

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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 26, 2020

ACM Research, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware
*(State or Other
Jurisdiction of Incorporation)*

001-38273
*(Commission
File Number)*

94-3290283
*(IRS Employer
Identification No.)*

42307 Osgood Road, Suite I
Fremont, California
(Address of Principal Executive Offices)

94539
(Zip Code)

Registrant's telephone number, including area code: (510) 445-3700

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trading symbol	Name of each exchange on which registered
Class A Common Stock, par value \$0.0001 per share	ACMR	Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934: Emerging growth company ☒

If an emerging growth company, 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. ☒

NOTE: ACM Research, Inc., or ACM Research, conducts its business operations principally through its subsidiary ACM Research (Shanghai), Inc., or ACM Shanghai. Unless the context requires otherwise, references in this report to “our,” “us,” “we” and similar terms refer to ACM Research and its subsidiaries, including ACM Shanghai, collectively.

Item 1.01. Entry into a Material Definitive Agreement.

The information set forth under the heading “STAR Listing and STAR IPO—ACM Research Undertaking Agreements” in Item 8.01 of this report is incorporated by reference into this Item 1.01.

Item 7.01. Regulation FD Disclosure.

A copy of the preliminary information document, or PID, filed by ACM Shanghai on May 26, 2020 in connection with the STAR Listing and the STAR IPO, each as defined under “STAR Listing and STAR IPO—Background” in Item 8.01 of this report, is furnished as Exhibit 99.01 to this report.

There have not been any decisions made regarding the timing or terms of the STAR Listing and the STAR IPO or whether the proposed actions will ultimately be approved by the Shanghai Stock Exchange. Accordingly, there is no assurance that the proposed STAR Listing and STAR IPO will be completed.

The ACM Shanghai shares referred to in the PID and this Item 7.01 have not been and will not be registered under the Securities Act of 1933, or the Securities Act, or any state securities laws and may not be offered or sold in the United States absent registration under the Securities Act or an applicable exemption from the registration requirements of the Securities Act and applicable state securities laws. This report is neither an offer to sell nor a solicitation of an offer to buy, nor shall there be any offer, solicitation or sale of these shares in any jurisdiction in which such offer, solicitation or sale would be unlawful.

Item 8.01. Other Information.

STAR Listing and STAR IPO

Background

In June 2019, we announced our intention to complete:

- a listing, which we refer to as the STAR Listing, of shares of ACM Shanghai on the Shanghai Stock Exchange’s Sci-Tech Innovation Board, known as the STAR Market; and
- a concurrent initial public offering, which we refer to as the STAR IPO, of ACM Shanghai shares in the People’s Republic of China, or the PRC, at a pre-offering valuation of not less than RMB 5.15 billion (\$747.1 million).

We believe the listing of ACM Shanghai shares on the STAR Market will help us scale our business in mainland PRC, as we continue to seek to broaden our markets in Europe, Japan, Korea, Taiwan and the United States. Our global headquarters will continue to be located in Fremont, California, and we are committed to maintaining the listing of Class A common stock of ACM Research on the Nasdaq Global Market, or Nasdaq.

Certain STAR Listing Requirements

To meet a STAR Listing requirement that it have multiple independent stockholders in the PRC, ACM Shanghai completed private placements of its shares in June and November 2019, following which, as of May 31, 2020, the private placement investors held a total of 8.3% of the outstanding shares of ACM Shanghai and ACM Research held the remaining 91.7%.

The board of directors of ACM Shanghai consists of nine members, seven of whom are nominated by ACM Research and two of whom are nominated by two of the private placement investors. The directors nominated by ACM Research include two individuals who also are members of the board of directors of ACM Research: Haiping Dun and David H. Wang, who also is the Chief Executive Officer and President of ACM Research.

Consistent with STAR Listing requirements and applicable law, ACM Shanghai has adopted a dividend distribution policy, which generally contemplates that it will pay dividends, typically annually, based on its then-existing situation by fully considering and accepting the opinions of shareholders (especially small and medium shareholders), independent directors and supervisors through a variety of channels. In the absence of a “major” project, if ACM Shanghai is profitable and has met statutory reserve, surplus reserve and similar legal requirements with respect to a year, the annual cash dividend amount will be at least ten percent of any profits for that year, but any profit distribution established by the ACM Shanghai board will be subject to shareholder approval. We expect ACM Shanghai will not pay dividends under this policy for the foreseeable future, because the execution of its business strategy and growth plans each year will involve a “major” project, which generally is defined to be a project for which ACM Shanghai’s cumulative expenditures for proposed capital investments, asset acquisitions, research and development, and other items during that year will exceed five percent of its net assets.

Certain Proposed STAR IPO Terms

ACM Shanghai currently proposes to offer up to ten percent of its shares in the STAR IPO. The net proceeds of the STAR IPO would be used to fund:

- the land lease and building construction for our proposed development and production center in the Lingang region of Shanghai, as described in the Current Report on Form 8-K we filed with the Securities and Exchange Commission, or SEC, on May 13, 2020;
- product development to upgrade and expand our process equipment targeted at more advanced process nodes, including technical improvement and development of TEBO megasonic cleaning equipment, Tahoe single wafer wet bench combined cleaning equipment, front-end brush scrubbing equipment, front end process electroplating equipment, Stress Free Polish equipment and vertical furnace equipment; and
- working capital.

There have not been any decisions made regarding the timing or terms of the STAR Listing and the STAR IPO or whether the proposed actions will ultimately be approved by the Shanghai Stock Exchange. Accordingly, there is no assurance that the proposed STAR Listing and STAR IPO will be completed.

The ACM Shanghai shares referred to in the PID and this Item 7.01 have not been and will not be registered under the Securities Act of 1933, or the Securities Act, or any state securities laws and may not be offered or sold in the United States absent registration under the Securities Act or an applicable exemption from the registration requirements of the Securities Act and applicable state securities laws. This report is neither an offer to sell nor a solicitation of an offer to buy, nor shall there be any offer, solicitation or sale of these shares in any jurisdiction in which such offer, solicitation or sale would be unlawful.

ACM Research Undertaking Agreements

In connection with ACM Shanghai’s submission of the PID on May 26, 2020 with respect to the STAR IPO, ACM Research, as the controlling shareholder of ACM Shanghai, was required to enter into a series of agreements with the STAR Market, which became effective upon submission and are described below:

- Commitment Letter Regarding the Lock-up of Shares, pursuant to which ACM Research has agreed to a three-year lockup of its shares in ACM Shanghai, including a prohibition against directing ACM Shanghai to repurchase any of its shares following the closing of the STAR IPO. The lockup period will be extended for six additional months if the daily closing price of ACM Shanghai shares for twenty consecutive trading days during the first six months following the STAR IPO is lower than the issue price of shares in the STAR IPO.
 - Commitment Letter Regarding Shareholding Intent and Intent to Reduce Shareholdings, pursuant to which ACM Research and David H. Wang, Chief Executive Officer, President and Chair of the Board, have agreed that sale of ACM Shanghai shares during the two-year period following the termination of its lockup period (