHICS

Our board of directors has adopted a code of ethics that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officer, chief financial officer, chief operating officer, chief technology officer, vice presidents and any other persons who perform similar functions for us. We have filed our code of business conduct and ethics as an exhibit to Exhibit 99.1 of our registration statement on Form F-1/A (File No. 333-164432) filed with the Securities and Exchange Commission on February 4, 2010 and posted the code on our website at the following link: <http://ir.jinkosolar.com/static-files/ed0c40da-6be3-42fc-a779-03b16094c4e1>. We hereby undertake to provide to any person without charge, a copy of our code of business conduct and ethics within ten working days after we receive such person's written request.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by PricewaterhouseCoopers Zhong Tian LLP, our independent registered public accounting firm, for the periods indicated. We did not pay any other fees to our independent registered public accounting firm during the periods indicated below.

	2021	2022	
	(RMB)	(RMB)	(US\$)
		(in thousands)	
Audit Fees	6,000	6,600	956.9
Audit-related Fees	—	—	—
Tax Fees ⁽¹⁾	745	391	56.8
All Other Fees ⁽²⁾	—	272	39.4
Total	6,745	7,263	1053.1

(1) "Tax Fees" represent the aggregated fees billed in each of the fiscal year listed for professional services rendered by our independent registered public accounting firm for tax advice.

(2) "All Other Fees" represent the aggregated fees billed in each of the fiscal year listed for professional services rendered by our independent registered public accounting firm for ESG advice.

The policy of our audit committee is to pre-approve all audit and non-audit services provided by our independent registered public accounting firm, including audit services, audit-related services, tax services and other services as described above, other than those for *de minimis* services that are approved by our audit committee prior to the completion of the audit. All fees listed above were pre-approved by our audit committee.

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

Not applicable.

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

Period	(a) Total Number of ADSs Purchased	(b) Average Price Paid per ADS	(c) Total Number of ADSs Purchased as Part of Publicly Announced Plans or Programs⁽¹⁾	(d) Maximum Approximate Dollar Value of ADSs That May Yet Be Purchased Under the Plans or Programs (in million)⁽¹⁾
January 2020 (through April 28, 2023) ⁽¹⁾	—	—	—	US\$ 200.0
Total	—	—	—	US\$ 200.0

(1) On July 6, 2022, we announced a share repurchase program of up to US\$200 million of our ordinary shares represented by ADSs within eighteen months following July 6, 2022. Purchases may be made from time to time on the open market at prevailing market prices in open-market transactions, privately negotiated transactions or block trades, and/or through other legally permissible means, depending on market conditions and in accordance with the applicable rules and regulations. The timing and conditions of the share repurchases will be subject to various factors including the requirements under Rule 10b-18 and Rule 10b5-1 of the Exchange Act, as well as our insider trading policy.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

We are incorporated under the laws of Cayman Islands. Many of the corporate governance rules in the New York Stock Exchange Listed Company Manual, or the NYSE Standards, do not apply to us as a “foreign private issuer” and we are permitted to follow the corporate governance practices in the Cayman Islands in lieu of most corporate governance standards contained in the NYSE Standards. Section 303A.11 of the NYSE Standards requires foreign private issuers listed on the New York Stock Exchange to describe the significant differences between their corporate governance practices and the corporate governance standards applicable to U.S. domestic companies listed on the New York Stock Exchange, or the U.S. domestic issuers. The following table sets forth a summary of such significant differences:

	NYSE Listed Company Manual Requirements on Corporate Governance	Our Practice
Board of Directors	NYSE Standards require U.S. domestic issuers to schedule an executive session at least once a year to be attended by only independent directors. We are not subject to such requirement.	Our directors may attend all of our board meetings.
	NYSE Standards require U.S. domestic issuers to disclose a method for interested parties to communicate directly with the presiding director or with non-management directors as a group. We are not subject to such requirement.	We have not adopted any such method.
Audit Committee	If an audit committee member simultaneously serves on the audit committees of more than three public companies, and the listed company does not limit the number of audit committees on which its audit committee members serve to three or less, then in each case, the boards of directors of U.S. domestic issuers are required to determine that such simultaneous service would not impair the ability of such member to effectively serve on its audit committee and disclose such determination in its annual proxy statement or annual report. We are not subject to such requirement.	Our board of directors has not made any such determination.
Compensation Committee	NYSE Standards require U.S. domestic issuers to have a compensation committee composed entirely of independent directors. We are not subject to such requirement.	We have a compensation committee that consists of one independent director and one executive director.
	NYSE Standards require compensation committees of U.S. domestic issuers to produce a compensation committee report annually and include such report in their annual proxy statements or annual reports on Form 10-K. We are not subject to such requirement.	Our compensation committee has not produced any such report.
Nominating Committee	While NYSE Standards require U.S. domestic issuers to have only independent directors on their nominating committees, we are not subject to such requirement.	Our corporate governance and nominating committee consists of two independent directors and one executive director.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

Item 16I. Disclosure Regarding Foreign Jurisdiction that Prevent Inspections

On May 26, 2022, the Company was conclusively listed by the SEC as a Commission-Identified Issuer under the HFCAA following the filing of its annual report on Form 20-F for the fiscal year ended December 31, 2021. Our auditor, a registered public accounting firm that the PCAOB was unable to inspect or investigate completely in 2021, issued the audit report for us for the fiscal year ended December 31, 2021. 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. For this reason, the Company does not expect to be identified as a Commission-Identified Issuer under the HFCAA after it files this annual report on Form 20-F.

As of the date of this annual report, to our best knowledge, (i) no governmental entities in the Cayman Islands or in China own the Company's shares, (ii) the governmental entities in China do not have a controlling financial interest in the Company, (iii) none of the members of the board of directors of the Company or its 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 the Company or its operating entities contains any charter of the Chinese Communist Party.

PART III

ITEM 17. FINANCIAL STATEMENTS

We have elected to provide financial statements pursuant to Item 18.

ITEM 18. FINANCIAL STATEMENTS

See pages beginning on page F-1 in this annual report.

ITEM 19. EXHIBITS

Exhibit Number	Description of Document
1.1	<u>Third Amended and Restated Memorandum and Articles of Association, as currently in effect (incorporated by reference to Exhibit 3.2 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on February 9, 2010)</u>
2.1	<u>Registrant's Specimen American Depositary Receipt (included in Exhibit 2.3)</u>
2.2	<u>Registrant's Specimen Certificate for Shares (incorporated by reference to Exhibit 4.2 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
2.3	<u>Form of Amended and Restated Deposit Agreement among the Registrant, the depositary and holder of the American Depositary Receipts (incorporated by reference to Exhibit 99.(A) of our Registration Statement on Form F-6 (File No. 333-164523) filed with the Securities and Exchange Commission on November 9, 2018)</u>
2.4	<u>Description of Securities (incorporated by reference to Exhibit 2.4 to our annual report on Form 20-F (File No. 001-34615) filed with the Securities and Exchange Commission on April 24, 2020).</u>
4.1	<u>2009 Long Term Incentive Plan, amended and restated as of September 28, 2011 (incorporated by reference to Exhibit 4.1 to our annual report on Form 20-F (File No. 001-34615) filed with the Securities and Exchange Commission on April 18, 2012)</u>
4.2	<u>Form of Indemnification Agreement between the directors and the Registrant (incorporated by reference to Exhibit 10.29 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.3	<u>Form of Executive Service Agreement of Chief Financial Officer (incorporated by reference to Exhibit 10.27 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.4	<u>English translation of Form of Employment Agreement (incorporated by reference to Exhibit 10.28 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.5	<u>English translation of Plant Lease Agreement between Jinko Solar Co., Ltd. and Jiangxi Desun Energy Co., Ltd. dated January 1, 2008 (incorporated by reference to Exhibit 10.2 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.6	<u>English translation of Form of Maximum Amount Guarantee Contract between the directors and Bank of China (incorporated by reference to Exhibit 10.21 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.7	<u>English translation of Maximum Amount Guarantee Agreement between the directors and Agricultural Bank of China (incorporated by reference to Exhibit 10.39 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on January 20, 2010)</u>
4.8	<u>2014 Equity Incentive Plan (incorporated by reference to Exhibit 4.9 of our annual report on Form 20-F (File No. 001-34615) filed with the Securities and Exchange Commission on April 16, 2015)</u>

[Subscription Agreement Schedule and Amended and Restated Subscription Agreement among the Registrant, JinkoSolar WWG Investment Co., Ltd., JinkoSolar Power Engineering Group Limited, Jiangxi JinkoSolar Engineering Co., Ltd., Jinko Power Co., Ltd. and MEGCIF Investments 6 Limited \(incorporated by reference to Exhibit 4.10 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 16, 2015\)](#)

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- 4.10 [Master Services Agreement between the Registrant and Jiangxi JinkoSolar Engineering Co., Ltd. dated October 18, 2016 \(incorporated by reference to Exhibit 4.10 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on March 29, 2017\)](#)
- 4.11 [English translation of Share Purchase Agreement between Wide Wealth Group Holdings Limited and Shangrao Kangsheng Technology Co., Ltd. dated October 18, 2016 \(incorporated by reference to Exhibit 4.11 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on March 29, 2017\)](#)
- 4.12 [Convertible Senior Notes Purchase Agreement between the Registrant and Credit Suisse AG, Singapore Branch dated May 15, 2019 \(incorporated by reference to Exhibit 4.16 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.13 [Convertible Senior Notes Purchase Agreement between the Registrant and Credit Suisse \(Hong Kong\) Limited dated May 15, 2019 \(incorporated by reference to Exhibit 4.17 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.14 [Convertible Senior Notes Purchase Agreement between the Registrant and BFAM Asian Opportunities Master Fund, LP acting through its general partner BFAM Asian Opportunities Master GP Limited dated May 15, 2019 \(incorporated by reference to Exhibit 4.18 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.15 [Convertible Senior Notes Purchase Agreement between the Registrant and CAI Global Master Fund, L.P. dated May 15, 2019 \(incorporated by reference to Exhibit 4.19 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.16 [Convertible Senior Notes Purchase Agreement between the Registrant and Myriad Opportunities Master Fund Limited dated May 15, 2019 \(incorporated by reference to Exhibit 4.20 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.17 [Convertible Senior Notes Purchase Agreement between the Registrant and Nine Masts Investment Fund dated May 15, 2019 \(incorporated by reference to Exhibit 4.21 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.18 [Convertible Senior Notes Purchase Agreement between the Registrant and Huge Star Opportunity II Limited dated May 15, 2019 \(incorporated by reference to Exhibit 4.22 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.19 [Placement Agent Agreement between the Registrant and Credit Suisse \(Hong Kong\) Limited dated May 15, 2019 \(incorporated by reference to Exhibit 4.23 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.20 [Indenture among the Registrant, The Bank of New York Mellon, London Branch, as trustee and paying agent, The Bank of New York Mellon SA/NV, Luxembourg Branch, as registrar and transfer agent, and The Bank of New York Mellon, London Branch, as conversion agent dated May 17, 2019 \(incorporated by reference to Exhibit 4.24 of our annual report on Form 20-F \(File No. 001-34615\) filed with the Securities and Exchange Commission on April 24, 2020\)](#)
- 4.21 [Automatic Shelf Registration Statement on Form F-3 \(File No. 333-251377\) filed with the Securities and Exchange Commission on December 16, 2020](#)
- 4.22 [Form of Distribution Agency Agreement among the Registrant, Credit Suisse Securities \(USA\) LLC and Barclays Capital Inc. \(incorporated by reference to Exhibit 1.1 on Form 6-K \(File No. 001-34615\) furnished with the Securities and Exchange Commission on December 16, 2020\)](#)
- 4.23* [English translation of Acting-in-Concert Agreement among Xiande Li, Kangping Chen and Xianhua Li](#)

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4.24	2021 Equity Incentive Plan (incorporated by reference to Exhibit 4.23 of our annual report on Form 20-F (File No. 001-34615) filed with the Securities and Exchange Commission on April 28, 2021)
4.25	2022 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of our Form S-8 (File No. 333-263307) filed with the Securities and Exchange Commission on March 4, 2022)
4.26*	2023 Equity Incentive Plan
8.1*	Subsidiaries of the Registrant
11.1	Code of Business Conduct and Ethics of the Registrant (incorporated by reference to Exhibit 99.1 of our Registration Statement on Form F-1 (File No. 333-164432) filed with the Securities and Exchange Commission on February 4, 2010)
12.1*	CEO Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2*	CFO Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	CEO Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2**	CFO Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1*	Consent of Maples and Calder (Hong Kong) LLP
15.2*	Consent of King & Wood Mallesons
15.3*	Consent of PricewaterhouseCoopers Zhong Tian LLP
101.INS*	Inline XBRL Instance Document — the instance document does not appear in 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 with this annual report on Form 20-F

** Furnished with this annual report on Form 20-F

SIGNATURES

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

JinkoSolar Holding Co., Ltd.

By: /s/ Xiande Li
Name: Xiande Li
Title: Chairman of the Board of Directors and Chief Executive Officer

Date: April 28, 2023

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of JinkoSolar Holding Co., Ltd.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of JinkoSolar Holding Co., Ltd. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income, of changes in shareholders’ equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as 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 (COSO).

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 each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. 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 COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for credit losses on certain financial instruments in 2020.

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 Management’s Annual Report on Internal Control Over Financial Reporting appearing under Item 15. Our responsibility is to express opinions on the Company’s consolidated financial statements and 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Accrued warranty costs

As described in Note 2(z) to the consolidated financial statements, solar modules produced by the Company are typically sold with either a 5-year or 10-year warranty for product defects, and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. Management applied significant judgment in estimating the expected failure rate of the Company's solar module products and the estimated replacement costs associated with fulfilling its warranty obligations when measuring the warranty costs. The Company's accrued warranty costs were RMB1,644 million as of December 31, 2022.

The principal considerations for our determination that performing procedures relating to the accrued warranty costs is a critical audit matter are (i) the significant judgment made by management in estimating the warranty costs, including the expected failure rate and the estimated replacement costs and (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence relating to management's estimation of warranty costs.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of internal controls relating to the estimation of accrued warranty costs. These procedures also included, among others, testing the appropriateness of the methodology used and the reasonableness of the significant assumptions used by management in developing these estimates, related to the expected failure rate of the Company's solar module products and the estimated replacement costs associated with fulfilling its warranty obligations. Evaluating whether the significant assumptions used by management were reasonable involved (i) testing historical warranty claims and settlements, (ii) evaluating the reasonableness and appropriateness of factors considered by management in estimating the expected failure rate, and (iii) testing the completeness and accuracy of the underlying data used to estimate the replacement cost.

Allowance for credit losses for accounts receivable

As described in Notes 2(h) and 7 to the consolidated financial statements, the Company's gross accounts receivable were RMB17,259 million, for which an allowance for credit losses of RMB584 million was recorded as of December 31, 2022. The allowance is management's estimate of expected credit losses on accounts receivable. Management estimated the allowance by segmenting accounts receivable into groups based on certain credit risk characteristics, including geographic region and industry. Management determined an expected loss rate for each group based on historical credit loss experience, current and future economic conditions, and lifetime for debt recovery.

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The principal considerations for our determination that performing procedures relating to the allowance for credit losses for accounts receivable is a critical audit matter are (i) the significant judgment made by management in estimating the credit loss provision for accounts receivable and (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence relating to management's judgement about credit risk characteristics, current and future economic conditions, and lifetime for debt recovery. The audit effort also included the involvement of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of internal controls relating to the estimation of credit loss provision for accounts receivable. These procedures also included, among others, testing management's process for estimating the credit loss provision for accounts receivable by (i) testing the completeness and accuracy of the data used; (ii) evaluating the appropriateness of management's model and methodology; and (iii) evaluating the reasonableness of significant assumptions used by management, related to credit risk characteristics, current and future economic conditions, and lifetime for debt recovery. Professionals with specialized skill and knowledge were also used to assist in evaluating the appropriateness of the model, methodology and reasonableness of management's significant assumptions.

/s/PricewaterhouseCoopers Zhong Tian LLP
Shanghai, the People's Republic of China
April 28, 2023

We have served as the Company's auditor since 2008.

JINKOSOLAR HOLDING CO., LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022
(In thousands, unless otherwise indicated)

	For the year ended December 31,			
	2020	2021	2022	USD (Note 2 (a))
	RMB	RMB	RMB	
Revenues from third parties	35,067,287	40,794,758	82,794,101	12,004,016
Revenues from related parties	62,172	31,763	333,195	48,309
Total revenues	35,129,459	40,826,521	83,127,296	12,052,325
Cost of revenues	(28,957,798)	(34,168,686)	(70,848,983)	(10,272,137)
Gross profit	6,171,661	6,657,835	12,278,313	1,780,188
Selling and marketing	(2,473,982)	(2,856,465)	(7,241,888)	(1,049,975)
General and administrative	(1,409,371)	(1,963,562)	(3,508,678)	(508,710)
Impairment of long-lived assets	(114,168)	(273,713)	(373,732)	(54,186)
Research and development	(389,192)	(461,590)	(724,769)	(105,082)
Total operating expenses	(4,386,713)	(5,555,330)	(11,849,067)	(1,717,953)
Income from operations	1,784,948	1,102,505	429,246	62,235
Interest expenses	(675,852)	(838,320)	(1,079,409)	(156,500)
Interest income	216,618	214,291	588,706	85,354
Subsidy income	191,981	465,685	1,089,435	157,953
Exchange gain/(loss), net	(336,523)	(355,499)	1,025,891	148,741
Other income, net	2,292	1,911	1,571	228
Change in fair value of foreign exchange forward contracts	191,186	288,880	(164,356)	(23,829)
Change in fair value of foreign exchange options	(3,608)	18,809	(4,163)	(604)
Change in fair value of interest rate swap	(78,878)	—	—	—
Change in fair value of long-term investment	—	—	101,871	14,770
Change in fair value of convertible senior notes and call option	(725,792)	191,641	(12,083)	(1,752)
Income before income taxes	566,372	1,089,903	1,976,709	286,596
Income tax expenses	(178,411)	(194,140)	(605,278)	(87,757)
Equity in (loss)/income of affiliated companies	(52,706)	59,809	193,708	28,085
Net income	333,255	955,572	1,565,139	226,924
Less: Net income attributable to the non-controlling interests	(104,870)	(234,554)	(944,633)	(136,959)
Net income attributable to JinkoSolar Holding Co., Ltd.'s ordinary shareholders	230,385	721,018	620,506	89,965
Net income/(loss) attributable to JinkoSolar Holding Co., Ltd.'s ordinary shareholders per share-				
Basic	1.29	3.78	3.13	0.45
Diluted	(1.36)	2.01	3.10	0.45
Net income/(loss) attributable to JinkoSolar Holding Co., Ltd.'s ordinary shareholders per ADS-				
Basic	5.15	15.12	12.54	1.82
Diluted	(5.42)	8.02	12.38	1.80
Weighted average ordinary shares outstanding				
Basic	178,938,853	190,672,869	198,004,260	198,004,260
Diluted	171,438,853	205,719,772	200,408,494	200,408,494

Each ADS represents four ordinary shares.

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

JINKOSOLAR HOLDING CO., LTD.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022
(In thousands, unless otherwise indicated)

	For the year ended December 31,			
	2020	2021	2022	
	RMB	RMB	RMB	USD
				(Note 2 (a))
Net income	335,255	955,572	1,565,139	226,924
Other comprehensive income:				
-Unrealized gain on available-for-sale securities (Note 12)	—	—	973	141
-Change in fair value of interest rate swap cash flow hedges (Note 29)	—	(12,294)	—	—
-Reclassification of change in instrument-specific credit risk (Note 22)	—	(14,252)	—	—
-Change in instrument-specific credit risk (Note 22)	60,326	56,224	100,158	14,522
-Foreign currency translation adjustments	(251,893)	(55,438)	406,149	58,886
Comprehensive income	143,688	929,812	2,072,419	300,473
Less: comprehensive income attributable to non-controlling interests	(104,870)	(234,554)	(1,079,975)	(156,582)
Comprehensive income attributable to JinkoSolar Holding Co., Ltd.'s ordinary shareholders	38,818	695,258	992,444	143,891

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

JINKOSOLAR HOLDING CO., LTD.
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2021 AND 2022
(In thousands, unless otherwise indicated)

	December 31, 2021	December 31, 2022	
	RMB	RMB	USD (Note 2 (a))
ASSETS			
Current assets:			
Cash and cash equivalents	8,321,415	10,243,500	1,485,168
Restricted cash	602,044	1,027,454	148,967
Restricted short-term investments	9,261,918	8,945,271	1,296,942
Short-term investments	150,000	—	—
Accounts receivable, net - related parties	29,417	139,713	20,257
Accounts receivable, net - third parties	7,471,103	16,674,876	2,417,630
Notes receivable - a related party	—	282,824	41,006
Notes receivable, net - third parties	1,689,102	6,697,096	970,988
Advances to suppliers - a related party	—	56,860	8,244
Advances to suppliers - third parties	1,536,155	3,271,284	474,292
Inventories, net	13,252,352	17,450,284	2,530,053
Foreign exchange forward contract receivables	73,532	119,625	17,344
Other receivables - related parties	17,348	23,105	3,350
Held-for-sale assets	684,631	—	—
Available-for-sale securities	—	104,499	15,151
Prepayments and other current assets	2,435,057	3,290,903	477,136
Total current assets	45,524,074	68,327,294	9,906,528
Non-current assets:			
Restricted long-term investments	1,204,697	1,378,680	199,890
Accounts receivable, net - third parties	27,624	—	—
Long-term investments	633,866	1,711,072	248,083
Property, plant and equipment, net	19,969,894	32,290,088	4,681,623
Land use rights, net	1,090,057	1,431,424	207,537
Intangible assets, net	55,484	79,600	11,541
Deferred tax assets	371,767	704,244	102,106
Financing lease right-of-use assets, net	628,592	558,407	80,961
Operating lease right-of-use assets, net	438,271	396,966	57,555
Advances to suppliers to be utilized beyond one year	296,709	310,375	45,000
Other assets - related parties	3,292	52,363	7,592
Other assets - third parties	2,739,160	1,421,669	206,123
Total non-current assets	27,459,413	40,334,888	5,848,010
Total assets	72,983,487	108,662,182	15,754,538

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

JINKOSOLAR HOLDING CO., LTD.
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2021 AND 2022
(In thousands, unless otherwise indicated)

	December 31, 2021	December 31, 2022	
	RMB	RMB	USD (Note 2 (a))
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities:			
Accounts payable - related parties	15,863	—	—
Accounts payable - third parties	6,799,854	10,378,076	1,504,680
Notes payable - a related party	—	419,500	60,822
Notes payable - third parties	12,072,223	20,204,323	2,929,351
Accrued payroll and welfare expenses	1,240,791	2,035,931	295,182
Advances from a related party	—	3,829	555
Advances from third parties	5,914,354	9,220,267	1,336,813
Income tax payables	214,856	737,735	106,962
Foreign exchange forward derivatives payables	2,659	63,137	9,154
Financing lease liabilities - current	194,939	168,381	24,413
Operating lease liabilities - current	62,515	65,489	9,495
Short-term borrowings, including current portion of long-term borrowings, and failed sale-leaseback financing	13,339,367	12,419,170	1,800,610
Other payables and accruals - third parties	4,844,084	9,214,384	1,335,961
Other payables and accruals - a related party	2,230	5,964	865
Guarantee liabilities to related parties	2,500	—	—
Held-for-sale liabilities	553,234	—	—
Deferred revenue	200,000	—	—
Total current liabilities	45,459,469	64,936,186	9,414,863
Non-current liabilities:			
Long-term borrowings	9,896,455	13,022,795	1,888,128
Long-term payables	568,495	601,759	87,247
Accrued warranty costs - non-current	858,641	1,422,276	206,211
Financing lease liabilities - non-current	236,374	69,881	10,131
Operating lease liabilities - non-current	385,420	339,885	49,279
Convertible senior notes	1,098,736	1,070,699	155,237
Deferred tax liability	183,003	194,808	28,245
Guarantee liabilities to related parties - non-current	9,642	—	—
Total non-current liabilities	13,236,766	16,722,103	2,424,478
Total liabilities	58,696,235	81,658,289	11,839,341
Commitment and contingencies	—	—	—
Shareholders' equity:			
Ordinary shares (US\$0.00002 par value, 500,000,000 shares authorized, 193,770,753 and 204,135,029 shares issued as of December 31, 2021 and December 31, 2022, respectively)	26	28	4
Additional paid-in capital	5,617,923	9,912,931	1,437,240
Accumulated other comprehensive (loss)/income	(154,375)	217,563	31,544
Treasury stock, at cost; 2,945,840 ordinary shares as of December 31, 2021 and December 31, 2022	(43,170)	(43,170)	(6,259)
Retained earnings	5,629,377	6,249,883	906,148
Total JinkoSolar Holding Co., Ltd. Shareholders' equity	11,049,781	16,337,235	2,368,677
Non-controlling interests	3,237,471	10,666,658	1,546,520
Total shareholders' equity	14,287,252	27,003,893	3,915,197
Total liabilities, non-controlling interest and shareholders' equity	72,983,487	108,662,182	15,754,538

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

JINKOSOLAR HOLDING CO., LTD.
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022
(In thousands, unless otherwise indicated)

	Ordinary shares issued			JinkoSolar Holding Co., shareholders' equity					
	Number of shares	Par value	Additional paid-in capital	Accumulated other comprehensive (loss)/income	Number of Treasury Stock	Treasury Stock	Retained earnings	Non-controlling interests	Total shareholders' equity
		RMB	RMB	RMB		RMB	RMB	RMB	RMB
Balance as of December 31, 2019	180,653,497	25	4,582,850	62,952	(1,723,200)	(13,876)	4,671,367	3,137,709	12,441,027
Share-based compensation expense	—	—	923	—	—	—	—	—	923
Common stock offering	5,976,272	1	636,179	—	—	—	—	—	636,180
Foreign currency exchange translation adjustment	—	—	—	(251,893)	—	—	—	—	(251,893)
Change in the instrument-specific credit risk (Note 22)	—	—	—	60,326	—	—	—	—	60,326
Contribution from non-controlling interest (Note 1)	—	—	—	—	—	—	—	865,000	865,000
Contribution from principal shareholders (Note 24)	—	—	139,854	—	—	—	—	(139,854)	—
Settlement of non-controlling interest (Note 18)	—	—	(171,498)	—	—	—	—	(3,798,746)	(3,970,244)
Repurchase of non-controlling interest	—	—	(20,625)	—	—	—	—	(266,062)	(286,687)
Equity financing in a subsidiary (Note 24)	—	—	—	—	—	—	—	3,100,000	3,100,000
Exercise of share options	3,750,540	—	83,562	—	—	—	—	—	83,562
Share repurchase(Note 23)	—	—	—	—	(1,222,640)	(29,294)	—	—	(29,294)
Cumulative effect of adoption of new accounting standard (Note 2(am))	—	—	—	—	—	—	6,607	—	6,607
Net income	—	—	—	—	—	—	230,385	104,870	335,255
Balance as of December 31, 2020	190,380,309	26	5,251,245	(128,615)	(2,945,840)	(43,170)	4,908,359	3,002,917	12,990,762
Share-based compensation expense	—	—	9,884	—	—	—	—	—	9,884
Foreign currency exchange translation adjustment	—	—	—	(55,438)	—	—	—	—	(55,438)
Change in the instrument-specific credit risk (Note 22)	—	—	—	56,224	—	—	—	—	56,224
Exercise of share options	109,200	—	2,212	—	—	—	—	—	2,212
Conversion of Convertible senior notes (Note 22)	3,281,244	—	354,582	(14,252)	—	—	—	—	340,330
Net income	—	—	—	—	—	—	721,018	234,554	955,572
Change in fair value of interest rate swap cash flow hedges	—	—	—	(12,294)	—	—	—	—	(12,294)
Balance as of December 31, 2021	193,770,753	26	5,617,923	(154,375)	(2,945,840)	(43,170)	5,629,377	3,237,471	14,287,252
Share-based compensation expense	—	—	987,259	—	—	—	—	13,610	1,000,869
Foreign currency exchange translation adjustment	—	—	—	270,807	—	—	—	135,342	406,149
Change in the instrument-specific credit risk (Note 22)	—	—	—	100,158	—	—	—	—	100,158
Unrealized gain on available-for-sale securities (Note 12)	—	—	—	973	—	—	—	—	973
Subsidiary's offering of its equity interests (Note 24)	—	—	3,303,660	—	—	—	—	6,419,192	9,722,852
Exercise of share options	10,364,276	2	3,853	—	—	—	—	—	3,855
Contribution from non-controlling interest shareholders	—	—	—	—	—	—	—	17,000	17,000
Net income	—	—	—	—	—	—	620,506	944,633	1,565,139
Settlement of non-controlling interests	—	—	236	—	—	—	—	(5,418)	(5,182)
Distribution of a subsidiary's dividend to non-controlling interest holders (Note 24)	—	—	—	—	—	—	—	(95,172)	(95,172)
Balance as of December 31, 2022	204,135,029	28	9,912,931	217,563	(2,945,840)	(43,170)	6,249,883	10,666,658	27,003,893

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

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JINKOSOLAR HOLDING CO., LTD. CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022 (In Thousands, unless otherwise indicated)

	For the year ended December 31,			
	2020 RMB	2021 RMB	2022 RMB	USD (Note 2 (a))
Cash flows from operating activities:				
Net income	335,255	955,572	1,565,139	226,924
Adjustments to reconcile net income to net cash provided by operating activities:	—	—	—	—
Share-based compensation charge (Note 25)	923	9,884	1,000,869	145,112
Change in fair value of foreign exchange forward contracts (Note 29)	(129,806)	104,643	13,818	2,003
Change in fair value of foreign exchange options (Note 29)	3,608	(18,909)	4,163	604
Change in fair value of convertible senior notes (Note 22)	1,202,082	(327,762)	12,083	1,752
Change in fair value of call option (Note 22)	(476,290)	136,121	—	—
Change in fair value of interest rate swap (Note 29)	78,878	—	—	—
Deferred income taxes	94,158	(262,370)	(320,673)	(46,493)
Change in fair value of long-term investment (Note 12)	—	—	(101,871)	(14,770)
Depreciation of property, plant and equipment (Note 13)	1,160,851	1,603,786	2,585,018	374,792
Amortization of right-of-use assets	146,965	135,791	129,869	18,829
Depreciation of project assets	52,830	32,559	—	—
Amortization of land use rights (Note 14)	12,379	18,031	27,353	3,966
Amortization of intangible assets (Note 15)	10,177	11,904	17,324	2,512
Amortization of guarantee liability	(14,688)	(6,364)	—	—
Inventory write-down (Note 10)	270,893	823,273	1,819,166	263,754
Provision for expected credit loss	14,086	82,427	285,394	41,378
Loss on disposal of property, plant and equipment and land use right	428,115	350,336	248,500	36,029
Amortization of deferred losses related to sale-leaseback transactions	27,503	13,424	—	—
Impairment of long-lived assets	114,168	273,713	373,713	54,168
Equity in loss/(income) of affiliated companies	—	(59,809)	(193,708)	(28,085)
Gain on disposal of investment in subsidiaries	—	—	(14,232)	(2,063)
Exchange (gain)/loss, net	336,523	355,499	(1,025,891)	(148,740)
Changes in operating assets and liabilities (net of impact of disposition):				
(Increase)/decrease in accounts receivable - third parties	362,087	(8,666,406)	(8,610,986)	(1,248,476)
(Increase)/decrease in accounts receivable - related parties	89,587	364,677	(115,300)	(16,717)
(Increase)/decrease in notes receivable - third parties	478,057	(638,398)	(5,006,954)	(725,940)
(Increase)/decrease in notes receivable - a related party	(14,373)	33,001	(282,824)	(41,006)
(Increase)/decrease in advances to suppliers - third parties	1,536,442	(856,574)	(1,706,688)	(247,446)
Increase in advances to suppliers - a related party	—	—	(56,860)	(8,244)
Increase in inventories	(2,822,713)	(5,698,689)	(6,053,218)	(877,634)
decrease in project assets constructed for sale, net of incremental revenue	975,713	—	—	—
Decrease in lease liabilities	(36,498)	(50,426)	(22,365)	(3,243)
(Increase)/decrease in other receivables - related parties	30,562	6,408	(6,248)	(906)
Increase in prepayments and other current assets	(1,112,029)	(208,125)	(277,283)	(40,201)
Decrease in other assets - related parties	—	104,027	3,417	495
Decrease in other assets - third parties	(75,445)	(139,877)	(621,880)	(90,164)
Increase in land use right	(176,283)	(347,126)	(473,806)	(68,695)
Increase/(decrease) in accounts payable - third parties	(367,054)	2,644,118	3,588,939	520,347
Increase/(decrease) in accounts payable - related parties	(22,196)	1,750	(15,863)	(2,300)
Increase in accrued payroll and welfare expenses	115,537	245,737	795,140	115,285
Increase in deferred revenue	—	200,000	—	—
Increase/(decrease) in advances from - third parties	(1,792,906)	3,533,231	3,289,191	476,888
Increase/(decrease) in advances from - a related party	(749)	—	3,829	555
Increase/(decrease) in income tax payables	(44,763)	141,136	522,879	75,810
Decrease in derivative liability - interest rate swap	(140,150)	—	—	—
Increase in other payables and accruals - third parties	687,122	599,618	1,572,549	227,998
Increase/(decrease) in other payables and accruals - a related party	58,388	(69,285)	3,734	541
Decrease of long-term borrowings related to sale of project assets constructed for sale	(859,166)	—	—	—
Net cash provided by / (used in) operating activities	591,486	430,646	(5,800,784)	(841,035)
Cash flows from investing activities:				
Maturity of restricted short-term investments	10,075,360	10,501,209	8,494,069	1,231,524
Maturity of short-term investments	—	723,000	150,000	21,748
Maturity of restricted long-term investments	790,398	1,648,698	1,232,960	178,762
Proceeds from disposal of property, plant and equipment and land use right	88,717	20,458	714,176	103,546
Proceeds from pro rata decrease in an equity investment (Note12)	—	—	94,284	13,670
Proceeds from disposal of an equity investment (Note12)	—	—	15,000	2,175
Net of cash disposed of, cash payment from, disposal of subsidiaries	48,078	—	(91,334)	(13,242)
Purchase of property, plant and equipment	(4,055,060)	(8,653,859)	(12,251,348)	(1,776,279)
Cash paid for project assets constructed to operate	(76,351)	—	—	—
Cash paid for investment in affiliates (Note12)	—	(315,000)	(615,100)	(89,181)
Purchase of intangible assets	(14,566)	(32,261)	(42,415)	(6,150)
Purchase of restricted short-term investments	(9,552,999)	(13,362,480)	(8,177,428)	(1,185,615)
Purchase of restricted long-term investments	(1,648,436)	(1,464,202)	(1,406,943)	(203,987)
Purchase of short-term investments	(570,000)	(303,000)	—	—
Purchase of a subsidiary	(19,432)	—	—	—
Cash paid for investment in equity securities (Note12)	—	(95,000)	(227,000)	(32,912)
Loan to third party (Note11)	—	—	(23,459)	(3,403)
Deposits provided for an equity investment	—	—	(37,854)	(5,488)
Purchase of available-for-sale securities (Note12)	—	—	(100,000)	(14,499)
Cash received from dividend	15,598	23,213	—	—
Net cash used in investing activities	(4,918,690)	(11,309,233)	(12,272,387)	(1,779,329)
Cash flows from financing activities:				
Proceeds from exercise of call option	—	621,059	—	—
Proceeds from issuance of ordinary shares	—	641,065	—	—
Subsidiary's offering of its equity interests (Note 24)	—	—	9,770,000	1,416,517
Cash payment for transaction costs of subsidiary's offering (Note 24)	—	—	(47,148)	(6,836)
Settlement of non-controlling interests	—	—	(5,182)	(751)
Cash payment for finance lease as lessee	(252,485)	(286,292)	(216,722)	(31,422)
Proceeds from exercise of share options	114,758	10,185	5,024	729
Payment of deposit for finance lease as lessee	—	(4,257)	—	—
Capital contributions from non-controlling interest holder	865,000	—	17,000	2,465
Proceeds from bank borrowings	24,104,976	30,445,781	29,663,730	4,300,837
Repayment of borrowings	(25,337,297)	(24,280,437)	(27,624,209)	(4,005,134)
Increase in notes payable - related party	—	—	419,500	60,822
Increase in notes payable - third party	1,816,307	2,737,347	8,132,100	1,179,044
Payment of a subsidiary's dividend to non-controlling interest holders	—	—	(95,172)	(13,799)
Equity financing in a subsidiary	3,100,000	—	—	—
Borrowings from government background funds	2,202,000	2,133,400	—	—
Repurchase of shares	(29,294)	—	—	—
Repurchase of non-controlling interest	(286,686)	—	—	—
Net cash provided by financing activities	6,297,279	12,017,851	20,018,922	2,902,472

Effect of foreign exchange rate changes on cash, cash equivalents, and restricted cash	(169,261)	(116,790)	227,957	33,050
Net increase in cash, cash equivalents, and restricted cash	1,800,814	1,022,474	2,173,708	315,158
Cash, cash equivalents, and restricted cash, beginning of the year	6,273,958	8,074,772	9,097,246	1,318,977
Cash, cash equivalents, and restricted cash, end of the year (Note 2(d))	8,074,772	9,097,246	11,270,954	1,634,135
Supplemental disclosure of cash flow information				
Cash paid for income tax	357,781	157,366	400,338	58,044
Cash paid for interest expenses (net of amounts capitalized)	670,160	801,873	1,072,812	155,543
Supplemental disclosure of non-cash investing and financing cash flow information				
Purchases of property, plant and equipment included in payables	1,648,427	2,756,446	5,674,455	822,719
Proceeds from exercise of share options received in subsequent period	9,143	1,169	—	—
Receivables related to At-The-Market offering	641,065	—	—	—
Receivables related to disposal of Property, plant and equipment and land use right	92,735	111,804	378,900	54,935
Disposal of equity securities with consideration offset against payable balance due to third party	7,200	—	—	—
Conversion of convertible senior notes to ordinary shares	—	340,330	—	—

JINKOSOLAR HOLDING CO., LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022
(In Thousands, unless otherwise indicated)

1. ORGANIZATION AND NATURE OF OPERATIONS

JinkoSolar Holding Co., Ltd. (the “Company” or “JinkoSolar Holding”) was incorporated in the Cayman Islands on August 3, 2007. On May 14, 2010, the Company became listed on the New York Stock Exchange (“NYSE”) in the United States. The Company and its subsidiaries (collectively the “Group”) are principally engaged in the design, development, production and marketing of photovoltaic products as well as developing commercial solar power projects.

The following table sets forth information concerning the Company’s major subsidiaries as of December 31, 2022:

Subsidiaries	Date of Incorporation /Acquisition	Place of Incorporation	Percentage of ownership
JinkoSolar Investment Limited. (“Paker”)	November 10, 2006	Hong Kong	100 %
Jinko Solar Co., Ltd. (“Jiangxi Jinko”) (Note 24)	December 13, 2006	PRC	58.6 %
Zhejiang Jinko Solar Co., Ltd. (“Zhejiang Jinko”)	June 30, 2009	PRC	58.6 %
Jinko Solar Import and Export Co., Ltd. (“Jinko Import and Export”)	December 24, 2009	PRC	58.6 %
JinkoSolar GmbH (“Jinko GmbH”)	April 1, 2010	Germany	58.6 %
Zhejiang Jinko Trading Co., Ltd. (“Zhejiang Trading”)	June 13, 2010	PRC	58.6 %
Xinjiang Jinko Solar Co., Ltd. (“Xinjiang Jinko”)	May 30, 2016	PRC	58.6 %
Yuhuan Jinko Solar Co., Ltd. (“Yuhuan Jinko”)	July 29, 2016	PRC	58.6 %
JinkoSolar (U.S.) Inc. (“Jinko US”)	August 19, 2010	USA	58.6 %
Jiangxi Photovoltaic Materials Co., Ltd. (“Jiangxi Materials”)	December 1, 2010	PRC	58.6 %
JinkoSolar (Switzerland) AG (“Jinko Switzerland”)	May 3, 2011	Switzerland	58.6 %
JinkoSolar (US) Holdings Inc. (“Jinko US Holding”)	June 7, 2011	USA	58.6 %
JinkoSolar Italy S.R.L. (“Jinko Italy”)	July 8, 2011	Italy	58.6 %
Jinko Solar Canada Co., Ltd. (“Jinko Canada”)	November 18, 2011	Canada	58.6 %
Jinko Solar Australia Holdings Co. Pty Ltd. (“Jinko Australia”)	December 7, 2011	Australia	58.6 %
Jinko Solar Japan K.K. (“JinkoSolar Japan”)	May 21, 2012	Japan	58.6 %

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Subsidiaries	Date of Incorporation /Acquisition	Place of Incorporation	Percentage of ownership
Jinko Solar (Shanghai) Management Co., Ltd.	July 25, 2012	PRC	58.6 %
Wide Wealth Group Holding Limited. ("Wide Wealth Hong Kong")	June 11, 2012	Hong Kong	100 %
Canton Best Limited ("Canton Best BVI")	September 16, 2013	BVI	100 %
Jinko Solar Technology Sdn.Bhd.	January 21, 2015	Malaysia	58.6 %
JinkoSolar International Development Limited.	August 28, 2015	Hong Kong	100 %
JinkoSolar Middle East DMCC ("DMCC")	November 6, 2016	Emirates	58.6 %
JinkoSolar Trading Privated Limited.	February 6, 2017	India	58.6 %
JinkoSolar LATAM Holding Limited.	August 22, 2017	Hong Kong	100 %
JinkoSolar (U.S.) Industries Inc.	November 16, 2017	USA	58.6 %
JinkoSolar Technology (Haining) Co., Ltd. ("Haining Jinko")*	December 15, 2017	PRC	45.9 %
Poyang Ruilixin Information Technology Co., Ltd.	December 19, 2017	PRC	58.6 %
Jinko Solar Korea Co., Ltd. ("Jinko Korea")	December 3, 2018	Korea	58.6 %
JinkoSolar (Sichuan) Co., Ltd. ("Jinko Sichuan")*	February 18, 2019	PRC	38.4 %
JinkoSolar (Qinghai) Co., Ltd. ("Jinko Qinghai")*	April 3, 2019	PRC	32.2 %
Rui Xu Co., Ltd. ("Rui Xu")*	July 24, 2019	PRC	35.2 %
JinkoSolar (Yiwu) Co., Ltd. ("Jinko Yiwu")*	September 19, 2019	PRC	32.2 %
Jinko PV Material Supply SDN. BHD	September 23, 2019	Malaysia	58.6 %
JinkoSolar (Vietnam) Co., Ltd.	September 26, 2019	Vietnam	58.6 %
JinkoSolar (Chuzhou) Co., Ltd. ("Jinko Chuzhou")*	December 26, 2019	PRC	32.2 %
Zhejiang New Materials Co., Ltd. ("Zhejiang New Materials")	March 24, 2020	PRC	58.6 %
JinkoSolar (Shangrao) Co., Ltd. ("Jinko Shangrao")*	April 17, 2020	PRC	32.2 %
Jinko Solar Denmark ApS	May 28, 2020	Denmark	58.6 %
JinkoSolar Hong Kong Limited	August 17, 2020	Hong Kong	58.6 %
Jinko Solar (Malaysia) SDN BHD	August 28, 2020	Malaysia	58.6 %
JinkoSolar (Chuxiong) Co., Ltd. ("Jinko Chuxiong")	September 25, 2020	PRC	58.6 %
Yiwu New Materials Co., Ltd. ("Yiwu Materials")	October 14, 2020	PRC	58.6 %
Jinko Solar (Vietnam) Industries Company Limited.	March 29, 2021	Vietnam	58.6 %
JinkoSolar (Leshan) Co., Ltd. ("Jinko Leshan")	April 25, 2021	PRC	58.6 %
JinkoSolar (Anhui) Co., Ltd. ("Jinko Anhui") *	September 3, 2021	PRC	32.2 %
JinkoSolar (Yushan) Co., Ltd. ("Jinko Yushan") *	September 26, 2021	PRC	46.9 %
Fengcheng Jinko PV Materials Co., Ltd	August 11, 2021	PRC	58.6 %
JinkoSolar (Feidong) Co., Ltd. ("Jinko Feidong") *	September 23, 2021	PRC	32.2 %
JinkoSolar (Jinchang) Co., Ltd. ("Jinko Jinchang")	September 24, 2021	PRC	58.6 %
JinkoSolar (Poyang) Co., Ltd. ("Jinko Poyang")	December 1, 2021	PRC	58.6 %
Shangrao Changxin Enterprise Management Center LP.	December 16, 2021	PRC	100 %
Shangrao Changxin No. 1 Enterprise Management Center LP.	February 17, 2022	PRC	100 %
Shangrao Changxin No. 2 Enterprise Management Center LP.	February 17, 2022	PRC	100 %
Shangrao Changxin No. 3 Enterprise Management Center LP.	June 15, 2022	PRC	100 %
Shangrao Changxin No. 5 Enterprise Management Center LP.	June 15, 2022	PRC	100 %
Shangrao Changxin No. 6 Enterprise Management Center LP.	October 25, 2022	PRC	100 %
Jiaxing Jinyue Phase I Venture Capital Partnership	April 26, 2022	PRC	78.2 %
Shangrao Jinko PV Manufacturing Co., Ltd.	March 28, 2022	PRC	58.6 %
Shangrao Guangxin Jinko PV Manufacturing Co., Ltd	March 23, 2022	PRC	58.6 %
Jinko Energy Storage Technology Co., Ltd.	December 6, 2022	PRC	58.6 %
Jiangxi Jinko Energy Storage Co., Ltd	May 26, 2022	PRC	58.6 %

* These entities are subsidiaries of Jiangxi Jinko with non-controlling interest. The percentage of ownership is the economic interest calculated as the multiple of the Company's ownership in Jiangxi Jinko and Jiangxi Jinko's ownership in such subsidiary.

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- (i) In the fourth quarter of 2016, JinkoSolar Technology Limited (formally known as Paker Technology Limited) disposed of Zhejiang Jinko Financial Leasing Co., Ltd. with the consideration of RMB183 million (USD26 million). Loss on disposal of this subsidiary amounted to RMB15 million (USD2 million) was recognized. Consideration associated with the transaction amounted to RMB128 million and RMB42 million was collected in the years of 2019 and 2020, respectively.
- (ii) Haining Jinko was founded by the Group in the year of 2017 and is principally engaged in the production of photovoltaic products, such as solar modules and cells, for intercompany sales within the Group. In the second and third quarter of 2018, government background companies made capital injection with the amounted of RMB517 million into Haining Jinko. In the third quarter of 2019, to support developments of local enterprise, government background funds of Zhejiang province made investment into Haining Jinko as capital injections through limited partnership established together with Zhejiang Jinko. The total capital injection received from government funds in the year of 2019 amounted to RMB846 million. The Group's percentage of ownership in Haining Jinko was 56.4% as at December 31, 2019. During the year of 2020, the Group repurchased certain of the noncontrolling interests with the consideration of RMB287 million, with the difference between the consideration and the carrying amount of noncontrolling interests charged to additional paid-in capital with the amount of RMB21 million. In addition, in the fourth quarter of 2020, certain of the non-controlling interest arrangements were settled in return for a loan liability pursuant to a supplementary investment agreement between the Group and the government background fund (Note 18).
- (iii) In the second quarter of 2019, Jiangxi Jinko, together with government background funds, established Jinko Sichuan. Cash capital injections with the amount of RMB800 million and RMB200 million had been made by the non-controlling shareholders in 2019 and 2020, respectively. The Group controls and consolidates the entity in its financial statements. Jinko Sichuan is principally engaged in the production of silicon ingot for intercompany sales within the Group. In the fourth quarter of 2020, the non-controlling interest arrangement was settled in return for a loan liability pursuant to a supplementary investment agreement between the Group and the government background fund (Note 18).
- (iv) In the fourth quarter of 2019, Jiangxi Jinko, together with government background funds, established Jinko Chuzhou. Cash capital injections with the amount of RMB550 million and RMB300 million had been made by the non-controlling shareholder in 2019 and 2020, respectively. The Group owns controls and consolidates such entity in its financial statements. Jinko Chuzhou is principally engaged in the production of solar modules for intercompany sales within the Group. In the third quarter of 2020, the non-controlling interest arrangement was settled in return for a loan liability pursuant to a supplementary investment agreement between the Group and the government background fund (Note 18).
- (v) In the fourth quarter of 2019, Jiangxi Jinko, together with government background funds, established Jinko Yiwu. Cash capital injections with the amount of RMB400 million and RMB365 million had been made by the non-controlling shareholders in 2019 and 2020, respectively. The Group owns controls and consolidates such entity in its financial statements. Jinko Yiwu is principally engaged in the production of solar modules for intercompany sales within the Group. In the third quarter of 2020, the non-controlling interest arrangement was settled in return for a loan liability pursuant to a supplementary investment agreement between the Group and government background funds (Note 18).
- (vi) In the second quarter of 2020, Jiangxi Jinko, together with a government background fund, established Jinko Shangrao. Cash capital injections with the amount of RMB1,902 million had been made by the government fund as of December 31, 2020. The group owns controls and consolidates such entity in its financial statements. Shangrao Jinko is principally engaged in the production of photovoltaic products, such as solar modules and cells (Note 18).
- (vii) In the second quarter of 2020, Jiangxi Materials acquired Rui Xu with a consideration of RMB20 million. Rui Xu is principally engaged in the production of photovoltaic consumable materials.
- (viii) In the fourth quarter of 2020, the Group disposed all of its equity interest in Jinko Huineng Technology Services Co.,Ltd to JinkoPower with the consideration of RMB10 million (USD2 million). Consideration associated with the transaction was collected in December 2020.

2. PRINCIPAL ACCOUNTING POLICIES

a. Basis of presentation and use of estimates

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").



The preparation of consolidated financial statements in conformity with U.S. GAAP requires management of the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The Group bases its estimates on historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Significant accounting estimates reflected in the Company's consolidated financial statements include expected credit loss provision, provision for inventories, impairment of long-lived assets, the economic useful lives of property, plant and equipment, project assets and intangible assets, certain accrued liabilities including accruals for warranty costs, guarantees, sale-leaseback, accounting for share-based compensation, fair value measurements of share-based compensation and financial instruments, legal contingencies, income taxes and related deferred tax valuation allowance.

b. Consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries. All significant transactions and balances among the Company and its subsidiaries have been eliminated upon consolidation.

For the Group's majority-owned subsidiaries, non-controlling interests is recognized to reflect the portion of their equity interests which are not attributable, directly or indirectly, to the Group. Consolidated net income on the consolidated statement of operation includes the net income attributable to non-controlling interests. The cumulative results of operations attributable to non-controlling interests are recorded as non-controlling interests in the Group's consolidated balance sheets. Cash flows related to transactions with non-controlling interests are presented under financing activities in the consolidated statements of cash flows.

c. Foreign currency translation

The Group's reporting currency is the Renminbi ("RMB"), the official currency in the PRC. The Company and its PRC subsidiaries use RMB as their functional currency, while local currencies have been determined to be the functional currency of its subsidiaries incorporated outside of PRC such as USD or EUR etc. Transactions denominated in currencies other than the functional currency are translated into the functional currency of the entity at the exchange rates prevailing at the dates of the transactions. Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency of the entity using the applicable exchange rates at the applicable balance sheet dates. All such exchange gains or losses are included in exchange loss in the consolidated statements of operations.

For consolidation purpose, the financial statements of the Company's subsidiaries whose functional currencies are other than the RMB are translated into RMB using exchange rates quoted by PBOC. Assets and liabilities are translated at the exchange rates at the balance sheet date, equity accounts are translated at historical exchange rates and revenues, expenses and gains and losses are translated using the average exchange rates for the year. Translation adjustments are reported as cumulative translation adjustments and are shown as a separate component of in accumulated other comprehensive income in the consolidated statement of comprehensive income/ (loss).

The RMB is not a freely convertible currency. The PRC State Administration for Foreign Exchange, under the authority of PBOC, controls the conversion of RMB into foreign currencies. The value of the RMB is subject to changes in central government policies and to international economic and political developments affecting supply and demand in China's foreign exchange trading system market. The Company's aggregate amount of cash, cash equivalents, restricted short-term investments and restricted cash denominated in RMB amounted to RMB16,672 million and RMB 14,243 million as of December 31, 2021 and 2022, respectively.

d. Cash, cash equivalents and restricted cash

Cash and cash equivalents represent cash on hand and demand deposits placed with banks or other financial institutions, which have original maturities of three months or less.

Restricted cash represents deposits legally held by banks which are not available for the Group's general use. These deposits are held as collateral for issuance of letters of credit or guarantee, bank acceptance notes to vendors for purchase of machinery and inventories and foreign exchange forward contracts.

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Cash, cash equivalents and restricted cash as reported in the consolidated statement of cash flows are presented **separately** on our consolidated balance sheet as follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Cash and cash equivalents	8,321,415	10,243,500
Restricted cash	602,044	1,027,454
Cash and cash equivalents included in held-for-sale assets (note 2 (n))	173,787	—
Total	9,097,246	11,270,954

e. Restricted short-term investments

Restricted short-term investments represent the time deposits at banks with original maturities longer than three months and less than one year, which are held as collateral for issuance of letters of credit, guarantee, bank acceptance notes or deposits for short-term borrowings.

f. Notes receivable and payable

Notes receivable represents bank or commercial drafts that have been arranged with third-party financial institutions by certain customers to settle their purchases from the Group. The carrying amount of notes receivable approximate their fair values due to the short-term maturity of the notes receivables.

The Group also issues bank acceptance notes to its suppliers in China in the normal course of business. The Group classifies the changes in notes payable as financing activities.

Notes receivable and payable are typically non-interest bearing and have maturities of less than six months.

g. Derivative Instruments

Derivative instruments are carried at fair value. The fair values of the derivative financial instruments generally represent the estimated amounts expect to receive or pay upon termination of the contracts as of the reporting date.

The Company's derivative instruments primarily consisted of foreign currency forward contracts and foreign exchange options which are used to economically hedge certain foreign denominated assets/liabilities and reduce, to the extent practicable, the potential exposure to the changes that exchange rates might have on the Company's earnings, cash flows and financial position. As the derivative instruments do not qualify for hedge accounting treatment, changes in the fair value are reflected in "change in fair value of foreign exchange forward contracts" and "change in fair value of foreign exchange options" of the consolidated statements of operations.

The Company's solar project subsidiaries located in Mexico obtained long-term bank borrowings from local bank, which carries variable interest rates. With an aim to reduce its interest rate exposure, the Company entered into long-term interest rate swap contracts to fix the interest rate as a fixed rate payer. The interest rate swap is a derivative which needs to be fair valued at each reporting period end. As the derivative instrument does not qualify for hedge accounting treatment, the fair value gain or loss arising from the measurement is recognized in the consolidated statements of operations. The Company sold its solar power plants in Mexico in March 2020.

The Company's solar project subsidiary located in Argentina entered into an interest rate swap contract to swap floating interest payments related to certain borrowings for fixed interest payments to hedge the interest rate risk associated with certain forecasted payments and obligations. As the interest rate derivative is designated as cash flow hedge and the hedge is highly effective, all changes in the fair value of the derivative hedging instruments are recorded in other comprehensive income. The Company sold its solar power plants in Argentina in June 2022.

h. Current expected credit losses

In 2016, the FASB issued ASU No. 2016-13, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" ("ASC Topic 326"), which amends previously issued guidance regarding the impairment of financial instruments by creating an impairment model that is based on expected losses rather than incurred losses.

The Company adopted this ASC Topic 326 and several associated ASUs on January 1, 2020 using a modified retrospective approach with a cumulative effect recorded as increase of accumulated retained earnings with amount of RMB7 million, among which RMB31 million was related to the decrease of allowance for accounts receivables- third parties, RMB15 million was related to the increase of allowance for accounts receivables- related parties and RMB9 million was related to the increase of allowance for other receivables and other current/non-current assets. As of January 1, 2020, upon the adoption, the expected credit loss provision for the current and non-current assets were RMB307 million and RMB5 million, respectively.

The Company's trade receivable, notes receivable, guarantee receivables, deposits and other receivables are within the scope of ASC Topic 326. The allowance is management's estimate of expected credit losses on receivables. The Company estimated the allowance by segmenting receivables into groups based on certain credit risk characteristics, including geographic region and industry. The Company determined an expected loss rate for each group based on the historical credit loss experience, current and future economic conditions, and lifetime for debt recovery.

For the year ended December 31, 2020, the Company recorded RMB14 million expected credit loss expense in general and administrative expenses. As of December 31, 2020, the expected credit loss provision for the current and non-current assets were RMB324 million and RMB2 million, respectively.

For the year ended December 31, 2021, the Company recorded RMB82 million expected credit loss expense in general and administrative expenses. As of December 31, 2021, the expected credit loss provision for the current and non-current assets were RMB331 million and RMB4 million, respectively.

For the year ended December 31, 2022, the Company recorded RMB285 million expected credit loss expense in general and administrative expenses. As of December 31, 2022, the expected credit loss provision for the current and non-current assets were RMB600 million and RMB2 million, respectively.

i. Accounts receivable

Specific provisions are made against accounts receivable for estimated losses resulting from the inability of the Group's customers to make payments. The Group periodically assesses accounts receivable balances to determine whether an allowance for credit losses should be made based upon historical bad debts, specific customer creditworthiness and current economic trends. Accounts receivable in the balance sheets are stated net of such provision, if any. Before approving sales to each customer, the Group conducts a credit assessment for each customer to evaluate the collectability of such sales. The assessment usually takes into consideration the credit worthiness of such customer and its guarantor, if any, the Group's historical payment experience with such customer, industry-wide trends with respect to credit terms, including the terms offered by competitors, and the macro-economic conditions of the region to which sales will be made. The Group executes a sales order with a customer and arrange for shipment only if its credit assessment concludes that the collectability with such customer is probable. The Group may also from time to time require security deposits from certain customers to minimize its credit risk. After the sales are made, the Group closely monitors the credit situation of each customer on an on-going basis for any subsequent change in its financial position, business development and credit rating, and evaluates whether any of such adverse change warrants further action to be taken by the Group, including asserting claims and/or initiating legal proceedings against the customer and/or its guarantor, as well as making provisions. It is also the Group's general practice to suspend further sales to any customer with significant overdue balances. The Group adopted ASC 326 on January 1, 2020 and has also made updates to its policies and internal controls over financial reporting as a result of adoption. Details please refer to Note 2 (h) above.

j. Advances to suppliers

The Group provides short-term and long-term advances to secure its raw material needs, which are then offset against future purchases. The Group continually assesses the credit quality of its suppliers and the factors that affect the credit risk. If there is deterioration in the creditworthiness of its suppliers, the Group will seek to recover its advances to suppliers and provide for losses on advances which are akin to receivables in operating expenses because of suppliers' inability to return its advances. Recoveries of the allowance for advances to supplier are recognized when they are received. The Company classified short-term and long-term advances to suppliers based on management's best estimate of the expected purchase in the next twelve-months as of the balance sheet date and the Group's ability to make requisite purchases under existing supply contracts. The balances expected to be utilized outside of the 12 months are recorded in advances to suppliers to be utilized beyond one year. No provision of advance to suppliers was recorded for the years ended December 31, 2020, 2021 and 2022.

k. Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using the weighted average method. Provisions are made for excessive, slow moving and obsolete inventories as well as for inventories with carrying values in excess of market. Certain factors could impact the realizable value of inventory, so the Group continually evaluates the recoverability based on assumptions about customer demand and market conditions. The evaluation may take into consideration historical usage, expected demand, anticipated sales price, new product development schedules, the effect new products might have on the sale of existing products, product obsolescence, customer concentrations, and other factors. The reserve or write-down is equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory reserves or write-downs may be required that could negatively impact the Group's gross margin and operating results. If actual market conditions are more favorable, the Group may have higher gross margin when products that have been previously reserved or written down are eventually sold. The sale of previously reserved inventory did not have a material impact on our gross margin percentage for any of the years presented.

In addition, the Group analyzes its firm purchase commitments, if any, at each period end. Provision is made in the current period if the net realizable value after considering estimated costs to convert polysilicon into saleable finished goods is higher than market selling price of finished goods as of the end of a reporting period. There was no provision recorded related to these long-term contracts for each of the three years ended December 31, 2020, 2021 and 2022.

l. Property, plant and equipment, net

Property, plant and equipment are stated at cost less accumulated depreciation. Cost includes the prices paid to acquire or construct the assets, interest capitalized during the construction period and any expenditure that substantially extends the useful life of an existing asset. Depreciation is computed using the straight-line method over the following estimated useful lives (RMB in thousands):

Buildings	20 years
Machinery and equipment	5~10 years
Furniture, fixture and office equipment	3~5 years
Motor vehicles	4~5 years

Construction in progress primarily represents the construction of new production line and buildings. Costs incurred in the construction are capitalized and transferred to property, plant and equipment upon completion, at which time depreciation commences.

Expenditures for repairs and maintenance are expensed as incurred. The gain or loss on disposal of property, plant and equipment, if any, is the difference between the net sales proceeds and the carrying amount of the disposed assets, and is recognized in the consolidated statement of operations upon disposal.

m. Project Assets, net

Project assets represented the costs of solar power plants held for generation of electricity revenue, held with the intention to sell to third parties and solar power plants under construction. Project assets are stated in the consolidated balance sheets at cost less accumulated depreciation and impairment provision, if any.

Costs of project assets consist primarily of costs relating to construction of solar power plants at various stages of development. These costs include costs for procurement of solar module and other equipment (including intercompany purchases), cost of land on which solar power plants are developed and other direct costs for developing and constructing solar power plants, such as costs for obtaining permits required for solar power plants and costs for designing, engineering, interest costs capitalized and installation in the course of construction. Such costs are capitalized starting from the point when it is determined that development of the solar power plant is probable. For a solar power project asset acquired from third parties, the initial cost is the acquisition cost which includes the consideration transferred and certain direct acquisition costs.

During the year of 2020, the Group recorded full impairments of RMB94 million against its remaining solar power project in Mexico based on the Company's estimation that it is unable to complete the grid connection before the due date of the purchase agreement with Federal Electricity Commission of Mexico. During the year of 2021, the Group recorded impairments of RMB123 million against its solar power project in Argentina which was measured based on the excess of the carrying amount over the fair value of the solar power project according to the quoted market price.

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Costs capitalized in the construction of solar power plants under development will be transferred to completed solar power plants upon completion and when they are ready for intended use, which is at the point of time when the solar power plant is connected to grids and begins to generate electricity. Depreciation of the completed solar power plant held for generation of electricity revenue commences once the solar power plant is ready for intended use. Depreciation is computed using the straight-line method over the expected life of 20 years. Depreciation expenses of solar power plants were RMB53 million, RMB33 million and nil for the years ended December 31, 2020, 2021 and 2022.

The Company does not depreciate project assets when such project assets are constructed for sale upon completion. Any revenue generated from such project assets connected to the grid would be considered incidental revenue and accounted for as a reduction of the capitalized project costs for development. During the years of 2020, 2021 and 2022, electricity revenue generated from certain overseas project assets constructed for sale upon completion, with the amount of RMB8 million, nil and RMB47 million was considered as incidental revenue and accounted for as a reduction of the capitalized project costs for development.

n. Assets held for sale

Long-lived assets to be sold are classified as held for sale when the following recognition criteria in ASC 360-10-45-9 are met:

- “ Management, having the authority to approve the action, commits to a plan to sell the asset.
- “ The asset is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets.
- “ An active program to locate a buyer and other actions required to complete the plan to sell the asset have been initiated.
- “ The sale of the asset is probable, and transfer of the asset is expected to qualify for recognition as a completed sale, within one year,
- “ The asset is being actively marketed for sale at a price that is reasonable in relation to its current fair value.
- “ Actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

The Group entered into an agreement to sell its solar power plant located in Argentina to JinkoPower in December 2021. Assets and liabilities related to the solar power plant were reclassified from project assets to assets/liabilities held for sale as of December 31, 2021. The Group sold its solar power plants in Argentina in June 2022.

The Group entered into a share purchase agreement to dispose all of its equity interest in Jiangsu Jinko-Tiansheng Co., Ltd. (“Jinko-Tiansheng”) to the Jinko-Tiansheng’s other shareholders in November 2021. The Group’s investment in Jinko-Tiansheng was reclassified from investments in affiliates to held for sale assets as of December 31, 2021.

o. Interest Capitalization

Interest expenses during the years ended December 31, 2020, 2021 and 2022 were RMB705 million, RMB879 million and RMB1,150 million, net of interest income of RMB217 million, RMB214 million and RMB589 million respectively.

The interest cost associated with major development and construction projects is capitalized and included in the cost of the property, plant and equipment or project assets. Interest capitalization ceases once a project is substantially completed or no longer undergoing construction activities to prepare it for its intended use. When no debt is specifically identified as being incurred in connection with a construction project, the Group capitalizes interest on amounts expended on the project at the Group’s weighted average cost of borrowings. Interest expense capitalized associated with the construction projects for the years ended December 31, 2020, 2021 and 2022 were RMB29 million, RMB41 million and RMB71 million, respectively.

p. Land use rights and land lease

(a) Land use rights

Land use rights represent acquisition costs to purchase land use rights from the PRC government, which are evidenced by property certificates. The periods of these purchased land use rights are either 50 years or 70 years. The Company classifies land use rights as long term assets on the balance sheet and cash outflows related to acquisition of land use right as investing activities.

Land use rights are carried at cost less accumulated amortization and impairment losses, if any. Amortization is computed using the straight-line method over the term specified in the land use right certificate for 50 years or 70 years, as applicable.

(b) Land lease

For certain of the Group's solar power project, the Group enters into land lease contracts with the owners of the land use rights. Under such lease arrangements, the owners retain the property right of the land use rights. While the Group can only set up the solar panels on these leased lands but does not have the right to sell, lease or dispose the land use rights. Accordingly, land leases are classified as operating leases.

q. Intangible assets

Intangible assets include purchased software and fees paid to register trademarks and are amortized on a straight-line basis over their estimated useful lives, which are 5 or 10 years, respectively.

r. Business combination and assets acquisition

U.S. GAAP requires that all business combinations not involving entities or businesses under common control be accounted for under the purchase method. The Group has adopted ASC 805 "Business Combinations," and the cost of an acquisition is measured as the aggregate of the fair values at the date of exchange of the assets given, liabilities incurred and equity instruments issued. The transaction costs directly attributable to the acquisition are expensed as incurred. Identifiable assets, liabilities and contingent liabilities acquired or assumed are measured separately at their fair value as of the acquisition date, irrespective of the extent of any non-controlling interests. The excess of the (i) the total of cost of acquisition, fair value of the non-controlling interests and acquisition date fair value of any previously held equity interest in the acquiree over (ii) the fair value of the identifiable net tangible and intangible assets of the acquiree is recorded as goodwill. If the cost of acquisition is less than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in the consolidated statements of operations and comprehensive income.

The determination and allocation of fair values to the identifiable assets acquired and liabilities assumed is based on various assumptions and valuation methodologies requiring considerable management judgment. The most significant variables in these valuations are discount rates, terminal values, the number of years on which to base the cash flow projections, as well as the assumptions and estimates used to determine the future cash inflows and outflows. Management determines discount rates to be used based on the risk inherent in the related activity's current business model and industry comparisons. Terminal values are based on the expected life of products and forecasted life cycle and forecasted cash flows over that period. Although management believes that the assumptions applied in the determination are reasonable based on information available at the date of acquisition, actual results may differ from the forecasted amounts and the difference could be material.

A non-controlling interest is recognized to reflect the portion of a subsidiary's equity which is not attributable, directly or indirectly, to the Company. Consolidated net income on the consolidated statements of operations and comprehensive income includes the net income (loss) attributable to non-controlling interests when applicable. The cumulative results of operations attributable to non-controlling interests are also recorded as non-controlling interests in the Company's consolidated balance sheets. Cash flows related to transactions with non-controlling interests are presented under financing activities in the consolidated statements of cash flows when applicable.

s. Investments

On January 1, 2018, the Company adopted ASU No. 2016-01, which requires equity investments to be measured at fair value with subsequent changes recognized in net income, except for those accounted for under the equity method or requiring consolidation. This standard also changed the accounting for investments without a readily determinable fair value and that do not qualify for the practical expedient to be measured at fair value. A policy election can be made for these investments whereby investment will be carried at cost and adjusted in subsequent periods for any impairment or changes in observable prices of identical or similar investments.

With the adoption of ASU No. 2016-01 and the Update, for investments in equity securities lacking of readily determinable fair values and the ability to exercise significant influence, the Company elected to use the measurement alternative defined as cost, less impairments, adjusted by observable price changes. Adoption of these standards had no significant impact on the Group's consolidated financial statements for the years ended 2020, 2021 and 2022.

The Group's investments include equity method investments, equity securities without readily determinable fair values, equity securities applying fair value option and available-for-sale debt securities.

The Group holds equity investments in affiliates in which it does not have a controlling financial interest, but has the ability to exercise significant influence over the operating and financial policies of the investee. These investments are accounted for under equity method of accounting wherein the Group records its proportionate share of the investees' income or loss in its consolidated financial statements.

Equity securities without readily determinable fair values are measured and recorded using a measurement alternative that measures the securities at cost minus impairment, if any, plus or minus changes resulting from qualifying observable price changes.

Fair value option election is made on an instrument-by-instrument basis and equity securities applying fair value option is reported at fair value with changes in fair value recognized in earnings.

Equity investments are evaluated for impairment when facts or circumstances indicate that the fair value of the investment is less than its carrying value. The Group reviews several factors to determine whether an impairment is recognized. These factors include, but are not limited to, the: (1) nature of the investment; (2) cause and duration of the impairment; (3) extent to which fair value is less than cost; (4) financial conditions and near term prospects of the issuers; and (5) ability to hold the security for a period of time sufficient to allow for any anticipated recovery in fair value.

Debt securities that the Company has positive intent and ability to hold to maturity are classified as held to maturity debt securities and are stated at amortized cost. The Company classified its investments in debt securities, other than the held to maturity debt securities, as available-for-sale securities. Available-for-sale debt securities are reported at estimated fair value with the aggregate unrealized gains and losses, net of tax, reflected in "Accumulated other comprehensive loss" in the consolidated balance sheets. If the amortized cost basis of an available-for-sale security exceeds its fair value and if the Company has the intention to sell the security or it is more likely than not that the Company will be required to sell the security before recovery of the amortized cost basis, an impairment is recognized in the consolidated statements of operations. If the Company does not have the intention to sell the security and it is not more likely than not that the Company will be required to sell the security before recovery of the amortized cost basis and the Company determines that the decline in fair value below the amortized cost basis of an available-for-sale security is entirely or partially due to credit-related factors, the credit loss is measured and recognized as an allowance for credit losses in the consolidated statements of operations. The allowance is measured as the amount by which the debt security's amortized cost basis exceeds the Company's best estimate of the present value of cash flows expected to be collected.

t. Impairment of long-lived assets

The Group's long-lived assets include property, plant and equipment, project assets, land use rights and intangible assets with finite lives. The Group's business requires heavy investment in manufacturing equipment that is technologically advanced, but can quickly become significantly under-utilized or rendered obsolete by rapid changes in demand for solar power products produced with those equipment.

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that carrying amount of an asset may not be recoverable. Factors considered important that could result in an impairment review include significant underperformance relative to expected historical or projected future operating results, significant changes in the manner of use of acquired assets and significant negative industry or economic trends. The Group may recognize impairment of long-lived assets in the event the net book value of such assets exceeds the future undiscounted cash flows attributable to these assets. If the total of the expected undiscounted future net cash flows is less than the carrying amount of the asset, a loss, if any, is recognized for the difference between the fair value of the asset and its carrying value. Fair value is generally measured based on either quoted market prices, if available, or discounted cash flow analyses.

u. Leases

The Company adopted ASC Topic 842 to account for its lease transactions since January 1, 2019. The Company determines if a contract contains a lease at inception of the arrangement based on whether it has the right to obtain substantially all of the economic benefits from the use of an identified asset and whether it has the right to direct the use of an identified asset in exchange for consideration, which relates to an asset which the Company does not own. Right of use ("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. ROU assets and lease 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 does not typically incur variable lease payments related to its leases.

For a sale-leaseback transaction, sale-leaseback accounting shall be used by a seller-lessee only if the transaction meet all of the following: a) the transfer of the underlying asset meets the definition of a sale under ASC 606; b) the leaseback transaction does not result in a lease that would be classified as a finance lease; c) the contract does not contain a repurchase option, unless the option is exercisable at the fair value on the exercise date and there are alternative assets substantially the same as the transferred asset available in the market place.

If a sale-leaseback transaction does not qualify for sale-leaseback accounting because of the transfer of underlying assets does not meet the definition of sale, it is accounted for as a financing under ASC 360.

The Company has elected to adopt the following lease policies in conjunction with the adoption of ASU 2016-02: (i) elect for each lease not to separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component; (ii) for leases that have lease terms of 12 months or less and does not include a purchase option that is reasonably certain to exercise, the Company elected not to apply ASC Topic 842 recognition requirements; and (iii) the Company elected to apply the package of practical expedients for existing arrangements entered into prior to January 1, 2019 to not reassess (a) whether an arrangement is or contains a lease, (b) the lease classification applied to existing leases, and (c) initial direct costs.

v. Guarantees

The Group issues debt payment guarantees in favor of JinkoPower, a related party. The guarantees require the Group to make payments to reimburse the holders of the debt subject to these guarantees for losses they incur JinkoPower fails to make repayments to the holders, when its liability to the holders falls due.

A guarantee liability is initially recognized at the estimated fair value in the Group's consolidated balance sheets unless it becomes probable that the Group will reimburse the holder of the guarantee for an amount higher than the carrying amount, in which case the guarantee is carried in the Group's consolidated balance sheets at the expected amount payable to the holder. The fair value of the guarantee liability is measured by the total consideration to be received in connection with the provision of guarantee. The guarantee liability is amortized in straight line during the guarantee period.

Receivables have also been recorded for the guarantee payments to be received (Note 26).

Pursuant to the master service agreement signed with JinkoPower, guarantee service fee is settled on an annual basis.

w. Revenue recognition

On January 1, 2018, the Company adopted revenue guidance ASC Topic 606, “Revenue from Contracts with Customers” (“ASC 606”).

The Company negotiated payment terms on a case by case basis and allows most of its overseas’ customers to make full payment within 90 days and its domestic customers to make 90% to 95% of payment within 180 days after delivery and the rest will be paid when the Retainage Period (as defined below) ends.

As a result of adopting ASC Topic 606, for the sales contracts with retainage terms, under which customers were allowed to withhold payment of 5% to 10% of the full contract price as retainage for a specified period from one year to two year since normal operation of related customer’s solar project (“Retainage Period”), revenue from retainage is recognized upon the Group satisfied its performance obligation to transfer the goods to its customers instead of deferring recognition until the customers pay it after the Retainage Period expires. Revenue recognition for the Group’s other sales arrangements, including sales of solar modules, wafers, cells and revenue from generated electricity, remained materially consistent with historical practice.

For the contracts with retainage terms signed and executed before the adoption date of January 1, 2018, as 90%~95% of the revenue was recognized before the date of initial application, which is considered to be substantial, management concluded that these contracts have been completed before the adoption date, and as the company has elected to apply the modified retrospective adoption method only to contracts that were not completed as of January 1, 2018, no cumulative effect related to these retainages is recognized as an adjustment to the opening balance of retained earnings. The revenue recognized upon collection of these retainage amounts is recognized under ASC 605, the prior revenue recognition standard, with the amount of RMB29 million, RMB3 million and RMB0.4 million in 2020, 2021 and 2022.

The total amounts of retainage that were not recognized as revenue were RMB27 million, RMB24 million and RMB23 million as of December 31, 2020, 2021 and 2022, respectively.

The Group was mainly subject to value added taxes (“VAT”) on its sales from products. The Group recognizes revenue net of VAT. Related surcharges, such as urban maintenance and construction tax as well as surtax for education expenses are recorded in cost of revenues.

The Company’s accounting practices under ASC Topic 606, “Revenue from Contracts with Customers” are as followings:

(a) Revenue recognition on product sales

For all product sales, the Group requires a contract or purchase order which quantifies pricing, quantity and product specifications. The Company’s sales arrangements generally do not contain variable considerations and are short-term in nature. The Company recognizes revenue at a point in time based on management’s evaluation of when the customer obtains control of the products. Revenue is recognized as performance obligation under the terms of a contract with the customer are satisfied and control of the product has been transferred to the customer. Sales of goods do not include multiple product and/or service elements.

Practical expedients and exemption

Upon the election of the practical expedient under ASC 340-40-25-4, the incremental costs of obtaining a contract are expensed when incurred if the amortization period of the asset that the entity otherwise would have recognized is one year or less. For the years ended December 31, 2020, 2021 and 2022, no incremental cost was capitalized as assets.

The Group also selected to apply the practical expedients allowed under ASC Topic 606 to omit the disclosure of remaining performance obligations for contracts with an original expected duration of one year or less and for contracts where the Company has the right to invoice for performance completed to date.

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Based on the considerations that there is no difference between the amount of promised consideration and the cash selling price of product sales, in addition the actual length of time between when the Group transfers products to the customer and when the customer pays for those products has been generally within one year, the Group assessed and concluded that there is no significant financing component in place within its products sales as a practical expedient in accordance with ASC 606-10-32-18. As the retainage term is made to secure the future effective operation of solar modules and not to provide customer with significant financing, no significant financing component is considered to exist in the sales contract with retainage terms.

(b) Sales of solar projects

The Company's sales arrangements for solar projects do not contain any forms of continuing involvement that may affect the revenue or profit recognition of the transactions, nor any variable considerations for energy performance guarantees, minimum electricity end subscription commitments. The Company therefore determined its single performance obligation to the customer is the sale of a completed solar project. The Group recognizes revenue for sales of solar projects at a point in time after the solar project has been grid connected and the customer obtains control of the solar project.

(c) Revenue on electricity generation

The Group recognizes electricity generation revenue on project assets constructed with a plan to operate the plant when persuasive evidence of a power purchase arrangement with the power grid company exists, electricity has been generated and been transmitted to the grid and the electricity generation records are reconciled with the grid companies, the price of electricity is fixed or determinable and the collectability of the resulting receivable is reasonably assured.

(d) Revenue on processing services

The Group provides solar power product processing services to customers and the revenue of processing services is recognized at a point in time upon completion which is generally evidenced by delivery of processed products to the customers.

VAT on invoice amount is collected on behalf of tax authorities in respect of the sales of product and is not recorded as revenue. VAT collected from customers, net of VAT paid for purchases, is recorded as a liability until it is paid to the tax authorities.

x. Segment report

The Group uses the management approach in determining reportable operating segments. The management approach considers the internal organization and reporting used by the Group's chief operating decision maker for making operating decisions, allocating resources and assessing performance as the source for determining the Group's reportable segments.

Based on the criteria established by ASC 280 "Segment Reporting", the Group's chief operating decision maker has been identified as the Chairman of the Board of Directors as well as the CEO, who only review consolidated results of the Group when making decisions about allocating resources and assessing performance. Hence, the Group has only one operating segment which is vertically integrated solar power products manufacturing business from silicon ingots, wafers, cells to solar modules.

y. Cost of revenue

Cost of revenue for sales of photovoltaic products includes production and indirect costs, as well as shipping and handling costs for raw materials purchase and provision for inventories.

Costs of electricity generation revenue include depreciation of solar power project assets and costs associated with operation and maintenance of the project assets. Cost of electricity sales was RMB40 million, RMB31 million and nil for years ended December 31, 2020, 2021 and 2022, respectively.

z. Warranty cost

Solar modules produced by the Group are typically sold with either a 5-year or 10-year warranty for product defects, and a 10-year and 25-year warranty against declines of more than 10% and 20%, respectively, from the initial minimum power generation capacity at the time of delivery. Therefore, the Group is exposed to potential liabilities that could arise from these warranties. The potential liability is generally in the form of product replacement or repair.

Management applied significant judgements in estimating the expected failure rate of the Company's solar module products and the estimated replacement costs associated with fulfilling its warranty obligations when measuring the warranty costs. Based on the actual claims incurred during the past years which appears to be consistent with the market practice, the Group projected the expected failure rate as 1% for the whole warranty period, which is consistent with prior assumptions. Based on the Group's actual claims experience in the historical periods as well as management's current best estimation, the Group believes that the average selling price of solar modules over the past two years more accurately reflects the estimated warranty cost liability in connection with the products sold by the Group, as opposed to the current and past spot prices. For the years ended December 31, 2020 and 2021, due to the decrease in average selling price of solar modules, the Group reversed previous years' recorded warranty liability of RMB124 million and RMB104 million, with a corresponding decrease to selling and marketing expenses, respectively. For the year ended December 31, 2022, due to the rising in average selling price of solar modules, the Group increased previous years' recorded warranty liability of RMB75 million, with a corresponding increase to selling and marketing expenses in 2022.

The warranty costs were classified as current liabilities under other payables and accruals, and non-current liabilities under accrued warranty costs-non-current, respectively, which reflect the Group's estimation of the timing of when the warranty expenditures will likely be made. For the years ended December 31, 2020, 2021 and 2022, warranty costs accrued for the modules delivered in the periods before the increase/reversal due to updated project replacement cost were RMB363 million, RMB390 million and RMB773 million, respectively. The utilization of the warranty accruals for the years ended December 31, 2020, 2021 and 2022 were RMB99 million, RMB171 million and RMB212 million, respectively. Utilization of warranty accruals in 2020 and 2022 was mainly due to sporadic customer claims with accumulation of the Group's solar module shipment. Utilization of warranty accruals in 2021 was mainly due to extreme climatic conditions in Europe.

Movement of accrued warranty cost

The following table summarizes the movement of accrued warranty cost (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
At beginning of year	751,440	892,131	1,007,805
Additions	363,159	390,238	773,498
Utilization	(98,526)	(170,776)	(212,130)
Accrue (reversal) to selling and marketing expense	(123,942)	(103,788)	74,802
At end of year	892,131	1,007,805	1,643,975

The Group purchases warranty insurance policy which provides coverage for the product warranty services of solar modules worldwide. Prepayment for warranty insurance premium is initially recorded as other assets and is amortized over the insurance coverage period. Prepayment for warranty insurance premium is not recorded as reduction of estimated warranty liabilities. Once the Group receives insurance recoveries, warranty expenses will be credited.

In previous years, the Company incurred additional warranty costs due to the defects in a specific batch of raw materials provided by a supplier. The Company appealed against the supplier for the defects and obtained the final judgement from the court in September 2020, pursuant to which the Company shall be compensated by the supplier with the amount of RMB83 million by offsetting the Company's payables due to such supplier. Given that, the Company reversed warranty expenses in the third quarter of 2020 with a corresponding reduction in accounts payables.

aa. Shipping and handling

Costs to ship products to customers are included in selling and marketing expenses in the consolidated statements of operations. Costs to ship products to customers were RMB1,631 million, RMB2,048 million and RMB5,161 million for the years ended December 31, 2020, 2021 and 2022, respectively.

ab. Research and development

Research and development costs are expensed when incurred.

ac. Start-up costs

The Group expenses all costs incurred in connection with start-up activities, including pre-production costs associated with new manufacturing facilities (excluding costs that are capitalized as part of property, plant and equipment) and costs incurred with the formation of new subsidiaries such as organization costs.

ad. Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and any tax loss and tax credit carry forwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities of a change in tax rates or tax laws is recognized in the consolidated statements of operations in the period the change in tax rates or tax laws is enacted. A valuation allowance is provided to reduce the amount of deferred income tax assets if it is considered more likely than not that some portion or all of the deferred income tax assets will not be realized.

The accounting for uncertain tax positions requires that the Company recognizes in the consolidated financial statements the impact of an uncertain tax position, if that position is more likely than not of being sustained upon examination, based on the technical merits of the position. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Group's policy is to recognize, if any, tax related interest as interest expenses and penalties as general and administrative expenses. As of December 31, 2021 and 2022, there were no uncertain tax positions.

ae. Commitments and Contingencies

Liabilities for loss contingencies arising from claims, assessments, litigation, fines and penalties and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated.

af. Fair value of financial instruments

The Group does not have any non-financial assets or liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (also referred to as an exit price). A hierarchy is established for inputs used in measuring fair value that gives the highest priority to observable inputs and the lowest priority to unobservable inputs. Valuation techniques used to measure fair value shall maximize the use of observable inputs.

When available, the Group measures the fair value of financial instruments based on quoted market prices in active markets, valuation techniques that use observable market-based inputs or unobservable inputs that are corroborated by market data. Pricing information the Group obtains from third parties is internally validated for reasonableness prior to use in the consolidated financial statements. When observable market prices are not readily available, the Group generally estimates the fair value using valuation techniques that rely on alternate market data or inputs that are generally less readily observable from objective sources and are estimated based on pertinent information available at the time of the applicable reporting periods. In certain cases, fair values are not subject to precise quantification or verification and may fluctuate as economic and market factors vary and the Group's evaluation of those factors changes. Although the Group uses its best judgment in estimating the fair value of these financial instruments, there are inherent limitations in any estimation technique. In these cases, a minor change in an assumption could result in a significant change in its estimate of fair value, thereby increasing or decreasing the amounts of the Group's consolidated assets, liabilities, equity and net income.

The Group's financial instruments consist principally of cash and cash equivalents, restricted cash, restricted short-term, available-for-sale securities and long-term investments, accounts and notes receivable, foreign exchange forward contract receivables other receivables, prepayments and other current assets, call option, foreign exchange option, accounts and notes payable, other payables and accruals, foreign exchange forward contract payables, guarantee liabilities, lease liabilities, short-term borrowings, long-term borrowings, long-term payables, convertible senior notes and interest rate swap.

The foreign exchange forward contracts receivable and payable, call option, foreign exchange options, interest rate swap, equity securities applying fair value option, available-for-sale debt securities and convertible senior notes are measured at fair value (Note 29). The Group measures the equity method investments at fair value on a non-recurring basis only if an impairment charge were to be recognized. For those equity investments without readily determinable fair value, the Group measures them at fair value when observable price changes are identified or impairment charge was recognized. Except for these financial instruments and long-term borrowing, the carrying values of the Group's other financial instruments approximated their fair values due to the short-term maturity of these instruments. The carrying amount of long-term borrowing approximates their fair value due to the fact that the related interest rates approximate rates currently offered by financial institutions for similar debt instruments of comparable maturities.

When the fair value option is elected for financial liabilities, changes in fair value due to changes in instrument-specific credit risk will be recognized separately in other comprehensive income. As the Company elected to measure its convertible senior notes issued in 2019 in their entirety at fair value, the portion of the total change in the fair value of the convertible senior notes that results from a change in the instrument-specific credit risk is presented separately in other comprehensive income. The gains or losses attributable to changes in instrument-specific credit risk were benchmarked by the portion of the total change in fair value that excluding the amount resulting from a change in a risk-free rate.

ag. Government grants

Government grants related to technology upgrades and enterprise development are recognized as subsidy income when received. For the years ended December 31, 2020, 2021 and 2022, the Group received financial subsidies of RMB192 million, RMB466 million and RMB1,089 million from the local PRC government authorities, respectively. These subsidies were non-recurring, not refundable and with no conditions related to specific use or disposition of the funds, attached. There are no defined rules and regulations to govern the criteria necessary for companies to enjoy such benefits and the amount of financial subsidy is determined at the discretion of the relevant government authorities.

Government grants related to assets are initially recorded as deferred revenue which are then deducted from the carrying amount when the assets are ready for use and approved by related government. The Company received government grant related to assets of RMB20 million, RMB291 million and RMB1,469 million for the years ended December 31, 2020, 2021 and 2022, respectively. As of December 31, 2021 and 2022, the carrying value of deferred revenue was RMB200 million and nil, respectively.

ah. Repurchase of share

When the Company's shares are purchased for retirement, the excess of the purchase price over its par value is recorded entirely to additional paid-in capital subject to the limitation of the additional paid in capital when the shares were originally issued. When the Company's shares are acquired for purposes other than retirement, the purchase price is shown separately as treasury stock.

ai. Earnings/(Loss) per share

Basic earnings(loss) per share is computed by dividing net income(loss) attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period using the two-class method. Under the two-class method, net income is allocated between ordinary shares and other participating securities based on their participating rights. Diluted earnings(loss) per share is calculated by dividing net income(loss) attributable to ordinary shareholders, as adjusted for the change in income or loss as result from the assumed conversion of those participating securities, if any, by the weighted average number of ordinary and dilutive ordinary equivalent shares outstanding during the period. Potential diluted securities consist of the ordinary shares issuable upon the conversion of the convertible senior notes (using the if-converted method), the potential shares underlying call option arrangement and ordinary shares issuable upon the exercise of outstanding share options (using the treasury stock method), which are not included in the calculation of dilutive earnings per share if the effect is anti-dilutive.

Changes in income or loss of potential dilutive securities as result from the assumed conversion of the convertible senior notes and assumed exercise of call option, if any, are recorded as the adjustment to the consolidated net income (loss) from continuing operations to arrive at the diluted net income (loss) available to the Company's ordinary shareholders.

Securities issued by a subsidiary that enable their holders to obtain the subsidiary's common stock is included in computing the subsidiary's earnings(loss) per share data. Those per-share earnings(loss) of the subsidiary are then included in the consolidated earnings(loss) per share computations based on the consolidated group's holding of the subsidiary's securities.

aj. Share-based compensation

The Company's share-based payment transactions with employees, including share options, are measured based on the grant-date fair value of the equity instrument issued. The fair value of the award is recognized as compensation expense, net of estimated forfeitures, over the period during which an employee is required to provide service in exchange for the award, which is generally the vesting period.

ak. Other comprehensive income

Other comprehensive income is defined as the change in equity during a period from non-owner sources. The Company's other comprehensive income for each period presented is comprised of foreign currency translation adjustment of the Company's foreign subsidiaries, the changes in fair value of interest swap cash flow hedges, fair value changes of the Company's debt securities and changes in instrument-specific credit risk of financial liabilities using fair value option.

al. Convenience translation

Translations of balances in the consolidated balance sheet, consolidated statement of operation, consolidated statement of comprehensive income and statement of cash flows from RMB into United States dollars ("USD" or "US\$") as of and for the year ended December 31, 2022 are solely for the convenience of readers and were calculated at the rate of RMB6.8972 to USD1.00, representing the exchange rate set forth in the H.10 statistical release of the Federal Reserve Board. No representation is intended to imply that the RMB amounts could have been, or could be, converted, realized or settled into USD at that rate on December 31, 2022, or at any other rate.

am. Recent accounting pronouncements

New Accounting Standards Adopted

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting”, which provides optional expedients and exceptions for applying U.S. GAAP on contract modifications and hedge accounting to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform, if certain criteria are met. These optional expedients and exceptions provided in ASU 2020-04 are effective for the Company as of March 12, 2020 through December 31, 2022. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

In August 2020, the FASB issued ASU 2020-06, “Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity’s Own Equity (Subtopic 815-40),” which removes certain separation models for convertible debt instruments and convertible preferred stock that require the separation of a convertible debt instrument into a debt component and an equity or derivative component. The ASU also expands disclosure requirements for convertible instruments and simplifies areas of the guidance for diluted earnings-per-share calculations that are impacted by the amendments. The standard is effective for interim and annual periods beginning after December 15, 2021, with early adoption permitted. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

In May 2021, the FASB issued ASU No. 2021-04, Earnings Per Share (Topic 260), Debt — Modifications and Extinguishments (Subtopic 470-50), Compensation — Stock Compensation (Topic 718), and Derivatives and Hedging — Contracts in Entity’s Own Equity (Subtopic 815-40) to clarify and reduce diversity in an issuer’s accounting for modifications or exchanges of freestanding equity classified written call options (for example, warrants) that remain equity classified after modification or exchange. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. An entity should apply the amendments prospectively to modifications or exchanges occurring on or after the effective date of the amendments. We adopted this update in the first quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements.

New Accounting Standards Not Yet Adopted

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which require that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606. At the acquisition date, an acquirer should account for the related revenue contracts in accordance with Topic 606 as if it had originated the contracts. The amendments in this Update also provide certain practical expedients for acquirers when recognizing and measuring acquired contract assets and contract liabilities from revenue contracts in a business combination. The amendments should be applied prospectively to business combinations occurring on or after the effective date of the amendments, with early adoption permitted. We will adopt this update in the first quarter of 2023 and we are currently evaluating the impact.

In March 2022, the FASB issued ASU 2022-02, Troubled Debt Restructurings and Vintage Disclosures. This ASU eliminates the accounting guidance for troubled debt restructurings by creditors that have adopted ASU 2016-13, Measurement of Credit Losses on Financial Instruments, which the Company adopted on January 1, 2020. This ASU also enhances the disclosure requirements for certain loan refinancing and restructurings by creditors when a borrower is experiencing financial difficulty. In addition, the ASU amends the guidance on vintage disclosures to require entities to disclose current period gross write-offs by year of origination for financing receivables and net investments in leases within the scope of ASC 326-20. The ASU is effective for annual periods beginning after December 15, 2022, including interim periods within those fiscal years. Adoption of the ASU would be applied prospectively. Early adoption is also permitted, including adoption in an interim period. We will adopt this update in the first quarter of 2023 and we are currently evaluating the impact.

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In June 2022, the FASB issued ASU 2022-02 Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions. The update clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The update also clarifies that an entity cannot, as a separate unit of account, recognize and measure a contractual sale restriction. The update also requires certain additional disclosures for equity securities subject to contractual sale restrictions. The amendments in this update are effective for the Company beginning January 1, 2024 on a prospective basis. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance. We are in the process of evaluating the impact of the new guidance on our consolidated financial statements.

3. REVENUES

The Group's revenues for the respective periods are detailed as follows (RMB in thousands):

	For the years ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Sales of solar modules	32,556,394	37,737,383	80,224,354
Sales of solar projects	1,197,713	—	31,400
Sales of silicon wafers	452,141	1,152,055	466,553
Sales of solar cells	344,510	606,582	1,024,114
Sales of other solar materials	478,184	1,043,760	1,380,875
Processing service fees	—	186,045	—
Revenue from generated electricity	100,517	100,696	—
Total	35,129,459	40,826,521	83,127,296

In March 2020, the Company sold two solar power plants in Mexico, that were constructed with an intent to sell, with a combined capacity of 155 MW to an independent third party, and recognized sales of solar projects with the amount of RMB1,198 million.

In December 2022, the Company received contingent receivables payments in cash related to the sales of these two solar projects and recognized revenue of RMB31 million.

During the years of 2020, 2021 and 2022, electricity revenue generated from certain overseas project assets constructed for sale upon completion, with the amount of RMB8 million, nil and RMB47 million was considered as incidental revenue and accounted for as a reduction of the capitalized project costs for development.

The following table summarizes the Group's net revenues generated in respective region (RMB in thousands):

	For the years ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Inside China (including Hong Kong and Taiwan)	6,370,975	10,134,888	34,839,410
North America	10,098,116	6,621,799	3,727,493
Europe	4,644,487	7,481,581	19,637,777
Asia Pacific	9,603,211	10,239,162	11,274,447
Rest of the world	4,412,670	6,349,091	13,648,169
Total	35,129,459	40,826,521	83,127,296

4. INTEREST EXPENSES, NET

Components of interest expenses, net are detailed as follows (RMB in thousands):

	For the years ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
Interest expenses	705,159	878,908	1,150,128
Less: Interest capitalization	(29,307)	(40,588)	(70,719)
Less: Interest income	(216,618)	(214,291)	(588,706)
Total	459,234	624,029	490,703

5. OTHER INCOME, NET

Components of other income, net are detailed as follows (RMB in thousands):

	For the years ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
Guarantee income	14,687	6,365	—
Donations	(12,395)	(4,454)	(6,824)
Disposal of Tiansheng	—	—	12,474
Disposal of solar power project in Argentina	—	—	1,758
Others	—	—	(5,837)
Total	2,292	1,911	1,571

- (a) Since 2016, the Group issued debt payment guarantees and redemption guarantees in favor of JinkoPower, a related party (Note 26). The guarantee liability which corresponds with the guarantee fees received is being amortized in straight line during the guarantee period from 1 to 16 years based on the life of the outstanding guaranteed bank loans by recognizing a credit to other income. In 2022, the Group and JinkoPower entered into an agreement to cancel the debt payment guarantees and redemption guarantees in favor of JinkoPower. Hence, no guarantee income was recognized for the year ended December 31, 2022.
- (b) The Group entered into a share purchase agreement to dispose all of its equity interests in Jinko-Tiansheng to Jinko-Tiansheng's other shareholders in November 2021. The disposition was consummated in 2022 with a gain of RMB12 million recognized.
- (c) In December 2021, the Group entered into an agreement to sell the solar power plant in Argentina to JinkoPower, a related party. Disposition of the solar power plant was consummated in June 2022 with a gain of RMB2 million recognized.

6. TAXATION

The Company and its subsidiaries file separate income tax returns.

Cayman Islands

Under the current laws of the Cayman Islands, the Company and its subsidiaries in Cayman Islands are not subject to tax on its income or capital gains. In addition, upon any payment of dividends by the Company, no Cayman Islands withholding tax is imposed. 10% withholding income tax is levied on the guarantee payment from JinkoPower (Note 26).

British Virgin Islands

Under the current laws of the British Virgin Islands("BVI"), the Company's subsidiary in BVI is not subject to tax on its income or capital gains. In addition, upon any

payment of dividends by the Company, no British Virgin Islands withholding tax is imposed.

People's Republic of China

On March 16, 2007, the National People's Congress approved the Corporate Income Tax Law of the People's Republic of China (the "CIT Law") with effective on January 1, 2008. The CIT Law enacted a statutory income tax rate of 25%.

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Jiangxi Jinko, Zhejiang Jinko, Haining Jinko, Jinko Yiwu, Shangrao Jinko and Zhejiang New Materials were designated by the relevant local authorities as “High and New Technology Enterprises” under the CIT Law. Zhejiang Jinko has successfully renewed this qualification for 2021, 2022 and 2023. Jiangxi Jinko and Haining Jinko have successfully renewed this qualification for 2022, 2023 and 2024. Jinko Yiwu was designated by the relevant local authorities as a “High and New Technology Enterprise” in 2021, and will enjoy the preferential tax rate of 15% in 2022 and 2023. Shangrao Jinko and Zhejiang New Materials were designated by the relevant local authorities as a “High and New Technology Enterprise” in 2022, and will enjoy the preferential tax rate of 15% in 2023 and 2024. Xinjiang Jinko was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% till 2030. It was also designated by the relevant local authorities as a “High and New Technology Enterprise” in 2020, and was subject to the preferential tax rate of 15% in 2021 and 2022. Jinko Leshan, Jinko Sichuan, Jinko Qinghai and Jinko Chuxiong was designated by the relevant local authorities as an “Enterprise in the Encouraged Industry” and was subject to a preferential tax rate of 15% till 2030.

Under the CIT Law, 10% withholding income tax (“WHT”) will be levied on foreign investors for dividend distributions from foreign invested enterprises’ profit earned after January 1, 2008. For certain treaty jurisdictions such as Hong Kong which has signed double tax arrangement with the PRC, the applicable WHT rate could be reduced to 5% if foreign investors directly hold at least 25% shares of invested enterprises at any time throughout the 12-month period preceding the entitlement to the dividends and they are also qualified as beneficial owners to enjoy the treaty benefit. Deferred income taxes are not provided on undistributed earnings of the Company’s subsidiaries that are intended to be permanently reinvested in China.

Since Jiangxi Jinko’s initial public offering in 2022 (Note 24), the Group provided withholding income tax for the earnings of Jiangxi Jinko, which are expected to be distributed in the future based on its distribution plan. As of December 31, 2022, the Group recognised deferred tax liabilities of RMB52 million, related to the cumulative undistributed earnings of Jiangxi Jinko.

The cumulative undistributed earnings of the Company’s PRC subsidiaries intended to be permanently reinvested totaled RMB3,879 million, RMB4,928 million and RMB6,635 million as of December 31, 2020, 2021 and 2022 respectively, and the amount of the unrecognized deferred tax liability, calculated based on the 10% rate, on the indefinitely reinvested earnings was RMB388 million, RMB493 million and RMB663 million as of December 31, 2020, 2021, 2022 respectively.

Hong Kong

The Company’s subsidiaries established in Hong Kong are subject to Hong Kong profit tax at a rate of 16.5% on its assessable profit.

Japan

Jinko Japan is incorporated in Japan and is subject to corporate income tax at 37.6%.

Korea

Jinko Korea is incorporated in Korea and is subject to corporate income tax at 22% in 2021 and 10% in 2022.

European Countries

Jinko Switzerland is incorporated in Switzerland and according to its current business model where it employs limited staff and generates income exclusively from trading activities conducted outside Switzerland, is subject to a combined federal, cantonal and communal tax rate of 11.6% in 2020, 9.57% in 2021 and 10% in 2022.

Jinko GMBH is incorporated in Germany and is subject to Germany profit tax rate of approximately 33% on the assessable profit.

Jinko Italy is incorporated in Italy and is subject to corporate income tax at 27.9%.

Jinko Portugal is incorporated in Portugal and is subject to corporate income tax at 22.5%.

Jinko Denmark is incorporated in Denmark and is subject to corporate income tax at 22%.

United States

Jinko US, Jinko US holding, and Jinko Solar (U.S.) Industries are Delaware incorporated corporations that are subject to U.S. federal corporate income tax on taxable incomes at a rate of 21% for taxable years beginning after December 31, 2017 and at differing tax rates of various states ranged from 0.75% to 9.99%.

Malaysia

The Income Tax Act 1967 of Malaysia, revised in 1971, enacted a statutory income tax rate of 24%. Nevertheless, Malaysia offers a wide range of tax incentives, including tax exemptions, capital allowances, and enhanced tax deductions, to attract foreign direct investment. Incorporated in Malaysia, Jinko Malaysia is entitled to a five year 100% tax exemption, approved in February 2017 and retrospectively effective from August 2015, under the pioneer status (PS) incentive scheme as a company engaged in producing high technology products identified by the Malaysian Investment Development Authority (MIDA). The tax exemption was expired in August 2020 and Jinko Malaysia is subject to corporate income tax at 24% from August 2020.

Canada

Jinko Canada is incorporated in Canada and is subject to a federal corporate income tax of 15% and provinces and territories income tax of 12%.

Australia

Jinko Australia is incorporated in Australia and is subject to corporate income tax at 30%.

Brazil

Jinko Brazil is incorporated in Brazil and is subject to corporate income tax at 34%.

Mexico

Jinko Mexico is incorporated in Mexico and is subject to corporate income tax at 30%.

Argentina

Cordillera Solar I, S.A., the wholly owned solar power project subsidiary, is incorporated in Argentina and is subject to corporate income tax at 35%.

Composition of Income Tax Expense

Income/(loss) before income taxes for the years ended December 31, 2020, 2021 and 2022 were taxed within the following jurisdictions (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Cayman Islands	(784,811)	199,956	(639,136)
PRC	444,368	1,120,667	2,743,467
Other countries	906,815	(230,720)	(127,622)
Income before income taxes	566,372	1,089,903	1,976,709

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For the year ended December 31, 2022, loss before income taxes of Cayman Islands subsidiaries was mainly due to the charge of share-based compensation expenses. Increase in the income before taxes of PRC subsidiaries was mainly attributable to the higher profits generated by the Group's subsidiaries in the PRC.

The current and deferred positions of income tax expense included in the consolidated statement of operations for the years ended December 31, 2020, 2021 and 2022 are as follows (RMB in thousands):

	For the year ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
Current income tax (expenses)/benefits			
PRC	26,473	(280,877)	(867,937)
Other countries	(110,726)	(175,633)	(58,014)
Total current income tax expenses	(84,253)	(456,510)	(925,951)
Deferred tax (expenses)/benefits			
PRC	(7,436)	77,741	457,266
Other countries	(86,722)	184,629	(136,593)
Total deferred tax (expenses)/benefits	(94,158)	262,370	320,673
Income tax expenses, net	(178,411)	(194,140)	(605,278)

Reconciliation of the differences between statutory tax rate and the effective tax rate

Reconciliation between the statutory CIT rate of 25% and the Company's effective tax rate from continuing operations is as follows:

	For the year ended December 31,		
	2020 %	2021 %	2022 %
Statutory CIT rate	25.0	25.0	25.0
Effect of permanent differences:			
—Share-based compensation expenses	0.1	0.1	3.2
—Change in fair value of convertible senior notes and call options	32.0	(4.4)	0.2
—Accrued payroll and welfare expenses	0.4	0.1	0.1
—Change of enacted tax rate	(7.2)	2.1	1.6
—Other non-deductible expenses including tax preferences	(6.6)	(1.8)	3.4
Difference in tax rate of subsidiaries outside the PRC	(3.1)	2.2	3.9
Effect of tax holiday for subsidiaries	(7.8)	(12.9)	(12.1)
Change in valuation allowance	(1.3)	7.4	5.3
Effective tax rate	31.5	17.8	30.6

Other tax preferences in 2020, 2021 and 2022 was mainly due to the additional income tax deduction amounting of RMB83 million, RMB74 million and RMB107 million for R&D costs approved by local tax bureau in the second quarter of 2020, 2021 and 2022, respectively.

The aggregate amount and per share effect of reduction of CIT for certain PRC subsidiaries as a result of tax holidays are as follows (RMB in thousands, except for per share data):

	For the year ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
The aggregate amount of effect*	44,191	140,235	239,268
Per share effect—basic	0.25	0.74	1.21
Per share effect—diluted **	0.25	0.68	1.19

* Increase of the aggregated amount of effect in 2022 was mainly attributable to more profit generated by the Group's PRC subsidiaries with preferential tax rates.

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**Due to the dilutive impact of call option in 2020, the denominator for diluted earnings per share is less than that for the basic earnings per share (Note 20). Therefore, the Company used the basic denominator for both of the basic and diluted effect to calculate above per share effect of tax holidays in 2020.

Significant components of deferred tax assets/liability (RMB in thousands)

	As of December 31,	
	2021 RMB	2022 RMB
Net operating losses	473,367	529,522
Accrued warranty costs	216,938	373,064
Provision for inventories, accounts receivable, other receivable	101,595	230,019
Timing difference for subsidiary income	15,235	166,857
Other temporary differences	24,953	69,183
Impairment for property, plant and equipment and project assets	100,860	35,491
Total deferred tax assets	932,948	1,404,136
Less: Valuation allowance	(217,124)	(243,141)
Less: Deferred tax liabilities in the same tax jurisdiction	(344,057)	(456,751)
Deferred tax assets	371,767	704,244
Timing difference for project assets, property, plant and equipment	(375,499)	(478,515)
Timing difference for refund of countervailing duties	(144,923)	(90,864)
Deferred tax liabilities related to cumulative distributable earnings in Jiangxi Jinko	—	(52,173)
Other temporary differences	(6,638)	(30,007)
Total deferred tax liabilities	(527,060)	(651,559)
Less: Deferred tax assets in the same tax jurisdiction	344,057	456,751
Deferred tax liabilities	(183,003)	(194,808)

Movement of valuation allowance (RMB in thousands)

	For the year ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
At beginning of year	(144,317)	(136,847)	(217,124)
Current year additions	(37,426)	(88,667)	(216,260)
Utilization and reversal of valuation allowances	44,896	8,390	111,296
Decrease of valuation allowances related to the disposal of a subsidiary	—	—	78,947
At end of year	(136,847)	(217,124)	(243,141)

Valuation allowances were determined by assessing both positive and negative evidence and have been provided on the net deferred tax asset due to the uncertainty surrounding its realization. As of December 31, 2020, 2021 and 2022, valuation allowances of RMB137 million, RMB217 million and RMB243 million were provided against deferred tax assets because it was more likely than not that such portion of deferred tax will not be realized based on the Group's estimate of future taxable incomes of all its subsidiaries. If events occur in the future that allow the Group to realize more of its deferred tax assets than the presently recorded amount, an adjustment to the valuation allowances will result in a non-cash income statement benefit when those events occur. Due to the strong financial performance and profitable condition of certain subsidiaries, the Company has determined that the future taxable income of those subsidiaries is sufficient to realize the benefits of such deferred tax assets. As a result, the Company reversed the valuation allowance of RMB45 million, RMB8 million and RMB111 million in 2020, 2021 and 2022.

7. ACCOUNTS RECEIVABLE, NET — THIRD PARTIES

Components of accounts receivables, net-third parties are detailed as follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Accounts receivables - current	7,794,174	17,259,003
Allowance for credit losses - current	(323,071)	(584,127)
Accounts receivable, net - current	7,471,103	16,674,876
Accounts receivables - non-current	28,186	—
Allowance for credit losses - non-current	(562)	—
Accounts receivable, net - non-current	27,624	—

As of December 31, 2021 and 2022, accounts receivable with net book value of RMB726 million and RMB1,006 million were pledged as collateral for the Group's borrowings (Note 18).

The following table summarizes the activity in the allowance for credit losses related to accounts receivable - current for the year ended December 31, 2020, 2021 and 2022:

	As of December 31,		
	2020	2021	2022
	RMB	RMB	RMB
At beginning of year	318,198	293,360	323,071
Impact of adopting ASC Topic 326	(30,916)	—	—
Addition	26,581	91,948	394,285
Reversal	(20,503)	(24,213)	(114,770)
Write off	—	(38,024)	(18,459)
At end of year	293,360	323,071	584,127

The following table summarizes the activity in the allowance for credit losses related to accounts receivable - non-current for the year ended December 31, 2020, 2021 and 2022:

	As of December 31,		
	2020	2021	2022
	RMB	RMB	RMB
At beginning of year	—	1,139	562
Impact of adopting ASC Topic 326	—	—	—
Addition	1,139	—	—
Reversal	—	(577)	(562)
At end of year	1,139	562	—

8. NOTES RECEIVABLE, NET - THIRD PARTIES

Components of notes receivables, net-third parties are detailed as follows (RMB in thousands):

As of December 31,	
2021	2022

	<u>RMB</u>	<u>RMB</u>
Notes receivable	1,690,142	6,697,096
Provision for notes receivable	(1,040)	—
Notes receivable, net	<u>1,689,102</u>	<u>6,697,096</u>

As of December 31, 2021 and 2022, notes receivable with net book value of RMB885 million and RMB1,481 million were pledged as collateral for the issuance of bank acceptance notes.

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The following table summarizes the activity in the allowance for credit losses related to notes receivable for the year ended December 31, 2020, 2021 and 2022 (RMB in thousands):

	As of December 31,		
	2020	2021	2022
	RMB	RMB	RMB
At beginning of year	—	182	1,040
Impact of adopting ASC Topic 326	223	—	—
Addition	—	858	—
Reversal	(41)	—	(1,040)
At end of year	182	1,040	—

9. ADVANCES TO SUPPLIERS, NET - THIRD PARTIES

Advance to suppliers, net - third parties were as follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Advances to suppliers - current	1,536,155	3,271,284
Advances to suppliers - non-current	296,709	310,375
Advances to suppliers, net	1,832,864	3,581,659

As of December 31, 2021 and 2022, advances to suppliers with term of less than 1 year mainly represent payments for procurement of recoverable silicon materials, virgin polysilicon and solar cells and the Group has delivery plan with the respective suppliers to receive the materials in the next twelve months.

As of December 31, 2021 and 2022, non-current advances to suppliers primarily represent upfront payments for procurement of silicon materials of which related good delivery is scheduled beyond one year.

There were no provisions recorded against advances to suppliers for the years ended December 31, 2020, 2021 and 2022. The Group wrote off fully impaired balances of advances to suppliers with the amount of RMB2 million, RMB6 million and nil for the years ended December 31, 2020, 2021 and 2022, respectively.

10. INVENTORIES

The Company's inventories are consisted of the follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Raw materials	3,761,045	5,499,573
Work-in-progress	2,623,044	3,237,480
Finished goods	6,868,263	8,713,231
Total	13,252,352	17,450,284

Write-down of the carrying amount of inventory to its estimated net realizable value was RMB271 million, RMB823 million and RMB1,819 million for the years ended December 31, 2020, 2021 and 2022, respectively, and were recorded as cost of revenues in the consolidated statements of operations. Inventory write downs were mainly related to the inventories whose market value is lower than their carrying amount.

As of December 31, 2021 and 2022, inventories with net book value of RMB1,749 million and RMB2,809 million were pledged as collateral for the Group's borrowings

(Note 18).

11. PREPAYMENTS AND OTHER CURRENT ASSETS

Prepayments and other current assets are consisted of the follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Value-added tax deductible (a)	1,705,159	1,374,909
Deposit for customer duty, bidding and others	142,442	181,371
Prepayment for income tax and deferred charges	129,931	233,744
Receivables related to disposal of land use rights and property, plant and equipment (b)	111,804	378,900
Receivables related to discount from a supplier	110,050	324,002
Prepayment of electricity and others	91,334	153,021
Prepaid insurance premium	6,675	7,281
Employee advances (c)	6,274	3,944
Refund receivable of U.S. countervailing duties and anti-dumping duties (Note 16)	—	480,535
Rental deposit and prepayment	3,606	1,643
Receivable of option exercised	1,169	—
Prepaid professional service fee	307	—
Loan receivable (d)	—	23,459
Others	131,827	136,212
Less: Allowance for credit losses	(5,521)	(8,118)
Total	2,435,057	3,290,903

(a) Value-added tax deductible represented the balance that the Group can utilize to deduct its value-added tax liability within the next 12 months.

(b) Represented the receivables related to disposition of certain equipment for the purpose of upgrading manufacturing facilities and receivables related to disposition of certain land use rights.

(c) As of December 31, 2021 and 2022, all of the employee advances were business related, interest-free, not collateralized and will be repaid or settled within one year from the respective balance sheet dates.

(d) Represented an interest-free half-year loan of RMB 23 million provided by Qinghai Jinko in 2022 to a third-party company.

The following table summarizes the activity in the allowance for credit losses related to prepayments and other current assets for the year ended December 31, 2022 (RMB in thousands):

	For year ended December 31,
	2022
	RMB
At beginning of year	5,521
Impact of adopting ASC Topic 326	—
Addition	2,597
Reverse	—
At end of year	8,118

12. INVESTMENTS AND AVAILABLE-FOR-SALE SECURITIES

The Group's investments are consisted of the follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
-Debt investment		
Available-for-sale securities	—	104,499
-Equity investment		
Investments accounted for under the equity method	538,866	1,287,201
Equity securities without readily determinable fair values	95,000	245,000
Equity securities applying fair value option	—	178,871
Subtotal	633,866	1,711,072
Total	633,866	1,815,571

- Debt investment

Available-for-sale securities

In May 2022, the Group purchased a two-year puttable bond with an aggregated principal of RMB 100 million and annual interest of 5.5% from JinkoPower. The Group has the option to require JinkoPower to repurchase all or part of the bonds at the end of the first year in the life of the bond, and JinkoPower has the option to adjust the interest rate at the end of the first year in the life of the bond. For the year ended December 31, 2022, unrealized gain on the available-for-sale securities amounted to RMB1 million which was reported in other comprehensive income.

- Equity investment

Investments accounted for under the equity method.

On February 26, 2017, JinkoSolar signed a shareholder agreement with AxiaPower Holdings B.V. ("Axia"), a subsidiary of Marubeni Corporation, to jointly invest in and establish a company named SweihanSolar Holding Company Limited ("SSHC") to hold 40% equity interest of Sweihan PV Power Company P.J.S.C ("the Project Company"), which develops and operates solar power projects in Dubai. In April 2019, JinkoSolar made pro rata additional capital injection to SSHC with the amount of RMB295 million. JinkoSolar holds 50% equity interest in the SSHC and accounts for its investment using the equity method. JinkoSolar's share of SSHC's results of operations is included in equity (loss)/income in affiliated companies in the Group's consolidated statements of operations, with a loss of RMB10 million, an income of RMB62 million and an income of RMB14 million for the years ended December 31, 2020, 2021 and 2022, respectively. JinkoSolar sold modules of 32.2 MW, nil and nil and recognized revenue of RMB51 million, nil and nil on sales to the Project Company (Note 26) during the years ended December 31, 2020, 2021 and 2022, respectively. Loss amounted to RMB0.2 million, RMB1 million and RMB1 million in connection with the intercompany transactions with the Project Company was eliminated during the years ended December 31, 2020, 2021 and 2022, respectively. The Group received dividend in cash from SSHC with the amount of RMB 16 million, RMB 23 million and nil during the year of 2020, 2021 and 2022, respectively, which were recorded as reductions of the carrying amount of the investment. In January 2022, JinkoSolar made pro rata decrease of its investment in SSHC with the amount of RMB94 million, which was recorded as a reduction of the carrying amount of the investment. The carrying value of this investment was RMB 224 million and RMB 144 million as of December 31, 2021 and 2022.

On March 30, 2017, JinkoSolar signed a shareholder agreement with Yangzhou Tiansheng PV-Tech Co., Ltd., a Chinese PV enterprise, to jointly invest in and establish Jinko-Tiansheng to process and assemble PV modules as OEM manufacturer in Jiangsu province, China. JinkoSolar holds 30% equity interest in Jinko-Tiansheng and accounts for its investment using the equity method. In November 2021, the Group entered into a share purchase agreement to dispose all of its equity interest in Jinko-Tiansheng to Jinko-Tiansheng's other shareholders. The carrying value of the Group's investment in Jinko-Tiansheng which met recognition criteria in ASC 360-10-45-9 was reclassified as a held for sale asset as of December 31, 2021. Disposition of equity interest in Jinko-Tiansheng was closed in January 2022 and the Group recognized a gain from disposal of the equity interest with the amount of RMB13 million (Note 5). For the years ended December 31, 2020, 2021 and 2022, JinkoSolar's share of Jinko-Tiansheng's results of operations included in equity (loss)/income in affiliated companies in the Group's consolidated statements of operations were a loss of RMB2 million, RMB7 million and nil, respectively. Jinko-Tiansheng charged processing fee amounted to RMB27 million, RMB5 million and nil to the Company for its OEM services provided (Note 26) during the years ended December 31, 2020, 2021 and 2022, respectively. Profit/(loss) amounted to RMB3 million, RMB(4) million and nil due to the intercompany transactions with Jinko-Tiansheng was eliminated for the years ended December 31, 2020, 2021 and 2022, respectively. The carrying value of this investment was RMB9 million and RMB3 million as of December 31, 2020 and 2021, respectively. On June 18, 2021, JinkoSolar signed a shareholder agreement with Xinte Energy Co., Ltd. and JA Solar Co., Ltd to jointly invest in and establish a company named Xinte Silicon Co., Ltd. ("Xinte Silicon") to produce polysilicon materials. JinkoSolar made capital injection in cash with the total amount of RMB315 million during the year of 2021. JinkoSolar holds 9% equity interest in Xinte Silicon. JinkoSolar can exercise significant influence on Xinte Silicon and accounts for its investment using the equity method. JinkoSolar's share of Xinte Silicon's results of operations is included in equity (loss)/income in affiliated companies in the Group's consolidated statements of operations, with a loss of RMB0.003 million and an income of RMB219 million for the year ended December 31, 2021 and 2022, respectively. JinkoSolar purchased polysilicon of nil and RMB825 million from Xinte Silicon during the years ended December 31, 2021 and 2022, respectively. Profit amounted to nil and RMB37 million in connection with these transactions with Xinte Silicon was eliminated for the years ended December 31, 2021 and 2022, respectively. The carrying value of this investment was RMB315 million and RMB534 million as of December 31, 2021 and 2022.

On November 3, 2021, JinkoSolar signed a shareholder agreement with Beijing Jingyuntong Technology Co., Ltd. and Sichuan Yongxiang Co., Ltd to jointly invest in and establish a company named Sichuan Yongxiang Technology Co., Ltd. ("Sichuan Yongxiang") to produce polysilicon materials. JinkoSolar made capital injection in cash with the total amount RMB 450 million in 2022 and holds 15% equity interest in Sichuan Yongxiang. JinkoSolar can exercise significant influence on Sichuan Yongxiang and accounts for its investment using the equity method. JinkoSolar's share of Sichuan Yongxiang's results of operations is included in equity (loss)/income in affiliated companies in the Group's consolidated statements of operations, with a loss of RMB1 million for the year ended December 31, 2022. The carrying value of this investment was RMB449 million as of December 31, 2022.

In July 2022, JinkoSolar established a fully owned subsidiary named as Shangrao Jinko Green Energy Technology Development Co., Ltd. ("Shangrao Lvneng"). JinkoSolar made capital injection in cash with the total amount of RMB50 million in July 2022. In November 2022, two third-party investors made capital injections into Shangrao Lvneng in cash with the total amount of RMB330 million (each paid RMB165 million) and JinkoSolar made additional capital injections in cash with the amount of RMB115 million. After these capital injections, JinkoSolar owns 33.33% equity interests and loses control of Shangrao Lvneng. A gain from disposal of Shangrao Lvneng subsidiary of RMB2 million was recognized because of the disposition. After the disposition, JinkoSolar can exercise significant influence on Shangro Lvneng and accounts for its investment using the equity method. JinkoSolar's share of Shangrao Lvneng's results of operations is included in equity (loss)/income in affiliated companies in the Group's consolidated statements of operations, with a loss of RMB4 million for the year ended December 31, 2022. The carrying value of this investment was RMB160 million as of December 31, 2022.

Equity securities without readily determinable fair values

In October 2021, the Group made capital injection in cash with the amount of RMB65 million in Shenzhen Laplace Energy Technology Co., Ltd. ("Laplace"), a company in Guangdong province, China, and owns 2.88% equity interests. Such equity securities without readily determinable fair values are measured and recorded using a measurement alternative that measures the securities at cost as adjusted for observable price changes and impairments.

In December 2021, the Group made capital injection in cash with the amount of RMB30 million in Ningxia Xiaoni Automation Equipment Co., Ltd. ("Xiaoni"), a company in Ningxia hui autonomous region, China, and owns 0.9375% equity interests. Such equity securities without readily determinable fair values are measured and recorded using a measurement alternative that measures the securities at cost as adjusted for observable price changes and impairments.

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In November 2022, the Group made capital injection in cash with the amount of RMB150 million in Aiswei Technology Co., Ltd . (“Aiswei”), a company in Shanghai, China, and owns 2.9126% equity interests. Such equity securities without readily determinable fair values are measured and recorded using a measurement alternative that measures the securities at cost as adjusted for observable price changes and impairments.

There was no re-measurement gain or loss being recognized in connection with equity investments accounted for using the measurement alternative for the years ended December 31, 2020, 2021 and 2022.

Equity securities applying fair value option

In June, 2022, the Group made capital injection in cash with the amount of RMB 77 million in Zhejiang Xiangbang Technology Co., Ltd . (“Zhejiang Xiangbang”), a company in Hangzhou, China, and owns 2.98% equity interests. The Group irrevocably elected fair value option to initially and subsequently measure the investment in Xiangbang in its entirety at fair value with changes in fair value recognized in earnings. The Group recorded change in fair value of its investment in Zhejiang Xiangbang with the amount of RMB102 million for the year ended December 31, 2022.

13. PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment used in continuing operation and related accumulated depreciation are as follows (RMB in thousands):

	As of December 31,	
	2021 RMB	2022 RMB
Buildings	6,875,072	12,655,905
Machinery and equipment	14,199,961	22,435,247
Motor vehicles	71,837	114,936
Furniture, fixture and office equipment	1,408,296	1,995,407
	22,555,166	37,201,495
Less: Accumulated depreciation	(5,232,342)	(6,462,379)
Subtotal	17,322,824	30,739,116
Construction in progress	2,647,070	1,550,972
Property, plant and equipment, net	19,969,894	32,290,088

Depreciation expenses were RMB1,161 million, RMB1,604 million and RMB2,585 million for the years ended December 31, 2020, 2021 and 2022, respectively.

For the years ended December 31, 2020, 2021 and 2022, the Group disposed certain equipment with the net book value amounting of RMB610 million, RMB390 million and RMB1,118 million and recognized related disposal loss amounted to RMB428 million, RMB350 million and RMB249 million respectively. Increase in disposal loss on property, plant and equipment was mainly due to the automation upgrade of the Group.

Construction in progress primarily represents the construction of new production line. Costs incurred in the construction are capitalized and transferred to property and equipment upon completion, at which time depreciation commences.

Significant increase of property, plant and equipment during the year ended December 31, 2022 was attributable to the expansion of manufacturing capacity and automation upgrade of the Group.

For the years ended December 31, 2020, 2021 and 2022, the Group recorded impairments of RMB20 million, RMB150 million and RMB374 million related to the retirement of certain equipment in production lines that had become obsolete due to automation upgrade of the Group.

As of December 31, 2021 and 2022, certain property, plant and equipment with net book value amounting of RMB4,115 million and RMB5,210 million were pledged as collateral for the Group’s borrowings (Note 18).

As of December 31, 2021 and 2022, certain property, plant and equipment with net book value of RMB105 million and nil were pledged as collateral for the issuance of bank acceptance notes.

14. LAND USE RIGHTS, NET

Land use rights represent fees paid to the government to obtain the rights to use certain lands over periods of 50 to 70 years, as applicable, in the PRC (RMB in thousands).

	As of December 31,	
	2021	2022
	RMB	RMB
Land use rights	1,196,668	1,535,556
Less: accumulated amortization	(106,611)	(104,132)
Land use rights, net	1,090,057	1,431,424

Amortization expense was RMB12 million, RMB18 million and RMB27 million for the years ended December 31, 2020, 2021 and 2022, respectively. As of December 31, 2022, estimated amortization expense in each of the next five years is RMB30 million.

As of December 31, 2021 and 2022, certain land use rights with net book value of RMB110 million and RMB169 million were pledged as collateral for the Company's borrowings (Note 18).

As of December 31, 2021 and 2022, certain land use rights with net book value of RMB15 million and nil were pledged as collateral for the issuance of bank acceptance notes.

15. INTANGIBLE ASSETS, NET

Intangible assets and their related amortization are as follow (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Trademark	1,581	1,230
Computer software	94,712	135,218
Less: accumulated amortization	(40,809)	(56,848)
Intangible assets, net	55,484	79,600

Amortization expense was RMB10 million, RMB12 million and RMB17 million for the years ended December 31, 2020, 2021 and 2022, respectively.

16. OTHER ASSETS - THIRD PARTIES

Other assets are consisted of the follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Prepayments for purchase of property, plant and equipment	1,859,173	1,162,351
Refund receivable of U.S. countervailing duties and anti-dumping duties	580,058	—
Deposit for rent and others	175,297	131,611
Prepayment for warranty insurance premium	111,537	114,088
Prepayment of income tax attributable to intercompany transactions	16,159	15,474
Less: Allowance for credit losses	(3,064)	(1,855)
Total	2,739,160	1,421,669

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During the year of 2018, the U.S. Department of Commerce (“DOC”) issued the amended final results of its fourth administrative review on the counter-veiling duties (“CVD”) imposed on the crystalline silicon photovoltaic, or CSPV, cells, whether or not incorporated into modules, from China. As a result, the Group’s CVD rate was updated to be 10.64% from 20.94%, covering the period from January 1, 2015 to December 31, 2015, and all future exports to the US starting from July 2018 (“CVD AR4”). Pursuant to the final results of fourth administrative review, the Group recorded a reversal of costs of revenues and recognized refundable deposits due from the U.S. Customs with the amount of USD31 million (RMB210 million), representing the difference between the amended rate and the previous rate during the period from January 1, 2015 to December 31, 2015. During the year of 2020, CVD rate was further amended to be 4.22%. The Group recorded a reversal of costs of revenues and refundable deposits with the amount of USD25 million (RMB164 million) based on the difference between the amended rate and the previous rate. In November 2022, due to the acceleration of cash liquidation procedures in relation to the CVD AR4, the Group received CVD AR4 refunds with the amount of USD 69 million (RMB 499 million) from the U.S. Customs, including principal amount of USD 56 million (RMB 400 million) and interests of USD 14 million (RMB 100 million).

During the year of 2019, the DOC issued its final results of the fifth administrative review, the Group’s CVD rate was finalized to be 12.70% from 20.94%, covering the period from January 1, 2016 to December 31, 2016, and all future exports to the US starting from August 2019 (“CVD AR5”). Pursuant to the final results of fifth administrative review, the Group recorded a reversal of costs of sales and recognized refundable deposits due from the U.S. Customs with the amount of USD37 million (RMB260 million) on an amortized cost basis based on its best estimation of related liquidation. In May 2022, CVD rate was further amended to be 5.86%. The Group recorded a reversal of costs of sales and refundable deposits with the amount of USD33 million (RMB 226 million) based on the difference between the amended rate and the previous rate. Subsequently in January 2023, due to the acceleration of cash liquidation procedures in relation to the CVD AR5, the Group received CVD AR5 refunds with the amount of USD 87 million (RMB 593 million) from the U.S. Customs, including principal amount of USD 70 million (RMB 477 million) and interests of USD 17 million (RMB 116 million). Hence, the Group reclassified the CVD AR5 receivables from “Other assets-third parties” to “Prepayments and other current assets” as of December 31, 2022 (Note 11).

During the year of 2020, the U.S. Department of Commerce issued its final results of the sixth administrative review, and the finalized CVD rate applicable to the Group was 12.67%, which was initially 20.94%, covering the period from January 1, 2017 to December 31, 2017, and all future exports to the United States starting from December 2020 (“CVD AR6”). Pursuant to the final results of sixth administrative review, the Group recorded a reversal of costs of sales and recognized refundable deposits due from the U.S. Customs with the amount of USD0.4 million (RMB3 million) under “other assets - third parties” on an amortized cost basis based on its best estimation of related liquidation. During the year of 2021, CVD rate was further amended to be 11.97%. The Group recorded a reversal of costs of sales and refundable deposits with the amount of USD0.04 million (RMB0.23 million) based on the difference between the amended rate and the previous rate. As of December 31, 2022, in light of the acceleration of liquidation of the refundable deposits, based on its latest communication from the DOC and best estimation, the Group considered the CVD AR6 receivables can be collected within the next 12 months and therefore reclassified the receivables from “Other assets-third parties” to “Prepayments and other current assets” (Note 11).

The following table summarizes the activity in the allowance for credit losses related to deposits for the year ended December 31, 2022(RMB in thousands):

	For the year ended December 31,
	2022
	RMB
At beginning of year	3,064
Impact of adopting ASC Topic 326	—
Addition	—
Reversal	(1,209)
Writeoff	—
At end of year	1,855

17. OTHER PAYABLES AND ACCRUALS

Other payables and accruals are consisted of the follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Payables for purchase of property, plant and equipment	3,073,625	6,412,134
Freight payables	858,027	1,359,813
Accrued utilities, rentals and interest	424,436	629,977
Customs duties	157,655	147,759
Accrued warranty cost	149,164	221,699
Value-added tax and other tax payables	74,784	329,078
Commission payables	24,861	13,587
Contracted labor fees	24,392	20,015
Accrued professional service fees	19,739	34,110
Insurance premium payables	6,839	1,853
Others	30,562	44,359
Total	4,844,084	9,214,384

18. BORROWINGS

(a) Short-term borrowings

Components of short-term borrowings as of December 31, 2021 and 2022 were as follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Short-term borrowings	11,967,827	10,316,714
Long-term borrowings—current portion	1,371,540	2,102,456
Total short-term borrowings	13,339,367	12,419,170

The short-term borrowings outstanding as of December 31, 2021 and December 31, 2022 carried a weighted average interest rate of 3.28% and 3.10% per annum, respectively. Included in the balance of short-term bank borrowings as of December 31, 2022 were borrowings of RMB2,186 million, RMB120 million, and RMB1,002 million which are denominated and repayable in EUR, JPY and USD, respectively.

Details of the Group's short-term borrowings as of December 31, 2022 are (RMB in thousands):

Type of loan	As of December 31, 2022	Guarantee/Collateral	
Credit loan	4,055,137		a)
Letter of credit loan	2,792,460		a)
	256,313	Guaranteed by JinkoSolar Holding	b)
	167,000	Guaranteed by JinkoSolar Holding and certain shareholders of the Group	b)
Guaranteed by subsidiaries	50,000	Guaranteed by Jiangxi Jinko and certain shareholders of the Group	b)
of the Group and third parties	1,942,835	Guaranteed by Jiangxi Jinko	b)
and/or collateralized on the	1,329,716	Guaranteed by Zhejiang Jinko	b)
Group's assets	20,197	Guaranteed by Agricultural Bank of China Shangrao Guangxin Branch	b)
	25,312	Guaranteed by China Export & Credit Insurance Corporation	b)
	1,132,645	Financings associated with failed sale-lease back transactions	c)
	647,555	Guaranteed and collateralized on buildings, equipment and other assets of the Group and shareholders of the Group	d)
Total	12,419,170		

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- a) As of December 31, 2022, the Group had short-term bank borrowings of RMB4,055 million credit loans, and RMB2,792 million letter of credit loans. The remaining short-term bank borrowings of RMB4,439 million were either guaranteed by other parties and/or collateralized on the Group's assets, detailed as following:

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- b) Borrowings of RMB256 million guaranteed by JinkoSolar Holding, RMB167 million guaranteed by JinkoSolar Holding and certain shareholders of the Group, RMB50 million guaranteed by Jiangxi Jinko and certain shareholders of the Group, RMB1,943 million guaranteed by Jiangxi Jinko, RMB1,330 million guaranteed by Zhejiang Jinko, RMB20 million guaranteed by Agricultural Bank of China Shangrao Guangxin Branch, and RMB25 million guaranteed by China Export & Credit Insurance Corporation, respectively.
- c) As of December 31, 2022, the Group recorded financings associated with failed sale-lease back transactions with the amount of RMB1,463 million under long-term borrowings, and RMB1,133 million as current portion (Note 18).
- d) RMB120 million collateralized on the account receivables and inventories of the Group, RMB528 million collateralized on the Group's certain building and equipment, including RMB329 million which were also collateralized on the Group's certain land use rights, RMB95 million were also collateralized on the Group's certain land use rights and inventories.

In addition, included in these borrowings there were borrowings of RMB120 million guaranteed by Jinkosolar Holding, RMB100 million guaranteed by JinkoSolar Holding and Zhejiang Jinko, and RMB288 million guaranteed by Jiangxi Jinko.

The net book value of the total collateralized accounts receivables, land use right, building, equipment, inventories was RMB1,006 million, RMB169 million, RMB1,102 million, RMB4,108 million and RMB2,809 million, respectively as of December 31, 2022.

(b) Long-term borrowings

Components of short-term borrowings as of December 31, 2021 and 2022 were as follows (RMB in thousands):

	As of December 31,	
	2021	2022
	RMB	RMB
Long-term bank borrowings	590,013	3,329,075
Long-term financings associated with failed sale-leaseback transactions	2,756,452	2,595,686
Other long-term borrowings	7,921,530	9,200,490
Less: Current portion of long-term borrowings	(99,256)	(969,811)
Less: Current portion of financings associated with failed sale-leaseback transactions	(1,272,284)	(1,132,645)
Total long-term borrowings	9,896,455	13,022,795

Future principal repayments on the long-term borrowings are as follows (RMB in thousands):

Year ending December 31,	RMB
Year ended December 31	
2023	3,862,228
2024	2,875,790
2025	5,085,899
2026	2,110,558
2027	625,033
Thereafter	565,743
Total	15,125,251

1) Long-term bank borrowings

In 2021, the Group entered into a 3-year loan agreement with Deutsche Bank Co.,LTD. for a principle amount of USD12 million (RMB75 million) with the interest rate of 1.92%, which was repayable from March 2022 to December 2024. As of December 31, 2022, the total outstanding balances amounted to RMB55 million, including RMB27 million (USD4 million) due in December 2023.

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In 2021, the Group entered into two separate 5-year loan agreements with Industrial Bank Co., LTD. for a principle amount of RMB100 million and RMB19 million with the interest rate of 5.30% and 5.30%, respectively, which were repayable from December 2021 to December 2026. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB119 million and RMB81 million, respectively, including RMB5 million due in December 2022, which was repaid in 2022 and RMB18 million due in December 2023.

In 2022, the Group entered into a 5-year loan agreement with Industrial Bank Co., LTD. for a principle amount of RMB190 million with the interest rate of 4.3%, which is repayable from September 2022 to March 2027. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB190 million, including RMB27 million due in March 2023.

In 2022, the Group entered into a 2-year loan agreement with Bank of Communications for a principle amount of RMB100 million with the interest rate of 3.65%, which is due and payable in July 2024. The borrowing was guaranteed by Jinko Sichuan, Jinko Chuxiong and Jinko Shangrao and collateralized on the Group's certain equipment with the net book value of RMB110 million. As of December 31, 2022, the total outstanding balances amounted to RMB100 million.

In 2022, the Group entered into a 2-year loan agreement with the Export-Import Bank of China for a principle amount of RMB817 million (EUR110 million) and RMB208 million (EUR28 million) with the interest rate of 2.10% and 2.70%, which is due and payable in October 2023 and September 2024, respectively.

In 2022, the Group entered into a 3-year loan agreement with Industrial Bank CO. LTD for a principle amount of RMB150 million with the interest rate of 4.1%, which is due and payable from September 2022 to March 2025. As of December 31, 2022, the outstanding balances amounted to RMB149 million.

In 2022, the Group entered into a 7-year revolving loan facility agreement with a financial consortium constituted by Agricultural Bank of China, China Construction Bank, China CITIC Bank and China Everbright bank CO., ltd in an aggregate principle amount not exceeding RMB2.4 billion. Borrowings drawn down from the loan facility were guaranteed by Jiangxi Jinko. As of December 31, 2022, the Group drew down borrowings from the bank facility with the amount of RMB397 million with the interest rate of 4.1% which were repayable from November 2022 to February 2029. As of December 31, 2022, the total outstanding balances amounted to RMB397 million, including RMB27 million due in June 2023.

In 2022, the Group entered into a 7-year loan agreement with Industrial Bank Co., LTD. for a principle amount of RMB31 million with the interest rate of 3.95%, which was repayable in December 2029. The borrowing was guaranteed by Jiangxi Jinko.

In 2022, the Group entered into a 3-year loan agreement with China Everbright bank CO., ltd. for a principle amount of RMB240 million with the interest rate of 4%, which was repayable in March 2025. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the outstanding balances amounted to RMB240 million.

In 2022, the Group entered into a 3-year loan agreement with Bank of Shanghai Co., Ltd. for a principle amount of RMB100 million with the interest rate of 3.65%. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB100 million, including RMB10 million due in September 2023.

In 2022, the Group entered into a 3-year loan agreement with China Construction Bank for a principle amount of RMB80 million with the interest rate of 4.10%, which is due and payable in June 2025.

In 2022, the Group entered into a 3-year loan agreement with Industrial Bank Co., LTD. for a principle amount of RMB100 million, RMB100 million and RMB200 million with the interest rate of 4.1%, which is due and payable from September 2022 to March 2025. As of December 31, 2022, the outstanding balances amounted to RMB100 million, including RMB0.06 million due on December 31, 2023. The borrowing was guaranteed by Jiangxi Jinko and collateralized on the Group's certain land use rights and buildings with the net book value of RMB38 million and RMB366 million, respectively.

In 2022, the Group entered into a 3-year loan agreement with China Everbright Bank for a principle amount of RMB50 million with the interest rate of 3.65%, which is due and payable from April 2023 to March 2024. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the outstanding balances amounted to RMB50 million, including RMB0.5 million due in October 2023.

In 2022, the Group entered into a 3-year loan agreement with Hua Xia Bank for a principle amount of RMB70 million with the interest rate of 3.40%, which is repayable from March 2023 to in October 2025. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB70 million, including RMB10 million due in September 2023.

In 2022, the Group entered into a 5-year loan agreement with Fudian Bank. for a principle amount of RMB17 million with the interest rate of 5.10%, which were repayable from December 2022 to March 2027. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB16 million, including RMB3 million due in December 2023.

In 2022, the Group entered into three separate 5-year loan agreements with Industrial Bank Co.,LTD. for a principle amount of RMB25 million,RMB92 million and RMB21 million with the interest rate of 4.80%,4.60% and 4.60%, respectively, which were repayable from December 2022 to December 2028. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB138 million, including RMB26 million due in December 2023.

In 2022, the Group entered into a 2-year loan agreement with China Everbright Bank. for a principle amount of RMB50 million with the interest rate of 3.5%,which was due and payable in March 2024. The borrowing was guaranteed by Jiangxi Jinko.

In 2022, the Group entered into a 4-year loan agreement with China CITIC Bank. for a principle amount of RMB164 million with the interest rate of 3.65%, which was due and payable from November 2023 to May 2026. The borrowing was guaranteed by Jiangxi Jinko. As of December 31, 2022, the total outstanding balances amounted to RMB160 million, including RMB4 million due in November 2023.

The long-term borrowings contain covenants including, among others, those related to certain financial metrics, liens, consolidation, merger and sale of the Group's assets. The Group is in compliance with all of the loan covenants as of December 31, 2021 and 2022.

2) Financings associated with failed sale-leaseback transactions

During the year ended December 31, 2021 and 2022, the Group sold certain machinery and equipment with total carrying amount of RMB2,630 million and RMB1,761 million to certain third parties (the "purchaser-lessors") for a total consideration of RMB3,334 million and RMB1,768 million and simultaneously entered into contracts to lease back these assets from the purchaser-lessors for periods from one to six years. Pursuant to the terms of the contracts, the Group is required to pay to the purchaser-lessors quarterly lease payment over the contract periods and is entitled to obtain the ownership of these equipment at a nominal price upon the expiration of the leases. Through the leaseback, the Group substantially retains all of the benefits and risks incident to the ownership of the equipment sold and the fair value of these equipment upon expiration of leasing period is most likely to be much higher than the repurchase price. Therefore, these lease transactions do not qualify as sale-leaseback transaction. Accordingly, the Group identified the transactions as financing arrangements and recorded as borrowings. As of December 31, 2022, the Group recorded RMB2,596 million under long-term borrowings, including RMB1,133 million as current portion.

3) Other long-term borrowings

In the February 2018, Jiangxi Jinko, together with government background funds, established Jinko Sichuan. Cash capital injections with an aggregate amount of RMB1.3 billion had been made by the non-controlling shareholders through December 31, 2021. The Group controls and consolidates such entity in its financial statements. In October 2020, Jiangxi Jinko entered into a supplementary investment agreement with the government background funds, pursuant to which the government background funds will no longer participates in any business decision of Jinko Sichuan and enjoys a fixed annual return of 6% on its capital injection. Additionally, Jiangxi Jinko shall repurchase all the 30% equity interests (the non-controlling interest) held by the government background funds upon the sixth anniversary of the capital injection date with a repurchase price equivalent to the capital injection made by the government background funds. Considering the government investment shall be repaid on a fixed date and for fixed amounts, redemption of the government investment is considered to be mandatory and certain to occur and is not upon the occurrence of a conditional event nor depends upon the satisfaction of a specified contingency. The Group assessed the impact of the above amendments and concluded that these amendments represented a settlement of the non-controlling interests given characteristics of the non-controlling interests has been completely changed to loan liabilities. At the time of the settlement, the carrying amount of the non-controlling interests with the amount of RMB997 million was derecognized, and the new loan liabilities was recorded at fair value of RMB1,114 million, with the difference recorded against additional paid-in-capital. In addition, in July, September and October 2021, the Jinko Sichuan received capital injection with the amount of RMB100 million, RMB150 million and RMB50 million from government background funds which bear a fixed annual return of 5.18%, and shall be repaid upon the fifth anniversary of the capital injection date. The Group recorded such capital injection as long-term borrowings. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB1,560 million and RMB1,633 million, respectively.

In the second and third quarter of 2018, government background companies made capital injection with the amount of RMB517 million into Haining Jinko. In the third quarter of 2019, to support developments of local enterprise, government background funds of Zhejiang province made investment into Haining Jinko as capital injections through limited partnership established together with Zhejiang Jinko. The total capital injection received from government funds in the year of 2019 amounted to RMB846 million. In the fourth quarter of 2020, the Group entered into supplementary investments agreement with government background funds, pursuant to which the government background funds will no longer participate in any business decision of Haining Jinko and enjoys fixed annual return within the range from 4.75% to 5.23% on their capital injections respectively. Additionally, the Group shall repurchase all the equity interests (the non-controlling interest) held by the government background funds upon the fifth or sixth anniversary of the capital injection date with a repurchase price equivalent to the capital injection made by the government background funds. Considering the government investment shall be repaid on a fixed date and for fixed amounts, redemption of the government investment is considered to be mandatory and certain to occur and is not upon the occurrence of a conditional event nor depends upon the satisfaction of a specified contingency. The Group assessed the impact of the above amendments and concluded that these amendments represented a settlement of the non-controlling interests given characteristics of the non-controlling interests has been completely changed to loan liabilities. At the time of the settlement, the carrying amount of the non-controlling interests with the amount of RMB1,164 million was derecognized, and the new loan liabilities was recorded at fair value of RMB1,193 million with the difference recorded against additional paid-in-capital. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB1,096 million and RMB1,099 million respectively.

In the September 2019, Jiangxi Jinko, together with government background funds, established Jinko Yiwu. Cash capital injections with an aggregate amount of RMB765 million had been made by the non-controlling shareholders through December 31, 2020. The Group controls and consolidates such entity in its financial statements. In August 2020, Jiangxi Jinko entered into a supplementary investment agreement with the government background funds, pursuant to which the government background funds will no longer participate in any business decision of Jinko Yiwu and enjoys a fixed annual return of 6% on its capital injection. Additionally, Jiangxi Jinko shall repurchase all the 45% equity interests (the non-controlling interest) held by the government background funds upon the fifth anniversary of the capital injection date with a repurchase price equivalent to the capital injection made by the government background funds. Considering the government investment shall be repaid on a fixed date and for fixed amounts, redemption of the government investment is considered to be mandatory and certain to occur and is not upon the occurrence of a conditional event nor depends upon the satisfaction of a specified contingency. The Group assessed the impact of the above amendments and concluded that these amendments represented a settlement of the non-controlling interests given characteristics of the non-controlling interests has been completely changed to loan liabilities. At the time of the settlement, the carrying amount of the non-controlling interests with the amount of RMB779 million was derecognized, and the new loan liabilities was recorded at fair value of RMB818 million, with the difference recorded against additional paid-in-capital. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB757 million and RMB754 million, respectively.

In the December 2019, Jiangxi Jinko, together with a government background fund, established Jinko Chuzhou. Cash capital injections with an aggregate amount of RMB1.1 billion had been made by the non-controlling shareholder through December 31, 2022. The Group controls and consolidates such entity in its financial statements. In August 2020, Jiangxi Jinko entered into a supplementary investment agreement with the government background fund, pursuant to which the government background fund will no longer participate in any business decision of Jinko Chuzhou and enjoys a fixed annual return of 4.35% on its capital injection. Additionally, Jiangxi Jinko shall repurchase all the 45% equity interests (the non-controlling interest) held by the government background fund upon the sixth anniversary of the capital injection date with a repurchase price equivalent to the capital injection made by the government background fund. Considering the government investment shall be repaid on a fixed date and for fixed amounts, redemption of the government investment is considered to be mandatory and certain to occur and is not upon the occurrence of a conditional event nor depends upon the satisfaction of a specified contingency. The Group assessed the impact of the above amendments and concluded that these amendments represented a settlement of the non-controlling interests given characteristics of the non-controlling interests has been completely changed to loan liabilities. At the time of the settlement, the carrying amount of the non-controlling interests with the amount of RMB859 million was derecognized, and the new loan liabilities was recorded at fair value of RMB846 million, with the difference recorded against additional paid-in-capital. In July and September 2021, Jinko Chuzhou received two 5-year loans with the amount of RMB150 million and RMB100 million from the government background fund which both bear a fixed annual return of 4.35%. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB1,025 million and RMB701 million, respectively.

In September and October 2021, Rui Xu entered into two 5-year loan agreements with a government background company with the principle amount of RMB20 million and RMB20 million and the interest rate of 5.05% and 5.05%, respectively. As of December 31, 2022, the total outstanding balances amounted to RMB40 million.

In April 2020, Jiangxi Jinko, together with a government background fund, established Jinko ShangRao. The Group controls and consolidates such entity in its financial statements. Pursuant to the investment agreement entered by Jiangxi Jinko and the government background fund, the government background fund will provide its investment into Shangrao Jinko of RMB4.5 billion with the interest rate stipulated by bank for the corresponding period. Jiangxi Jinko shall repurchase all the 45% equity interests (the non-controlling interest) held by the government background fund upon the sixth anniversary of the date of the investment agreement with a repurchase price equivalent to the capital injection made by the government background funds. Considering the government investment shall be repaid on a fixed date and for fixed amounts, redemption of the government investment is considered to be mandatory and certain to occur and is not upon the occurrence of a conditional event nor depends upon the satisfaction of a specified contingency. Therefore, these government investments were accounted as loan liabilities.

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In January 2021, Jinko Shangrao received a 5-year loan with the amount of RMB98 million from the government background fund which bears a fixed annual return of 4.9%. In June 2021, to further support the development of Jinko Shangrao, the government background fund entered into agreement with Jiangxi Jinko to waive interests associated with the government loans during the period from January 1 to December 31, 2021. Considering the cash flow effect on a present value basis is less than 10 percent, the interest waiving is regarded as a modification of the government loan, and therefore, established a new effective interest based on the carrying value of the government loan and the revised cash flows since the modification date on June 25, 2021. No gain or loss was recorded in relation to the modification in 2021. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB2,017 million and RMB2,059 million, respectively.

In July 2020, the Group entered into a 2-year loan agreement with Ping An International Financial Leasing Co., Ltd. for a principle amount of RMB49,263 million which was repayable from July 2020 to July 2022. The borrowing was guaranteed by Jiangxi Jinko. The loan was repaid in July 2022.

In July 2021, Haining Jinko entered into a 5-year loan agreement with a government background company with the principle amount of RMB690 million and interest rate of LPR plus 10%. The loan will be repaid upon the fifth anniversary of the borrowing date. The borrowing was guaranteed by Jiangxi Jinko and Zhejiang Jinko. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB690 million and RMB591 million, respectively.

In October 2021, Anhui Jinko entered into a 6-year loan agreement with a government background company with the principle amount of RMB455 million and interest rate of 5.58%. The loan will be repaid upon the sixth anniversary of the borrowing date. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB434 million and RMB465 million, respectively.

In October and December 2021, Yushan Jinko entered into a 6-year loan agreement with a government background company with the principle amount of RMB200 million and RMB100 million and interest rate of 4.90% and 4.90%, respectively. These loans will be repaid upon the sixth anniversary of the borrowing date. As of December 31, 2021 and 2022, the total outstanding balances amounted to RMB287 million and RMB278 million, respectively. In January 2022, Yushan Jinko entered into a 6-year loan agreement with a government background company with the principle amount of RMB100 million interest rate of 4.90%. These loans will be repaid upon the sixth anniversary of the borrowing date. As of December 31, 2022, the total outstanding balances amounted to RMB100 million.

In 2022, Anhui Jinko entered into three separate 6-year loan agreements with a government background company with the principle amount of RMB83 million, RMB66 million and RMB66 million with the interest rate of 5.58%, 5.58% and 5.57%, respectively. These loans will be repaid upon the sixth anniversary of the borrowing date. As of December 31, 2022, the total outstanding balances amounted to RMB215 million.

In July 2022, Jinko Feidong entered into a 5-year loan agreement with a government background company with the principle amount of RMB205 million and interest rate of 4.75%. The loan will be repaid upon the fifth anniversary of the borrowing date. As of December 31, 2022, the total outstanding balances amounted to RMB208 million. In July 2022, Jinko Leshan entered into a 4-year loan agreement with a government background company with the principle amount of RMB150 million and interest rate of 6%. The loan will be repaid upon the fifth anniversary of the borrowing date. As of December 31, 2022, the total outstanding balances amounted to RMB51 million.

In August 2022, Haining Jinko entered into a 5-year loan agreement with a government background company with the principle amount of RMB1,000 million and interest rate of 5.06%. The loan will be repaid upon the fifth anniversary of the borrowing date. As of December 31, 2022, the total outstanding balances amounted to RMB1,006 million.

19. LEASES

The Group's operating lease primarily represent offices and overseas manufacturing facilities and warehouses. Most of the operating leases are for terms ranging from 3 to 20 years, although terms and conditions can vary from lease to lease. The Group has assessed the specific terms and conditions of each operating lease to determine the amount of the lease payments and the length of the lease term, which includes the minimum period over which lease payments are required plus any renewal options that are both within the Group's control to exercise and reasonably certain of being exercised upon lease commencement. The Company assesses all relevant factors to determine if sufficient incentives exist as of lease commencement to conclude whether or not renewal is reasonably certain. There are no material residual value guarantees provided by the Company nor any restrictions or covenants imposed by the operating leases to which the Company is a party. In determining the lease liability, the Group utilizes its incremental borrowing rate for debt instruments with terms approximating the term for its operating leases to discount the future lease payments over the lease term to present value. The Company does not incur variable lease payments for its operating leases.

The Group's finance leases primarily represent machinery and equipment utilized in the Group's production facilities. All of the Group's finance leases meet one or more of the criteria as: a) the lease transfers ownership of the underlying asset to the Group by the end of the lease term; b) the lease grants the Group an option to purchase the underlying asset that the lessee is reasonably certain to exercise; c) the lease term is for the major part of the remaining economic life of the underlying asset; d) the present value of the sum of the lease payments and any residual value guaranteed by the Group that is not already reflected in the lease payments equals or exceeds substantially all of the fair value of the underlying asset; e) the underlying asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term. ROU of capital lease is recorded at the aggregate of future minimum lease payments and estimated residual value of the leased equipment. In determining the lease liability, the Group utilizes its incremental borrowing rate for debt instruments with terms approximating the term for its capital leases to discount the future lease payments over the lease term to present value.

The balances for the operating and finance leases where the Group is the lessee are presented as follows (RMB in thousands):

	2021	2022
	December 31	December 31
	RMB	RMB
Operating leases:		
Operating lease liabilities - current	62,515	65,489
Operating lease liabilities - non-current	385,420	339,885
Total operating lease liabilities	447,935	405,374
Operating lease right-of-use assets, net	438,271	396,966
Financing leases:		
Financing lease liabilities - current	194,939	168,381
Financing lease liabilities - non-current	236,374	69,881
Total financing lease liabilities	431,313	238,262
Financing lease right-of-use assets, net	628,592	558,407

(a) The components of lease expenses were as follows (RMB in thousands):

	For the years ended December 31,	
	2021	2022
	RMB	RMB
Lease cost:		
Amortization of right-of-use assets	135,791	129,869
Interest of lease liabilities	51,575	36,553
Expenses for short-term lease within 12 months	3,052	9,154
Total lease cost	190,418	175,576

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(b) Supplemental cash flow information related to leases was as follows (RMB in thousands):

	For the years ended December 31,	
	2021	2022
	RMB	RMB
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows for operating leases	76,400	72,906
Operating cash outflows for finance leases	25,974	19,926
Financing cash outflows for finance leases	286,292	216,722
Total cash paid for amounts included in the measurement of lease liabilities:	388,666	309,554
Lease obligation accrued in exchange for right-of-use assets:		
Operating lease liabilities	185,472	3,476
Finance lease liabilities	132,188	—
Total lease obligation accrued in exchange for right-of-use assets:	317,660	3,476

(c) Supplemental balance sheet information related to leases was as follows (RMB in thousands):

Operating leases:

	As of December 31,	
	2021	2022
Weighted-average remaining lease term	7.35 years	6.21 years
Weighted-average discount rate	6.47%	6.46%

Financing leases:

	As of December 31,	
	2021	2022
Weighted-average remaining lease term	1.94 years	0.94 years
Weighted-average discount rate	5.65%	5.55%

(d) Maturities of lease liabilities were as follows (RMB in thousands):

Operating leases:

	Year ending December 31,	RMB
Year ended December 31,		
2023		85,637
2024		84,973
2025		75,863
Thereafter		206,541
Total undiscounted lease payments		453,014
Less: imputed interest		47,640
Total lease liabilities		405,374

Financing leases:

Year ending December 31,	RMB
Year ended December 31,	
2023	236,657
2024	34,252
Total undiscounted lease payments	270,909
Less: imputed interest	32,647
Total lease liabilities	238,262

20. EARNINGS PER SHARE

Basic earnings per share and diluted earnings per share have been calculated as follows (RMB in thousands, except for share and per share data):

	For the years ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Numerator:			
Net income	335,255	955,572	1,565,139
Less: Net income attributable to non-controlling interests	104,870	234,554	944,633
Net income attributable to JinkoSolar's ordinary shareholders	230,385	721,018	620,506
Dilutive effects of convertible senior notes	—	(308,339)	—
Dilutive effects of call option	(462,752)	—	—
Numerator for diluted income/(loss) per share	(232,367)	412,679	620,506
Denominator:			
Denominator for basic earnings per share - weighted average number of ordinary shares outstanding	178,938,853	190,672,869	198,004,260
Dilutive effects of share options	—	540,620	2,404,234
Dilutive effects of convertible notes	—	14,506,283	—
Dilutive effects of call option	(7,500,000)	—	—
Denominator for diluted calculation - weighted average number of ordinary shares outstanding	171,438,853	205,719,772	200,408,494
Basic earnings per share attributable to JinkoSolar's ordinary shareholders	1.29	3.78	3.13
Diluted earnings/(loss) per share attributable to JinkoSolar's ordinary shareholders	(1.36)	2.01	3.10

For the years ended December 31, 2020 and 2022, convertible senior notes convertible into 17,708,332 and 14,427,088 shares were not included in the computation of diluted EPS because of their anti-dilutive effect, respectively.

For the years ended December 31, 2020, because of the dilutive impact, potential shares underlying the call option arrangement (Note 22) were removed from weighted average number of ordinary shares outstanding since its issuance date, and changes in income of the assumed exercise of call option were also recorded as the adjustment to the consolidated net income to arrive at the diluted net income available to the Company's ordinary shareholders.

21. EMPLOYEE BENEFITS

According to the guidance promulgated by the central government, companies (and employees) are required to contribute, in specified portions, to the social insurance funds (including medical care insurance, work injury insurance, unemployment insurance, maternity insurance and pension benefits) as well as the housing funds (collectively, "employee welfare funds") on a monthly basis for all of the employees based on such employees' actual salaries or the applicable capped salary base, whichever is lower. An employee is entitled to request its employer to make the required portion of contributions in the statutory amounts to the employee welfare funds.

In line with local customary practices, the Company has made contributions to the social insurance funds which met the requirement of the local minimum wage standard, instead of its employees' actual salaries as required by the above described guidance, and has not made full contribution to the housing funds.

Based on the Company's observation of local practices and consultation with relevant government authorities, the Company believes its practice has been consistent with the common practice adopted by businesses in Shangrao and Haining, where the Company's main subsidiaries operate.

However, the Company believes it is probable that it will be required to make additional contributions to the employee welfare funds if (i) the government authorities were to strictly enforce the statutory contribution requirements, or (ii) the employees were to request the Company to make full contributions to their employee welfare funds (such request, if made, would most likely be supported by the labor arbitration center or the labor administrative bureau). Therefore, the Company recognizes the difference between the amount of its actual contributions and the statutory contribution requirements under the guidance promulgated by the central government as a liability for employee welfare benefits. The unpaid balance of accrued liability accrued for the welfare benefits were RMB741 million and RMB1,071 million as of December 31, 2021 and December 31, 2022, respectively.

On October 28, 2010, the Standing Committee of the National People's Congress issued and adopted the Social Insurance Law (the "Social Insurance Law"), which became effective on July 1, 2011. The Social Security Law imposes certain fines for the aggregated amount of any outstanding contributions if such contributions are not made within a prescribed time period. In light of this requirement, the Company had accrued a penalty on the basis of a daily rate of 0.05% of the outstanding contributions as provided under the Social Insurance Law prior to 2014. The unpaid balance of penalty accrued for employee welfare benefits were RMB12 million and RMB26 million as of December 31, 2012 and 2013, respectively.

On September 26, 2013, the Ministry of Human Resources and Social Security of the People's Republic of China announced "Regulations on the Declaration and Payment of Social Welfare" ("New Social Security Regulation"), which took effect on November 1, 2013. The New Social Security Regulation clarifies that the local social security authority should issue a notification to the employers who fail to make appropriate contribution of social security and a late-payment penalty charge will only be imposed to employers who fail to pay the outstanding contribution within five days upon the receipt of the notification. However, there were different interpretations of the New Social Security Regulation as to applicability of the penalty charge by different local authorities in different cities and provinces in late 2013, therefore, the Company performed investigation and legal assessment as well as communicating with relevant local authorities. Legal assessment was completed in late 2014. In the opinion of the management, the probability that the Company would be required to pay late-payment penalty in connection with the unpaid contribution is remote, given that the Company has received certificates from local social security authorities which confirmed that the Company was in compliance with the local social insurance regulations as of December 31, 2014 and that local social security authorities have not issued any notification for payment of outstanding contribution to the Company. Accordingly, the Company did not accrue for late-payment penalty since then.

22. CONVERTIBLE SENIOR NOTES AND CALL OPTIONS

2024 Convertible Notes

The Company issued USD85 million of Convertible Senior Notes on May 17, 2019, which will mature on June 1, 2024 (the "2024 Notes"). The interest rate is 4.5% per annum payable semi-annually, in arrears.

Holders have the option to convert their 2024 Notes at any time prior to the close of business on the third business day immediately preceding the maturity date at a conversion rate of 52.0833 ADSs per USD1,000 principal amount of the Notes (equivalent to an initial conversion price of approximately USD19.20 per ADS).

The conversion rate is subject to change on anti-dilution and upon certain fundamental changes. Fundamental changes are defined as 1) any "person" or "group" beneficially owns (directly or indirectly) 50% or more of the total voting power of all outstanding classes of Company's shares or has the power to elect a majority of the members of the board of directors; 2) Company consolidates with, or merge with or into, another person or the Company sells, assigns, conveys, transfers, leases or otherwise disposes of all or substantially all of its assets, or any person consolidates with, or merges with or into, the Company; 3) Termination of trading of Company's ADSs; and 4) adoption of a plan relating to the Company's liquidation or dissolution.

The holders have the option to require the Company to repurchase the 2024 Notes, in whole or in part, in the event of a fundamental change for an amount equal to the 100% of the principal amount and any accrued and unpaid interest in the event of fundamental changes. Management assessed that the likelihood of fundamental change is remote.

The holders will have the right to require the Company to repurchase for cash all or any portion of their notes on June 1, 2021 at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to, but excluding, the repurchase date.

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While the 2024 Notes remain outstanding, the Company or its subsidiaries should not create or permit to subsist any security upon its property, assets or revenues (present or future) to secure any international investment securities or to secure any guarantee of or indemnity of any international investment securities unless the obligations under the Notes and the indenture (a) are secured equally and ratably therewith, or (b) have the benefit of such other security, guarantee, indemnity or other arrangement as shall be approved by holders of a majority in aggregate principal amount of the Notes then outstanding.

During the year of 2021, certain 2024 Notes with the principal amount of USD16 million were converted into 3,281,244 ordinary shares of the Company.

Accounting for 2024 Convertible Notes

The Company has RMB as its functional currency, and the 2024 Notes are denominated in USD. As a result, the conversion feature is dual indexed to the Company's stock as well as the RMB and USD exchange rate, and is considered an embedded derivative which needs to be bifurcated from the host instrument in accordance with ASC 815.

ASC 815-15-25 provides that if an entity has a hybrid financial instrument that would require bifurcation of embedded derivatives under ASC 815, the entity may irrevocably elect to initially and subsequently measure a hybrid financial instrument in its entirety at fair value with changes in fair value recognized in earnings. The fair value election can be made instrument by instrument and shall be supported by concurrent documentation or a preexisting documented policy for automatic election.

The Company elected to measure the 2024 Notes in their entirety at fair value. According to ASC 825-10-45-5, the Company measures the financial liability at fair value with qualifying changes in fair value recognized in net income. The Company also presents separately in other comprehensive income the portion of the total change in the fair value of the liability that results from a change in the instrument-specific credit risk.

Further, as the functional currency of the Company is RMB, the fair value of the 2024 Notes is translated into RMB at each balance sheet date with the difference being reported as exchange gain or loss, except for the exchange rate remeasurement of the component of the change in fair value of the liability resulting from the cumulative changes in instrument-specific credit risk which is presented in other comprehensive income. In addition, all issuance costs associated with the 2024 Notes offering has been expensed as incurred in accordance with ASC 825-10-25-3, which states that upfront costs and fees related to items for which the fair value option is elected shall be recognized in the consolidated statements of operations and comprehensive as incurred and not deferred.

As of December 31, 2021 and 2022, the estimated fair value of the 2024 Notes amounted to approximately RMB1,099 million and RMB1,071 million. The Company recorded a gain from foreign exchange remeasurement of RMB9 million and a loss from foreign exchange remeasurement of RMB60 million in net income for the year ended December 31, 2021 and 2022, respectively. The Company recorded a gain from change in fair value of 2024 Notes of RMB328 million and a loss from change in fair value of 2024 Notes of RMB12 million in net income for the years ended December 31, 2021 and 2022, respectively. The Company recorded gain from change in fair value of 2024 Notes of RMB56 million and RMB100 million in other comprehensive income for the year ended December 2021 and 2022, respectively. During the year of 2021, certain 2024 Notes with the principal amount of USD16 million were converted into 3,281,244 ordinary shares of the Company. Upon conversion of the 2024 Notes, accumulated gains due to changes in instrument-specific credit risk with amount of RMB14 million were reclassified from other comprehensive income to net income (Note 29).

Call Option

Concurrent with the issuance of the 2024 Notes, the Company used approximately USD30 million of the net proceeds from the offering to enter into zero-strike call option transactions ("Call option"), covering 1,875,000 ADSs, with the initial purchasers of the 2024 Notes ("Dealer"). The Call option is intended to facilitate privately negotiated transactions by which investors in the Notes are able to hedge their investment. The Call option expires on July 28, 2021 or when the Dealer request early settlement. The Company has the right to elect settlement method. If cash settlement applies, the Dealer will deliver the amount of cash to the Company calculated based on the number of shares determined on the commencement date and the volume-weighted average price of the Company shares on the settlement date. If physical settlement applies, the Company will receive the fixed number of ADSs determined at the commencement date of the transaction. In 2021, the Company elected cash settlement method and total cash received from the exercise of call options amounted to RMB621 million.

The economic substance of the Call option is the same as a traditional forward repurchase contract. Because the Call option permitted net cash settlement, it was classified as a derivative instrument measured initially and subsequently at fair value with changes in fair value recorded in earnings. The Company accounted for the Call option as a free-standing derivative asset on its consolidated balance sheet when the Call option was entered into in May 2019. The derivative asset was initially recorded at its fair value of US\$30 million on the commencement date which represented the amount of cash transferred to the Dealer. The derivative asset was subsequently recorded at fair value with the change in fair value through May 2019. The Company recorded a gain from change in fair value of the call option with the amount of RMB476 million and loss of RMB136 million, an exchange loss of the call option with the amount of RMB14 million and an exchange gain of RMB0.3 million for the year ended December 31, 2020 and 2021, respectively (Note 29).

23. ORDINARY SHARES

The Company's authorized share capital is USD10 comprising 500,000,000 ordinary shares with a par value of USD0.00002 each.

In January 2014, the Company closed an offering of 15,000,000 ordinary shares (3,750,000 ADSs) and received aggregated net proceeds of approximately USD126.3million, after deducting discounts and commissions but before offering expenses.

In February 2018, the Company closed an offering of 16,560,000 ordinary shares (4,140,000 ADSs), par value USD0.00002 per share, at USD18.15 per ADS (equivalent to USD4.54 per share). The net proceeds of the follow-on offering to the Company, after deducting underwriting commissions and fees and estimated offering expenses with the amount of USD4 million, was approximately USD71.1 million.

In February 2018, the Company also completed the private placement with Tanka International Limited, an exempted company incorporated in the Cayman Islands held by Mr. Xiande Li, chairman of the Company, and Mr. Kangping Chen, chief executive officer of the Company, for the issuance of 7,713,499 ordinary shares for USD35 million at USD4.54 per share.

In May 2019, the Company closed an offering of 18,687,500 ordinary shares (4,671,875 ADSs), par value USD0.00002 per share, at USD16.00 per ADS (equivalent to USD4.00 per share). The net proceeds of the follow-on offering to the Company, after deducting underwriting commissions and fees and estimated offering expenses with the amount of USD4 million, was approximately USD71 million (RMB489 million).

In December 2020, the Company completed to sell 5,976,272 ordinary shares (1,494,068 ADSs) through its at-the-market offering and was entitled to receive proceeds of USD98 million after deducting commissions and offering expense. All of the proceeds were received in January 2021.

For the year ended December 31, 2020, 305,660 outstanding ADSs (1,222,640 shares) were repurchased with a total consideration of RMB29 million, which is shown as treasury stock.

During the year of 2021, certain 2024 Notes with the principal amount of USD16 million were converted into 3,281,244 ordinary shares of the Company (Note 22).

As of December 31, 2021 and 2022, total of 736,460 ADSs (2,945,840 shares) were repurchased but have not been retired with a total consideration of RMB43 million which is shown as treasury stock.

As of December 31, 2021 and 2022, the Company's issued and outstanding shares were 190,824,913 and 201,189,189, respectively.

24. SUBSIDIARY'S OFFERING OF ITS EQUITY INTERESTS

In October 2020, Jiangxi Jinko, principal operating subsidiary of the Group, completed an RMB3.10 billion (approximately USD 461 million) equity financing. Immediately after the closing, third-party investors together with the Company's principal shareholders and senior management personnel, directly or through their investment arms, collectively owned approximately a 26.7% equity interest in Jiangxi Jinko and the Company owned 73.3% equity interest in Jiangxi Jinko.

Pursuant to the equity financing agreements, third-party investors have the option to require the Company's principal shareholders (Mr. Xiande Li, Mr. Kangping Chen and Mr. Xianhua Li) to repurchase their equity interests in Jiangxi Jinko upon the occurrence of certain events. Considering these rights of third-party investors solely against the Company's principal shareholders and did not change the Group's rights attached to the Jiangxi Jinko's ordinary shares, the equity financing in Jiangxi Jinko is not mandatorily nor contingently redeemable against Jiangxi Jinko or the Group, and therefore, the equity financing was classified as noncontrolling interest in the Company's consolidated financial statements.

Given the Group may not have been able to consummate the equity financing without the rights provided by the Company's principal shareholders, values of the rights provided by the Company's principal shareholders are deemed as shareholder contributions from the principal shareholders to the Company. Since the contributions from the Company's principal shareholders incurred directly attributable to Jiangxi Jinko's equity financing, the contributions were treated as issuance cost of the equity financing and was recorded as a reduction of noncontrolling interest with a credit of additional paid-in capital. Fair value of the rights provided by the Company's principal shareholders approximated RMB140 million.

On January 26, 2022, Jiangxi Jinko completed its initial public offering ("IPO") and started trading on the Shanghai Stock Exchange's Sci-Tech innovation board ("STAR Market"). The IPO raised net proceeds of approximately RMB9,723 million, of which, RMB6,419 million was recorded in the non-controlling interest and RMB3,304 million was recorded in the additional paid in capital. After the IPO, the Group owned approximately 58.62% of Jiangxi Jinko. Jiangxi Jinko's non-controlling interests' ownership of the subsidiary changed from 26.72% to 41.38% due to the IPO.

In April 2022, upon approval obtained from the board of directors of Jiangxi Jinko, Jiangxi Jinko declared dividends of RMB230 million for the year ended December 31, 2021, among with RMB95 million was distributed to the Company's non-controlling interest shareholders. Jiangxi Jinko paid the dividends in 2022.

25. SHARE BASED COMPENSATION

(a) Incentive plan of JinkoSolar Holding

The Company adopted a long-term incentive plan (the "2009 Plan") in July 2009 which was subsequently amended and restated. The 2009 plan provided for the issuance of options of 9,325,122 ordinary shares. The options have a contractual life of 7 years except for certain options granted to an employee in August 2009 that can be exercised until October 1, 2013. The share options will vest in 5 successive equal annual installments on the last day of each year from the grant date, provided that the personnel's service with the Company has not terminated prior to each such vesting date. For 953,200 options granted to one employee in August 2009, the share options vested in a series of 36 months, on the last day of each month, commencing from October 1, 2008.

The Company adopted a long-term incentive plan (the "2014 Plan") in August 2014. The 2014 Plan provides for the issuance of options of 12,796,745 ordinary shares. The options have a contractual life of 10 year. The share options will vest in 5 successive equal annual installments on the last day of each year from the grant date, provided that the personnel's service with the Company has not terminated prior to each such vesting date.

The Company adopted a long-term incentive plan (the "2021 Plan") in August 2021. The 2021 Plan provides for the issuance of restricted shares of 354,000 ordinary shares. The restricted shares have a contractual life of 5 year. The restricted shares will vest in 10 successive equal semi-annual installments on the first day of half-year anniversaries starting from the grant date, provided that the personnel's service with the Company has not terminated prior to each such vesting date.

The Company adopted a long-term incentive plan (the "2022 Plan") in February 2022. The 2022 Plan provides for the issuance of restricted shares of 16,684,600 ordinary shares. The restricted shares have a contractual life of 3 year. Fifty percent (50%) of the restricted shares were immediately vested at the grant date and the rest of the restricted shares will vest in 12 successive equal quarter installments on the first day of quarter anniversaries starting from the grant date, provided that the personnel's service with the Company has not terminated prior to each such vesting date.

(i) Share options

A summary of the share option activities under the Company's share-based compensation plan for the years ended December 31, 2020, 2021 and 2022 is as follows (RMB in thousands, except for share, exercise price and contractual term):

	Number of option outstanding	Weighted-average exercise price (USD/share)	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (RMB)
Balance as of December 31, 2019	4,555,288	3.34	4.73	73,354
Granted	—	—	—	—
Exercise	(3,750,540)	3.32	—	—
Forfeited	(88,000)	3.29	—	—
Balance as of December 31, 2020	716,748	3.46	4.25	58,836
Granted	—	—	—	—
Exercise	(105,200)	3.29	—	—
Forfeited	(264,012)	3.29	—	—
Balance as of December 31, 2021	347,536	3.65	3.84	17,373
Granted	—	—	—	—
Exercise	(175,536)	3.35	—	—
Balance as of December 31, 2022	172,000	3.96	2.69	8,305
Vested as of December 31, 2022	172,000	3.96	2.69	8,305
Vested and exercisable as of December 31, 2022	172,000	3.96	2.69	8,305

The aggregate intrinsic value is calculated as the difference between the market price of ordinary shares, USD10.22 (RMB71.18) per share as of December 31, 2022 and the exercise prices of the options.

Total intrinsic value of options exercised during the year ended December 31, 2020, 2021 and 2022 were RMB297 million, RMB6 million and RMB8 million, respectively.

Share-based compensation expenses related to the option awards granted to the employees amounted to RMB1 million, RMB0.5 million and nil for the years ended December 31, 2020, 2021 and 2022, respectively.

The total fair value of shares vested for the years ended December 31, 2020, 2021 and 2022 were RMB4 million, RMB2 million and RMB5 million respectively.

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For the year ended December 31, 2022, total cash received from the exercise of share options was RMB5 million.

(ii) Restricted shares

The fair value of each restricted share granted with service conditions is estimated based on the fair market value of the underlying ordinary shares of the Company on the date of grant.

The following table summarizes activities of the Company's restricted shares under the 2021 Plan and 2022 Plan:

	Number of restricted shares outstanding	Weighted average grant date fair value (RMB)
Unvested as of January 1, 2021	—	—
Granted	354,000	86.38
Vested	(35,400)	86.38
Unvested as of December 31, 2021	318,600	86.38
Granted	16,684,600	72.10
Vested	(10,188,740)	72.08
Unvested as of December 31, 2022	6,814,460	72.38

Share-based compensation expenses of nil, RMB9 million and RMB968 million related to restricted shares were recognized for the years ended December 31, 2020, 2021 and 2022, respectively

As of December 31, 2020, 2021 and 2022, there were nil, RMB20 million and RMB256 million of unrecognized compensation expenses related to restricted shares which is expected to be recognized over a weighted-average period of nil, 4.58 years and 2.28 years, respectively.

(b) Incentive plan of Jiangxi Jinko

In October 2022, Jiangxi Jinko adopted its 2022 Equity Incentive Plan (the "Jiangxi Jinko 2022 Plan"), which permits the grant of stock options of Jiangxi Jinko to its employees. Under the plan, a total of 40,187,375 ordinary shares of Jiangxi Jinko were initially reserved for issuance.

A summary of share option activities under the Jiangxi Jinko 2022 Plan for the years ended December 31, 2022 is as follows (RMB in thousands, except for share, exercise price and contractual term):

	Number of option outstanding	Weighted-average exercise price (RMB/share)	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (RMB)
Balance as of December 31, 2021	—	—	—	—
Granted	32,149,900	10.78	—	—
Exercise	—	—	—	—
Balance as of December 31, 2022	32,149,900	10.78	2.89	124,420
Vested and expected to vest as of December 31, 2022	32,149,900	10.78	2.89	124,420
Vested and exercisable as of December 31, 2022	32,149,900	10.78	2.89	124,420

Share-based compensation expenses related to the option awards granted to the employees under Jiangxi Jinko 2022 Plan was amounted to RMB 33 million for the year ended December 31, 2022.

The total share-based compensation expense of continuing operations for the year ended December 31, 2020, 2021 and 2022 was recorded in the respective items (RMB in thousands):

	For the years ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Costs of revenues	329	131	17,676
Selling expenses	462	131	7,101
General and administrative expenses	145	9,622	974,564
Research and development expenses	(13)	—	1,528
Total	923	9,884	1,000,869

26. RELATED PARTY TRANSACTIONS AND BALANCES

(a) Related party balances

Outstanding amounts due from/to related parties as of December 31, 2021 and 2022 were as follows (RMB in thousands):

	2021 December 31 RMB	2022 December 31 RMB
Accounts receivable from related parties:		
Accounts receivable from JinkoPower for sales of solar modules and others	29,417	139,713
Notes receivables from a related party:		
Notes receivables from JinkoPower	—	282,824
Advances to a related party:		
Advance to Xinte Silicon for inventory purchase	—	56,860
Prepayment and other receivables from related parties:		
Prepayments to JinkoPower for outsourcing services	11,990	5,664
Other receivables due from JinkoPower for disposal of solar power projects	—	12,953
Other receivables due from Sweihan PV Power Company P.S.J.C (“Sweihan PV”, which develops and operates solar power projects in Dubai) for technical services	—	1,075
Other receivables from JinkoPower for miscellaneous transactions	5,358	3,413
Subtotal	17,348	23,105
Other assets from related parties:		
Long-term receivables due from JinkoPower for disposal of solar power projects	—	14,603
Guarantee receivables due from JinkoPower	3,292	—
Long-term receivables due from Sweihan PV	—	37,760
Subtotal	3,292	52,363
Accounts payable due to a related party:		
Accounts payable due to Jinko-Tiansheng	15,863	—
Advances from a related party		
Advances from JinkoPower	—	3,829
Notes payables due to a related party		
Notes payables due to Xinte Silicon for inventory purchase	—	419,500
Other payables due to a related party:		
Other payables due to JinkoPower for payments on behalf of the Company	2,230	5,964

(1) Balances due to related parties are interest-free, not collateralized, and have no definitive repayment terms.

(2) On March 30, 2021, the Company signed an agreement to offset the debts and receivables between the Group and JinkoPower with the aggregate amount of RMB1 million.

(b) Related party transactions

Transactions related parties for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the years ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Revenue from sales of products and providing services to related parties			
Revenue from sales of products to Sweihan PV	51,202	—	—
Income of financing guarantees	14,688	6,364	—
Revenue from sales of products to JinkoPower	5,072	27,099	325,175
Income of project management provided to Sweihan PV	3,721	660	2,979
Rental services provided to JinkoPower	2,177	4,004	5,041
Service expenses and silicon procurement provided by related parties			
Processing fee of OEM service charged by Jiangsu Jinko-Tiansheng	27,485	5,310	—
Solar project management service provided by JinkoPower	9,443	8,753	7,133
Rental services provided by Jiangxi Desun	1,100	—	—
Electricity fee charged by JinkoPower	3,088	7,725	27,465
Other fees charged by JinkoPower	—	16	—
Silicon procurement from Xinte Silicon (Note 12)	—	—	824,785

- Financing guarantees

In connection with the Company's disposal of JinkoSolar Power downstream business in 2016, the Group entered into a master service agreement with JinkoPower under which the Group agreed to provide a guarantee for JinkoPower's financing obligations under its separate loan agreements. In the event that JinkoPower fails to perform its obligations under the loan agreements or otherwise defaults thereunder, the Company will become liable for JinkoPower's obligations under the loan agreements. The Company will charge JinkoPower service fees for the debt payment guarantee service according to the master service agreement.

Pursuant to the master service agreement, guarantee service fee is to be settled annually, and the management of the Company believes the guarantee fee charges are at market rates. The guarantee receivables are settled upon the receipt of guarantee fees from JinkoPower. The Company received RMB18 million, RMB21 million and nil guarantee fees from JinkoPower in 2020, 2021 and 2022, respectively.

In the year of 2022, the Group and JinkoPower entered into an agreement to cancel the above guarantee arrangement.

As of December 31, 2020, 2021 and 2022, the Company recorded the guarantee fee income receivable amounted to RMB107 million, RMB3 million and RMB3 million. The Company recorded a guarantee liability amounted to RMB57 million, RMB12 million and nil as of December 31, 2020, 2021 and 2022, respectively. The guarantee liability was amortized over the expected guarantee period from 1 to 16 years which relates to the life of the outstanding guaranteed bank loans in the subsequent reporting periods. Other income from JinkoPower for the guarantee fee amortized for the period during the year ended December 31, 2020, 2021 and 2022 amounted to RMB15 million, RMB6 million and RMB nil, respectively.

- Solar module transactions with JinkoPower

For the years ended December 31, 2020, 2021 and 2022, sales of solar module products to subsidiaries of JinkoPower amounted to RMB5 million, RMB27 million and RMB325 million, respectively. Payment term offered by the Group to JinkoPower is consistent with the Group's 3rd party sales arrangement. As of December 31, 2021 and 2022 outstanding receivables due from JinkoPower were RMB29 million and RMB423 million, respectively.

- Solar module transactions with Sweihan PV

For the years ended December 31, 2020, 2021 and 2022, sales of solar module products to Sweihan PV amounted to RMB51 million, nil and nil, respectively.

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- Rental services provided to JinkoPower

For the years ended December 31, 2020, 2021 and 2022, rental services provided to subsidiaries of JinkoPower amounted to RMB2 million, RMB4 million and RMB5 million, respectively.

- Transactions with Jinko-Tiansheng

Jinko-Tiansheng is an OEM service provider who provided PV module processing and assembling services to the Group. For the years ended December 31, 2020, 2021 and 2022, Jinko-Tiansheng charged the Group processing fee amounted to RMB27 million, RMB5 million and nil, respectively. The Group entered into a share purchase agreement to dispose all of its equity interest in Jinko-Tiansheng to Jinko-Tiansheng's other shareholders in November 2021. The carrying value of the Group's investment in Jinko-Tiansheng which met recognition criteria in ASC 360-10-45-9 was reclassified as a held for sale asset as of December 31, 2021. The disposition was consummated in 2022 with a gain of RMB12 million recognized (Note 5).

- Solar project management service provided by JinkoPower

In November 2017, the Company entered into an agreement with JinkoPower, which entrusted JinkoPower to exercise certain shareholders' rights (other than right of profit distribution, right of residual property distribution and right of disposition) in five operating entities of overseas power stations wholly-owned by the Company, enabling JinkoPower to monitor the construction and daily operations of these power stations. The Company retains ownership of these power stations and there exists no call or other rights of JinkoPower. The Company agrees to pay service fees calculated based on the actual costs incurred by JinkoPower during the power stations' construction period and a fixed amount fee during the operation period. The Company recorded service expenses incurred in the year of 2020, 2021 and 2022 amounted to RMB9 million, RMB9 million and RMB7 million as cost of project assets, respectively.

- Rental services provided by Jiangxi Desun

On January 1, 2008, Jiangxi Desun and the Group entered into an operating lease agreement pursuant to which Jiangxi Desun leased its buildings and land use rights to the Group for a ten-year period from January 1, 2008 to December 31, 2017. In 2018, the agreement was extended for another 10 years from January 1, 2018 to December 31, 2027. Jiangxi Desun charged the Group RMB1 million in rent for each of the years ended December 31, 2019 and 2020, respectively. The lease agreement was terminated in 2021 due to Jiangxi Desun's liquidation. No lease charges from Jiangxi Desun for the year ended December 31, 2021 and 2022.

- Electricity fee charged by JinkoPower

For the years ended December 31, 2020 and 2021 and 2022, electricity fee charged by subsidiaries of JinkoPower amounted to RMB3 million, RMB8 million and RMB27 million, respectively.

- Silicon procurement from Xinte Silicon

JinkoSolar jointly invest in Xinte Silicon in 2021 which was accounted for under the equity method (Note 12). JinkoSolar purchased polysilicon of nil and RMB825 million from Xinte Silicon during the years ended December 31, 2021 and 2022, respectively.

27. CERTAIN RISKS AND CONCENTRATION

(a) Concentrations of credit risk

Financial instruments that potentially subject the Group to significant concentrations of credit risk consist primarily of cash and cash equivalents, restricted cash, restricted short-term investments, accounts receivable, prepayments and other current assets. As of December 31, 2021 and 2022, substantially all of the Group's cash and cash equivalents, restricted cash and restricted short-term investments were held by major financial institutions located in the PRC.

The Group is also exposed to the credit and financial risks of its suppliers to which the Group made advances. The Group's financial condition and results of operations may be materially affected if the suppliers fail to meet their obligations of supplying silicon materials according to the contractually agreed schedules.

(b) Foreign currency risk

The Group has contracts for the sales of products, purchases of materials and equipment which are denominated in foreign currencies, including US Dollars, and Euros. For the year ended December 31, 2022, 58.09% of the Group's revenues are dominated in foreign currencies, including US Dollars, Euros, Yen, Australian Dollars, Canadian Dollars, South African Rand and Pounds. Renminbi, the functional currency of the Group, is not freely convertible into foreign currencies.

(c) Major customers

The Group performs ongoing credit evaluations of its customers' financial condition whenever deemed necessary and generally does not require collateral. The Group maintains an allowance for credit losses based upon the expected collectability of all accounts receivable, which takes into consideration an analysis of historical bad debts, specific customer creditworthiness and current economic trends.

There was no accounts receivable represented by customers with balances over 10% of accounts receivables as of December 31, 2020 2021 and 2022, respectively. In 2020, 2021 and 2022, our largest customer accounted for 5.3%, 4.6% and 4.6% of the Group' total revenue, respectively.

(d) Major suppliers

In 2020, 2021 and 2022, the Group's five largest group suppliers accounted for 70.0%, 78.7% and 77.4%, respectively, of its total silicon purchases by value. In 2020, four of its group suppliers individually accounted for more than 10%, and its largest group supplier accounted for 19.6% of its total silicon purchases by value. In 2021, three of its group suppliers individually accounted for more than 10%, and its largest group supplier accounted for 28.5% of its total silicon purchases by value. In 2022, two of its group suppliers individually accounted for more than 10%, and its largest group supplier accounted for 34.0% of its total silicon purchases by value. A "group supplier" refers to an aggregation of the Group's suppliers that are within the same corporate group.

(e) Interest rate

The Group's main interest rate exposure relates to long-term borrowings. Any increase in interest rates would increase the Group's finance expenses relating to our variable rate indebtedness and increase the costs of issuing new debt or refinancing its existing indebtedness.

28. COMMITMENTS AND CONTINGENCIES**(a) Capital commitments**

The Group entered into several purchase agreements and supplementary agreements with certain suppliers to establish manufactory plants and acquire machineries to be used in the manufacturing of its products. The Group's total future payments under these purchase agreements amounted to RMB13,591 million as of December 31, 2022.

	Year ending December 31,	RMB
2023		6,357,915
2024		5,786,393
Thereafter		1,446,598
Total		<u>13,590,906</u>

(b) Contingencies

In November 2018, one of the Group's customers in Singapore (the "Singapore Customer") filed two Notices of Arbitration ("NoAs") in two arbitrations with Arbitration No. ARB374/18/PPD ("ARB 374") and Arbitration No. ARB375/18/PPD ("ARB 375"), respectively, against Jinko Solar Import & Export Co., Ltd. ("Jinko IE") at Singapore International Arbitration Centre. These NoAs were subsequently amended by the Singapore Customer, and Jinko IE received the amended Notices of Arbitration from the Singapore Customer on December 20, 2018. The Singapore Customer claimed respectively in ARB 374 and ARB 375 that the photovoltaic solar modules supplied by Jinko IE to the Singapore Customer under the purchase agreement dated December 25, 2012 ("2012 Contract") and January 28, 2013 ("2013 Contract") were defective. The Singapore Customer sought, inter alia, orders that Jinko IE replace the modules and/or that Jinko IE compensate the Singapore Customer for any and all losses sustained by the Singapore Customer as a result of the supply of allegedly defective modules. In January 2019, Jinko IE issued its responses to the NoAs in ARB 374 and ARB 375, disputing the Singapore Customer's reliance on the arbitration clauses in the 2012 Contract and the 2013 Contract, denying all claims raised by the Singapore Customer, and disputing that the Singapore Customer was entitled to the reliefs claimed in the arbitrations. Arbitration tribunals in both ARB 374 and ARB 375 were constituted on September 5, 2019, which directed on January 14, 2020 that (i) the Singapore Customer shall submit its statement of claim in both ARB 374 and ARB 375 and Jinko IE shall submit its statement of defense no later than five months after Singapore Customer's submission of statement of claim; and (ii) the hearing of the arbitrations shall be bifurcated with the liability issue to be first determined by the tribunals, and then depending on the outcome of the liability issue, the issue of remedies/damages payable to be determined in the subsequent proceedings in such manner as may be directed by the tribunals. On August 7, 2020, the Singapore Customer submitted its statement of claim in both ARB 374 and ARB 375. In the statement of claim, the Singapore Customer maintained its claim that the photovoltaic solar modules supplied by Jinko IE to them under the 2012 Contract and the 2013 Contract were defective, and that Jinko IE should be liable in respect of all the modules supplied under the 2012 Contract and the 2013 Contract. On December 16, 2020, following Jinko IE's request, the tribunals in both ARB 374 and ARB 375 directed that Jinko IE's statement of defense should be submitted by February 11, 2021. On February 11, 2021, Jinko IE submitted its statement of defense and relevant evidence. In the statement of defense, Jinko IE (i) requested the tribunal to declare that it lacks jurisdiction over the dispute; and (ii) denied all the Singapore Customer claims and requested the same be dismissed by the tribunal. On February 22, 2021, upon mutual agreement by Jinko IE and the Singapore Customer, the tribunal directed that ARB 374 and ARB 375 should be consolidated. On August 24, 2021, the tribunal decided Jinko IE and the Singapore Customer's respective Redfern Schedules. On October 5, 2021, Jinko IE and the Singapore Customer exchanged documents pursuant to the tribunal's decision on the Redfern Schedules. On February 19, 2022, the Singapore Customer filed its Reply Memorial (accompanied by all evidence, including factual exhibits, written witness statements, expert reports and legal authorities relied upon). On July 17, 2022, Jinko IE submitted its Rejoinder Memorial with all evidence correspondingly in reply to Reply Memorial. From October 10 to 21, 2022, the hearing for liability issue was held in Singapore, during which the tribunal heard the parties' oral opening statements, evidence from the parties' factual and expert witnesses, and oral closing statements. According to the tribunal's directions, the parties submitted Post-hearing Briefs on January 20, 2023 and the Reply Post-hearing Briefs on March 3, 2023. Furthermore, in the event that Jinko IE is found liable on the liability issue, the issue of remedies or damages to be paid will be determined in a subsequent phase in the proceedings, with a separate procedural timeline for the provision of evidence (including expert evidence) and memorials on the appropriate remedy to be awarded by the tribunal. Based on the limited information currently available to the Company, it is difficult to provide an in-depth assessment of the Singapore Customer's claims. The Company believes that Jinko IE has reasonable grounds to challenge the Singapore Customer's claims in the arbitrations on jurisdiction and merits and will vigorously defend against the claims made by the Singapore Customer. Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and the Company is unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

In March 2019, Hanwha Q CELLS (defined below) filed patent infringement lawsuits against the company and a number of the company's subsidiaries.

(i) Patent infringement lawsuits in the United States:

On March 4, 2019, Hanwha Q CELLS USA Inc. and Hanwha Solutions Corporation (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation (registration no. 110111-0360935) during the course of the proceedings because of restructuring undertaken by its affiliate(s) in relation to ownership of the patent in suit) (collectively, "Plaintiffs A") filed suit against JinkoSolar Holding Co., Ltd and several of its subsidiary entities, i.e. JinkoSolar (U.S.) Inc, Jinko Solar (U.S.) Industries Inc, Jinko Solar Co., Ltd, Zhejiang Jinko Solar Co., Ltd and Jinko Solar Technology Sdn.Bhd (collectively "Respondents") at the U.S. International Trade Commission ("ITC"). In the complaint, it was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 purportedly owned by Hanwha Q CELLS & Advanced Materials Corporation and Plaintiffs A requested a permanent limited exclusion order and a cease and desist order be issued against the Respondents' allegedly infringing products. On March 5, 2019, Hanwha Q CELLS & Advanced Materials Corporation filed a suit against the Respondents before the U.S. District Court for the District of Delaware ("District Court") alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by the Respondents infringed U.S. Patent No. 9,893,215 allegedly owned by Hanwha Q CELLS & Advanced Materials Corporation and sought reliefs including compensation for alleged infringement activities, enhanced damages and reasonable attorney fees. On April 9, 2019, the ITC published the Notice of Institution on Federal Register. On April 15, 2019, the District Court granted our motion to stay the court litigation pending final resolution of the ITC. On May 3, 2019, the Respondents submitted their response to the complaint of Plaintiffs A to the ITC requesting ITC among other things to deny all relief requested by Plaintiffs A. On September 13, 2019, the Respondents filed motion for summary determination of non-infringement with ITC. On April 10, 2020, the administrative law judge issued the initial determination granting the Respondents' motion for summary determination of non-infringement. On June 3, 2020, the ITC determined to affirm the initial determination issued by the administrative law judge granting respondents' motions for summary determination of non-infringement and terminate the investigation (the "Final Determination"). On July 31, 2020, Plaintiffs A filed its petition to review with the United States Court of Appeals for the Federal Circuit against the ITC's Final Determination. On August 27, 2020, the Respondents filed the motion to intervene of such appeal. Plaintiffs A filed its opening appeal brief in November 2020. The Respondents filed the principal brief in February 2021. On July 12, 2021, the United States Court of Appeals for the Federal Circuit affirmed the ITC's findings that Respondents' products do not infringe U.S. Patent No. 9,893,215. On June 27, 2022, the District Court entered a joint motion to dismiss the said court litigation.

(ii) Patent infringement lawsuits in Germany:

On March 4, 2019, Hanwha Q CELLS GmbH ("Plaintiff B"), filed a patent infringement claim against JinkoSolar GmbH before the Düsseldorf Regional Court in Germany alleging that certain photovoltaic solar cells and modules containing these solar cells supplied by JinkoSolar GmbH infringed EP2 220 689 purportedly owned by Plaintiff B. On April 10, 2019, JinkoSolar GmbH filed the first brief with the court stating JinkoSolar GmbH would defend itself against the complaint. On September 9, 2019, JinkoSolar GmbH filed its statement of defense with the court (the "Statement of Defense"), requesting that the claim be dismissed and that Plaintiff B to bear the costs of the legal dispute. On March 3, 2020, Plaintiff B filed its reply to the Statement of Defense with the court. On April 20, 2020, JinkoSolar GmbH filed its rejoinder with the court commenting on Plaintiff B's reply on March 3, 2020. On May 5, 2020, the oral hearing regarding the validity of the EP2 220 689, Plaintiff B's entitlement to sue, and the infringement was held before the Düsseldorf Regional Court. On June 16, 2020, the Düsseldorf Regional Court sided with Plaintiff B and ordered that the third party cell technology contained in certain modules delivered by JinkoSolar GmbH infringes Plaintiff B's patent (the "Judgment"). JinkoSolar GmbH filed its notice of appeal on July 14, 2020. On October 16, 2020, JinkoSolar GmbH submitted grounds of appeal to the Düsseldorf Higher Regional Court. On March 1, 2021, JinkoSolar GmbH submitted appeal joinder to the Düsseldorf Higher Regional Court. On September 28, 2020, Plaintiff B has submitted the request for penalty to Düsseldorf Regional Court, claiming that JinkoSolar GmbH violated the Judgment by continuing to promote infringing products and requesting imposition of penalty for such violation. Though not specified in Plaintiff B's request, in general we do not expect the amount of such penalty to exceed €250,000. On November 30, 2020, JinkoSolar GmbH submitted its response to Plaintiff B's request for penalty. On April 6, 2021, JinkoSolar GmbH submitted its second response to Plaintiff B's request for penalty. On August 23, 2021, Düsseldorf Regional Court dismissed Plaintiff B's request for penalty. The oral proceedings at the Düsseldorf Higher Regional Court was held on March 30, 2023. Following this hearing, the Düsseldorf Higher Regional Court decided on 20 April 2023 that evidence should be taken by firstly hearing a witness and subsequently obtaining a written technical opinion from a court appointed expert. The outcome of the case is difficult to assess and predict. However, even if JinkoSolar GmbH failed and was ordered to stop distributing module cells using the third-party cell technology, it would not be subject to additional damages as it has already stopped delivering such module cells. Furthermore, the request for information and damages was withdrawn in the first instance and cannot be reinstalled in the second instance at the court of appeals level. Therefore, there is no danger for payment of damages. As of the date of the issuance of the financial statements, this case is still ongoing and based on the information currently available, the company does not believe that it is probable that JinkoSolar GmbH has incurred a loss and the Company is unable to estimate an amount of reasonably possible loss or range of loss.

(iii) Patent infringement lawsuits in Australia:

On March 12, 2019, Hanwha Solutions Corporation (registration no. 110111-0360935) (The plaintiff has been changed from Hanwha Q CELLS & Advanced Materials Corporation to Hanwha Solutions Corporation during the course of the proceedings because of restructuring undertaken by its affiliate(s) in relation to ownership of the patent in suit) and Hanwha Q CELLS Australia Pty Ltd (“Plaintiffs C”, together with Plaintiffs A and Plaintiff B, “Hanwha Q CELLS Plaintiffs”) filed suit at Federal Court of Australia (“FCA”) against Jinko Solar Australia Holdings Co. Pty Ltd (“Jinko AUS”). It was alleged that certain photovoltaic solar cells and modules containing these solar cells supplied by Jinko AUS infringed Australian Patent No. 2008323025 purportedly owned by Plaintiffs C. The relief sought by Plaintiffs C includes a declaration of infringement, injunctions restraining future acts of commercial exploitation by way of importing, offering to supply and supplying the relevant products; ancillary relief by way of delivery up for destruction of allegedly infringing product and pecuniary remedies by way of damages (including additional damages) or, at Hanwha’s election, an account of profits; and declarations and injunctions based on the misleading or deceptive conduct claim. It is expected that issues relating to pecuniary relief and their quantum will be separated and deferred for determination after the liability hearing. The FCA served Jinko AUS as the Respondent and the first case management hearing was held on April 12, 2019. The FCA heard the application, and made orders for the conduct of the proceeding at the first case management hearing, following which Jinko AUS submitted its defense and cross-claim to Plaintiffs C’s statement of claim on July 22, 2019. Shortly before the second case management hearing which was held on October 2, 2019, Plaintiffs C requested an amendment to Australian Patent No. 2008323025 (“Amendment Application”) on the stated basis of overcoming prior art relevant to validity and it also appeared that one of the amendments sought by Plaintiffs C was with a view to improving its position in relation to Jinko AUS’s defense to infringement. Plaintiffs C’s Amendment Application was opposed by Jinko AUS and the other Australian respondents and FCA directed Plaintiffs C to give discovery and produce documents in respect to the Amendment Application. The third case management hearing was held on December 13, 2019, after which Jinko AUS submitted particulars of opposition to the Amendment Application and requested for further and better discovery in respect to the Amendment Application. As a result, Hanwha subsequently dropped the amendment in relation to Jinko AUS’s defense to infringement and opposition to the remaining Amendment Application continued for some time but was ultimately not pursued by Jinko AUS and the other Australian respondents. The FCA granted Plaintiffs C’s Amendment Application on August 28, 2020. Following the order directed by FCA at the case management hearing held on November 16, 2020, Plaintiffs C’s has filed its infringement statement at FCA on December 17, 2020 and refers to certain testing undertaken in South Korea in 2018 prior to the commencement of the proceeding, and Jinko AUS has filed a precise non-infringement statement identifying the reasons why certain photovoltaic solar cells and modules supplied by Jinko AUS do not infringe Australian Patent No. 2008323025 on March 9, 2021. Since then, the parties have taken the various procedural steps required by the court’s directions in relation to infringement and validity claims and defences. The final was held from September 23 to 30 and October 10 to 14, 2022. As of the date of the issuance of the financial statements, the Judge has reserved its decision and based on the information currently available, there presently remains no indication that it is probable the court will award any liability for infringement against Jinko AUS and the Company is unable to estimate an amount of reasonably possible loss or range of loss.

The Company believes that Hanwha Q CELLS Plaintiffs’ claims in all the above-mentioned cases are lacking legal merit, and will vigorously defend against the claims made by them. The Group is considering all legal avenues including challenging the validity of U.S. Patent No. 9,893,215 (“the ‘215 Patent”), EP 2 220 689 and Australian Patent No. 2008323025 (collectively, the “Asserted Patents”), and demonstrating the Company’s non-infringement of the Asserted Patents. On June 3, 2019, the Company filed a petition for inter partes review (“IPR”) of the ‘215 Patent with the U.S. Patent and Trademark Appeal Board (“PTAB”). IPR is a trial proceeding conducted at the PTAB to review the patentability of one or more claims in a patent. On December 10, 2019, the PTAB instituted the IPR proceedings of the patentability of claims 12-14 of the ‘215 patent claims in view of prior art. On September 9, 2020, the Company attended the oral hearing of IPR of the ‘215 patent. On December 9, 2020, the PTAB issued the final decision on the Company’s petition for IPR, finding that all challenged claims 12-14 of the ‘215 patent are unpatentable. On February 8, 2021, the patent owner of ‘215 Patent, Hanwha Solutions Corporation, appealed to the United States Court of Appeals for the Federal Circuit against such final decision issued by the PTAB (“215 IPR Appeal”). On February 24, 2021, the Company has filed the certificate of interest to participate in 215 IPR Appeal. On May 28, 2021, Hanwha Solutions Corporation filed its opening appeal brief. On July 19, 2021, Hanwha Solutions Corporation filed a motion to remand the case to the United States Patent and Trademark Office. On October 4, 2021, the United States Court of Appeals for the Federal Circuit denied Hanwha Solutions Corporation’s motion to remand. On June 10, 2022, the United States Court of Appeals for the Federal Circuit affirmed the said final decision issued by PTAB that all challenged claims 12-14 of the ‘215 patent are unpatentable.

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On June 24, 2019, Jinko filed with the European Patent Office a Notice of Intervention in the opposition proceeding regarding the validity of the EP 2 220 689. On March 25 and March 26, 2021, the opposition oral hearing regarding the validity of the EP2 220 689 was held before the European Patent Office. During the hearing, the European Patent Office held that the EP2 220 689 was maintained in amended form. An additional hearing was held on September 28 and 29, 2022, during which the opposition division finally decided to uphold the patent with the limited claims and an amended version of the patent description. Currently, the European Patent Office has not yet issued its decision including the grounds in writing.

On May 7, 2021, one of the company's Spanish customers (the "Spanish Customer") submitted a Request for arbitration at International Chamber of Commerce (Case No. 26251/JPA) against Jiangxi Jinko in connection with dispute arising out of a PV Module Sales Contract entered into in August, 2020 ("Contract"). In the Request, the Spanish Customer's claims are based on (1) Jiangxi Jinko's alleged breaches of the Contract by being unable to deliver the goods at the initially agreed shipping dates and price; (2) the subsequent termination of the Contract by the Spanish Customer; (3) alleged replacement purchases the Spanish Customer has made to replace the goods originally ordered from Jiangxi Jinko; and (4) alleged further costs and other indirect damages purportedly incurred by the Spanish Customer as a consequence of Jiangxi Jinko's alleged breaches and relating to the PV plant in Australia for which the goods had been intended. On July 21, 2021, Jiangxi Jinko submitted the Answer to the Request and Counterclaim, denying that the Spanish Customer is entitled to the relief it requests and raising a counterclaim for damages its loss of profit as well as wasted costs expended in reliance on the performance of the Contract. On January 28, 2022, the tribunal confirmed the Terms of Reference and Procedural Order No.1 signed by the Spanish Customer and Jiangxi Jinko, according to which, except any extension granted by the tribunal, (1) the Spanish Customer will submit Statement of Claim before April 6, 2022 and Jiangxi Jinko will submit Statement of Defense and Counterclaim before June 6, 2022, (2) the Spanish Customer will submit Statement of Reply and Defense to Counterclaim before September 6, 2022, Jiangxi Jinko will submit Statement of Rejoinder and Reply on Counterclaim before November 4, 2022 and the Spanish Customer will submit Rejoinder on Counterclaim before December 19, 2022, (3) the hearing will be held during the week of April 17, 2023. On April 6, 2022, the Spanish Customer submitted Statement of Claim, which maintained the claims as the Request and additionally claimed the legal interest accrued on the amounts requested. On June 6, 2022, Jiangxi Jinko rejected the claims and brought the counterclaim for the wrongful termination in its submission of Statement of Defense and Counterclaim. On September 6, 2022, the Spanish Customer submitted Statement of Reply and Defense to Counterclaim to maintain its positions. On November 4, 2022, Jiangxi Jinko repeatedly denied the claims and claimed for the damages in its submission of Statement of Rejoinder and Reply on Counterclaim. On December 19, 2022, the Spanish Customer submitted Rejoinder on Counterclaim. The hearing took place from April 18 to 19, 2023 in Madrid. As of the date of the issuance of the financial statements, this case is still ongoing and based on the information currently available, the company does not believe that it is probable that Jiangxi Jinko has incurred a loss and the Company is unable to estimate an amount of reasonably possible loss or range of loss.

On June 17, 2022, one of the company's Indian customers (the "Indian Customer") submitted a Request for arbitration at International Chamber of Commerce (Case No. 27085/OSI) against Jiangxi Jinko in connection with dispute arising out of a project module supply agreement entered into in May 2017 ("Supply Agreement"). The Indian Customer further submitted Statement of Claim on December 9, 2022, in which the Indian Customer confirmed it does not pursue its claims requiring Jiangxi Jinko to repair or replace relevant modules under the warranty certificate and amended the amount of damages as follows: (i) delay Liquidated Damages in the amount of US\$363.3 million; (ii) costs arising from or in connection with the construction / installation of 32MW of additional capacity for the purpose of making up alleged shortfall in the performance of the plant due to allegedly deficient and/or defective modules in the amount of US\$14.1 million; and (iii) liquidated damages levied against the EPC Contractor by the owner of the plant in the amount of US\$14.6 million, together totalling US\$392.0 million. Jiangxi Jinko submitted Statement of Defence and Counterclaim on March 10, 2023, strongly defending itself and claiming that the Indian Customer failed to pay the invoices amounting to US\$5.3 million. According to the current schedule of the arbitration procedure, the International Chamber of Commerce is expected to render the final award by July 30, 2024. As of the date of this annual report, the hearing has not yet commenced. As this case is still ongoing and based on the information currently available to us, it is uncertain at this stage of the arbitration to conclude that whether Jiangxi Jinko will have be subject to any liability or to reasonably estimate the possible amount to be awarded.

Information available prior to issuance of the financial statements did not indicate that it is probable that a liability had been incurred at the date of the financial statements and the Company was also unable to reasonably estimate the range of any liability or reasonably possible loss, if any.

(c) Guarantees

The Company provided the loan guarantee to JinkoPower. In the year of 2022, the Group and JinkoPower entered into an agreement to cancel the guarantee arrangement. (Note 26).

29. FAIR VALUE MEASUREMENTS

A hierarchy is established for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability, developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. As such, fair value is a market-based measure considered from the perspective of a market participant who holds the asset or owes the liability rather than an entity-specific measure. The hierarchy is broken down into three levels based on the reliability of inputs as follows: (Level 1) observable inputs such as quoted prices in active markets; (Level 2) inputs other than the quoted price in active markets that are observable either directly or indirectly, or quoted prices in less active markets; and (Level 3) unobservable inputs with respect to which there is little or no market data, which require the Company to develop its own assumptions. Fair value of cash equivalents, restricted cash and restricted short-term investment are categorized as level 1 under the fair value hierarchy, as they based on quoted prices in active markets. Short-term borrowings and long-term borrowing are categorized as level 2 under the fair value hierarchy, as they based on quoted prices in less active markets.

Fair value change in forward contracts and foreign exchange options

The Company has entered into foreign exchange forward contracts with local banks to reduce the exposure of significant changes in exchange rates between Renminbi and foreign currencies. Authoritative guidance requires companies to recognize all of the derivative financial instruments as either assets or liabilities at fair value in the consolidated balance sheets based upon quoted market prices for comparable instruments. The Company's forward contracts have not met the criteria for hedge accounting within authoritative guidance. Therefore, the foreign exchange forward contracts have been recorded at fair value, with the gain or loss on these transactions recorded in the consolidated statements of operations within "Change in fair value of foreign exchange forward contracts" in the period in which they occur. The Company does not use derivative financial instruments for trading or speculative purposes. The Company held foreign exchange forward contracts with a total notional value of USD 630 million and USD560 million, EUR20 million and EUR250 million, nil and JYP2,000 million as of December 31, 2021 and 2022, respectively. These foreign exchange forward contracts mature within 12 months. The Company used a discounted cash-flow methodology to measure fair value, which requires inputs such as interest yield curves and foreign exchange rates. The significant inputs used in the aforementioned model can be corroborated with market observable data and therefore the fair value measurements are classified as level 2. Typically, any losses or gains on the forward exchange contracts are offset by re-measurement losses or gains on the underlying balances denominated in non-functional currencies. The Company's foreign currency exchange contract is an over-the-counter instrument. The Company recorded loss from change in fair value of foreign exchange forward contracts of RMB164 million during the year of 2022, compared to gain of RMB289 million in the year of 2021. The change was primarily due to the appreciation of the U.S. dollars against the RMB during the year of 2022.

The Group classified the cash flows related to realized gain or loss on settlement of foreign exchange forward contracts as operating activities, which are based on the nature of the cash flows the derivative is economically hedging.

The Company entered into USD foreign exchange option contracts with a total notional value of nil, USD120 million and USD65 million, and sold USD foreign exchange option contracts with a total notional value of USD170 million, USD90 million and USD50 million during the years ended December 31, 2020, 2021 and 2022, respectively. In the year of 2022, the Company entered into EUR foreign exchange option contracts with a total notional value of EUR50 million and sold EUR foreign exchange option contracts with a total notional value of EUR50 million. These foreign exchange options mature within 12 months. The Company adopted the Black-Scholes Option Pricing ("B-S") Model to value the foreign exchange options. The significant inputs used in the aforementioned model are unobservable inputs which there are little or no market data and therefore the fair value measurements are classified as level 3.

The foreign exchange option is asset derivatives which need to be fair valued on day one and marked to market subsequently at each reporting period end. The fair value gain or loss arising from the re-measurement is recognized in the consolidated statements of operations and comprehensive income. The fair value change was a loss of RMB4 million, a gain of RMB19 million and a loss of RMB 4 million for the year ended December 31, 2020, 2021 and 2022, respectively.

Equity securities applying fair value option

The fair value of equity securities applying fair value option is measured using Level 2 inputs within the fair value hierarchy. In determining the fair value, the Company adopted previous transaction method under market approach, which allows an entity to solve for its implied aggregate equity value by considering its recent arm's length equity transactions. The Group irrevocably elected fair value option to initially and subsequently measure its investment in Xiangbang in its entirety at fair value with changes in fair value recognized in earnings, and recorded change in fair value with the amount of RMB102 million for the year ended December 31, 2022 (Note 12).

Available-for-sale securities

The Group's available-for-sale securities represent the two-year puttable bond purchased from JinkoPower in 2022 (Note 12). In determining the fair value, the Company adopted the discounted cash flow method, which requires management to use unobservable inputs such as discount rate based on yield-to-maturity of comparable bonds in market and RMB risk free rate. These unobservable inputs and resulting fair value estimates may be affected by unexpected changes in future market or economic conditions. For the year ended December 31, 2022, unrealized gain on the available-for-sale securities amounted to RMB1 million which was reported in other comprehensive income.

Convertible Senior Notes and Call Option

The Company has adopted valuation models to assess the fair value for Call option and the Notes, as the Call option is not publicly traded and the trading of the Notes is considered inactive. Management is responsible for determining these fair values and assessing a number of factors. The Notes is valued using the Binomial Tree option pricing model. The valuation involves complex and subjective judgments as well as the Company's best estimates on the valuation date. Inputs related to the Binomial models for convertible debt fair value are: spot price, conversion price, expected dividend yield, expected share volatility, risk free interest rate, and yield-to-maturity, of which spot price and expected share volatility are most significant to valuation determination of convertible debt. The Call option is valued using the Black-Scholes Model. The valuation involves complex and subjective judgments as well as the Company's best estimates on the valuation date. Inputs related to the Black-Scholes Models for call option fair value are: call option price, spot price, exercise price, expected dividend yield, risk-free interest rate and time to maturity, of which spot price and exercise price are most significant to valuation determination of call option. The Company recorded loss from change in fair value of convertible senior notes and call option of RMB12 million during the year of 2022, compared to gain from change in fair value of convertible senior notes and call option of RMB192 million during the year of 2021.

Interest Rate Swap

The Company's exposure to the risk of changes in market interest rates primarily relates to its bank borrowings. To finance its overseas power station business operation and expansion, the Company's operating subsidiaries located in Mexico obtained long-term bank borrowings from local bank, which carries variable interest rates. With an aim to reduce its interest rate exposure, the Company entered into one long-term interest rate swap contract in 2016 to fix the interest rate as a fixed rate payer. The interest rate swap is a derivative which needs to be fair valued at each reporting period end. The fair value gain or loss arising from the measurement is recognized in the consolidated statements of operations. The fair value change was a loss of RMB79 million for the years ended December 31, 2020. The Company sold its solar power plants in Mexico in March 2020.

The Company solar project subsidiary located in Argentina entered into interest rate swap contracts to swap floating interest payments related to certain borrowings for fixed interest payments to hedge the interest rate risk associated with certain forecasted payments and obligations. As the interest rate derivatives were designated as cash flow hedges and the hedge is highly effective, all changes in the fair value of the derivative hedging instruments amounted to RMB12 million were recorded in other comprehensive income and as a derivative liability included in the held-for-sale liabilities as of December 31, 2021. The Company sold its solar power plants in Argentina in June 2022.

Guarantee liability

A guarantee liability is initially recognized at the estimated fair value in the Group's consolidated balance sheets unless it becomes probable that the Group will reimburse the holder of the guarantee for an amount higher than the carrying amount, in which case the guarantee is carried in the Group's consolidated balance sheets at the expected amount payable to the holder. The fair value of the guarantee liability is measured by the total consideration to be received in connection with the provision of guarantee. The guarantee liability would be amortized in straight line during the guarantee period. The guarantee arrangement was canceled in year 2022.

Recurring change in fair value

As of December 31, 2021 and 2022, information about the hierarchy of the fair value measurements for the Company's assets and liabilities that are measured at fair value on a recurring basis subsequent to their initial recognition is as follows (RMB in thousands, except for inputs):

Description	Fair Value Measurements at Reporting Date Using			
	Balance as of December 31, 2021	Quote prices in active market for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets:				
Foreign exchange forward contracts- receivable	73,532	—	73,532	—
Liabilities:				
Convertible senior notes	1,098,736	—	—	1,098,736
Guarantee liabilities	12,142	—	—	12,142
Derivative liability interest rate swap	12,294	—	—	12,294
Foreign exchange options	2,659	—	—	2,659

Description	Fair Value Measurements at Reporting Date Using			
	Balance as of December 31, 2022	Quote prices in active market for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets:				
Foreign exchange forward contracts- receivable	119,625	—	119,625	—
Equity securities applying fair value option	178,871	—	178,871	—
Available-for-sale securities	104,499	—	—	104,499
Liabilities:				
Convertible senior notes	1,070,699	—	—	1,070,699
Foreign exchange forward contracts- payable	59,911	—	59,911	—
Foreign exchange options	3,226	—	—	3,226

Assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3 valuation)

A summary of changes in Level 3 fair value of convertible senior notes for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
Balance on January 1,	728,216	1,831,612	1,098,736
Foreign exchange loss/(gain)	(38,360)	(8,560)	60,038
Change in fair value of convertible senior notes loss/(gain)	1,202,082	(327,762)	12,083
Change in the instrument-specific credit risk gain	(60,326)	(56,224)	(100,158)
Conversion of convertible senior notes	—	(340,330)	—
Balance on December 31,	1,831,612	1,098,736	1,070,699

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A summary of changes in Level 3 fair value of available-for-sale securities for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Balance on January 1,	—	—	—
Addition	—	—	100,000
Interest accrual	—	—	3,526
Change in fair value	—	—	973
Balance on December 31,	—	—	104,499

A summary of changes in Level 3 fair value of call option for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Balance on January 1,	294,178	756,929	—
Issuance of call options	—	—	—
Foreign exchange gain/(loss)	(13,539)	251	—
Change in fair value of call options gain/(loss)	476,290	(136,121)	—
Settlement of call options	—	(621,059)	—
Balance on December 31,	756,929	—	—

A summary of changes in Level 3 fair value of foreign exchange options for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Balance on January 1,	—	(12,924)	(2,659)
Addition of foreign exchange options	(9,316)	(8,544)	3,596
Change in fair value of foreign exchange options gain/(loss)	(3,608)	18,809	(4,163)
Balance on December 31,	(12,924)	(2,659)	(3,226)

A summary of changes in Level 3 fair value of rate swap derivative for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020	2021	2022
	RMB	RMB	RMB
Balance on January 1,	61,272	—	12,294
Change in fair value of interest rate swap	78,878	—	—
Change in fair value of interest rate swap cash flow hedges	—	12,294	—
Cash settlement	—	—	(12,294)
Balance on December 31,	(140,150)	—	—

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A summary of changes in Level 3 fair value of guarantee liabilities for the year ended December 31, 2020, 2021 and 2022 were as follows (RMB in thousands):

	For the year ended December 31,		
	2020 RMB	2021 RMB	2022 RMB
Balance on January 1,	72,019	57,332	12,142
Additions	—	—	—
Amortization	(14,687)	(6,365)	—
Cancellation	—	(38,825)	(12,142)
Balance on December 31,	57,332	12,142	—

Change in fair value of derivatives

The Change in fair value of derivatives recognized in earnings was as follows (RMB in thousands):

For the year ended December 31, In RMB	Foreign exchange forward contracts		Convertible senior notes	Interest Rate swap	Call Option	Type of derivatives		
	Realized	Unrealized				Foreign exchange Options	Equity securities Applying fair value option	Total
2020	61,380	129,806	(1,202,082)	(78,878)	476,290	(3,608)	—	(617,092)
2021	393,523	(104,643)	327,762	—	(136,121)	18,809	—	499,330
2022	(150,538)	(13,818)	(12,083)	—	—	(4,163)	101,871	(78,731)

Significant unobservable inputs

The significant unobservable inputs adopted in the valuation of Level 3 instruments as of December 31, 2022 are as follows:

Unobservable inputs of convertible senior notes

Expected volatility	75.47 %
Risk free interest rate	4.6 %
Discount rate	29.23 %

Unobservable inputs of available-for-sale securities

Risk free interest rate	2.06% - 2.21%
Discount rate	5.37% - 5.78%

Unobservable inputs of foreign exchange option

Expected volatility	8.13% - 10.00 %
Risk free interest rate	1.09% - 2.03 %

30. RESTRICTED NET ASSETS

Relevant PRC laws and regulations permit payments of dividends by the Company's PRC subsidiaries only out of their retained earnings, if any, as determined in accordance with PRC GAAP. In addition, the statutory general reserve fund requires annual appropriations of 10% of net after-tax income to be set aside prior to payment of any dividends by the Company's PRC subsidiaries that are registered as wholly owned foreign investment enterprises or domestic enterprises. As a result of these and other restrictions under PRC laws and regulations, the PRC subsidiaries are restricted in their ability to transfer a portion of their net assets to the Company either in the form of dividends, loans or advances. Even though the Company does not currently require any such dividends, loans or advances from the Company's PRC subsidiaries for working capital or other funding purposes, it may in the future require additional cash resources from the PRC subsidiaries due to changes in business conditions, to fund future acquisitions and development, or merely declare dividends or make distributions to the Company's shareholders.

Restricted net assets were RMB24,303 million representing 90% of the Company's total consolidated net assets as of December 31, 2022.

31. SUBSEQUENT EVENTS

The Group adopted its 2023 Equity Incentive Plan on January 5, 2023 which provided for the issuance of option, restricted share or other share-based award of 20,800,000 ordinary shares.

On April 23, 2023, Jiangxi Jinko completed the registration process with the China Securities Regulatory Commission (“CSRC”) for the issuance of convertible bonds in the principal amount of up to RMB10.00 billion (US\$1.45 billion). Such convertible bonds, which will be listed on the STAR Market, have a term of six years and are convertible into Jiangxi Jinko’s ordinary shares. The Company has the special preemptive rights to subscribe for a portion of the convertible bonds.

32. ADDITIONAL INFORMATION - CONDENSED FINANCIAL STATEMENTS OF THE PARENT COMPANY

The separate condensed financial statements of the Company as presented below have been prepared in accordance with Securities and Exchange Commission Regulation S-X Rule 5-04 and Rule 12-04 and present the Company’s investments in its subsidiaries under the equity method of accounting. Such investment is presented on separate condensed balance sheets of the Company as “Investments in subsidiaries “ and the Company’s shares of the profit or loss of subsidiaries are presented as “Share of (loss) / income from subsidiaries” in the statements of operations.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with US GAAP have been condensed and omitted. The footnote disclosures contain supplemental information relating to the operations of the Company, as such, these statements should be read in conjunction with the notes to the consolidated financial statements of the Company.

	For the year ended December 31			
	2020 RMB	2021 RMB	2022 RMB	USD (note 2 (al))
	(RMB in thousands)			
Net revenue	—	—	—	—
Cost of revenues	—	—	—	—
Gross profit	—	—	—	—
Total operating income/(expenses)	1,227	(6,150)	(593,204)	(86,007)
Other income, net	5,064	1,737	—	—
Income/(loss) from operations	6,291	(4,413)	(593,204)	(86,007)
Share of income from subsidiaries and affiliates	1,015,006	512,873	1,264,720	183,368
Interest income/(expenses), net	8,596	36,613	(19,867)	(2,880)
Exchange loss	(73,716)	(14,085)	(18,586)	(2,694)
Change in fair value of convertible senior notes and call option	(725,792)	191,641	(12,083)	(1,752)
Income before income taxes	230,385	722,629	620,980	90,035
Income tax expenses	—	(1,611)	(474)	(69)
Net income attributable to JinkoSolar Holding Co., Ltd.’s ordinary shareholders	230,385	721,018	620,506	89,966

Condensed balance sheets:

	December 31, 2021	December 31, 2022	
	RMB	RMB	USD
			(note 2 (al))
			(RMB in thousands)
ASSETS			
Current assets:			
Cash and cash equivalent	34,767	492,440	71,397
Due from subsidiaries	2,532,984	728,019	105,553
Due from related parties	3,454	3,454	501
Other current assets	1,562	1,671	242
Total current assets	2,572,767	1,225,584	177,693
Investments in subsidiaries	9,781,036	16,189,323	2,347,231
Due from subsidiaries - non-current	1,262,124	—	—
Due from related parties - non current	3,292	—	—
Total assets	13,619,219	17,414,907	2,524,924
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities:			
Due to subsidiaries	1,445,183	—	—
Due to related parties	2,500	—	—
Other current liabilities	13,377	6,973	1,011
Total current liabilities	1,461,060	6,973	1,011
Due to related parties - non-current	9,642	—	—
Convertible senior notes	1,098,736	1,070,699	155,237
Total liabilities	2,569,438	1,077,672	156,248
Shareholders' equity:			
Ordinary shares (USD \$0.00002 par value, 500,000,000 shares authorized, 193,770,753 and 204,135,029 shares issued as of December 31, 2021 and December 31, 2022, respectively, 190,824,913 and 201,189,189 shares outstanding as of December 31, 2021 and December 31, 2022, respectively)			
	26	28	4
Additional paid-in capital	5,617,923	9,912,931	1,437,240
Accumulated other comprehensive loss	(154,375)	217,563	31,544
Treasury stock, at cost; 2,945,840 ordinary shares as of December 31, 2021 and December 31, 2022	(43,170)	(43,170)	(6,259)
Retained earnings	5,629,377	6,249,883	906,148
Total shareholders' equity	11,049,781	16,337,235	2,368,677
Total liabilities and shareholders' equity	13,619,219	17,414,907	2,524,924

The current balances of due from subsidiaries represented loans to its subsidiaries which are expected to be collected within twelve months. Non-current balances due from subsidiaries represented loans to its subsidiaries which are not expected to be collected with twelve months.

Other current liabilities represented accrual for unpaid convertible senior notes interest and professional service fees.

Condensed statements of cash flows:

	For the year ended December 31,			
	2020 RMB	2021 RMB	2022 RMB	USD (note 2 (al))
	(RMB in thousands)			
Cash flows from operating activities:				
Net income	230,385	721,018	620,506	89,966
Adjustments to reconcile net income to net cash used in operating activities:				
Sharebase compensation charges	—	—	579,368	84,000
Change in fair value of convertible senior notes	1,202,082	(327,762)	12,083	1,752
Change in fair value of call option	(476,290)	136,121	—	—
Share of income from subsidiaries	(1,015,006)	(512,873)	(1,264,720)	(183,368)
Guarantee income	(5,064)	—	—	—
Exchange loss	73,716	14,085	18,586	2,694
Changes in operating assets and liabilities:				
Decrease in due from subsidiaries	592,425	6,088	1,465,778	212,518
Decrease in due from a related party	—	—	3,292	477
(Increase)/decrease in other current assets	(9,437)	165	(1,279)	(186)
Decrease in other non-current assets	—	11,181	—	—
Decrease in due to subsidiaries	(658,106)	(117)	(1,445,183)	(209,532)
Decrease in due to a related party	—	—	(12,142)	(1,760)
Increase/(decrease) in other current liabilities	9,773	1,978	(6,403)	(928)
Net cash (used in)/provided by operating activities	(55,522)	49,884	(30,114)	(4,367)
Cash flows from investing activities:				
Cash collection for loans from subsidiaries	—	—	735,673	106,662
Cash paid for loans to subsidiaries	—	(1,262,124)	(289,620)	(41,991)
Net cash used in investing activities	—	(1,262,124)	446,053	64,671
Cash flows from financing activities:				
Proceeds from exercise of share options	114,758	10,185	5,024	729
Proceeds from exercise of call option	—	621,059	—	—
Proceeds from issuance of ordinary shares	—	641,065	—	—
Repurchase of shares	(29,294)	—	—	—
Net cash provided by financing activities	85,464	1,272,309	5,024	729
Effect of foreign exchange rate changes on cash and cash equivalents	(14,992)	(44,809)	36,710	5,323
Net increase in cash and cash equivalents	14,950	15,260	457,673	66,356
Cash and cash equivalents, beginning of year	4,557	19,507	34,767	5,041
Cash and cash equivalents, end of year	19,507	34,767	492,440	71,397
Supplemental disclosure of non-cash investing and financing cash flow information				
Proceeds from exercise of share options received in subsequent period	9,143	1,169	—	—
Conversion of convertible senior notes to ordinary shares	—	340,330	—	—

Transfer receivable due from subsidiaries to investments in subsidiaries	—	—	1,160,000	168,184
Receivables related to At-The-Market offering	641,065	—	—	—

For the years ended December 31, 2020, 2021 and 2022 and up to the date of this annual report, no cash dividend was paid to the Company by its consolidated subsidiaries, unconsolidated subsidiaries, nor 50% or less owned persons accounted for by the equity method.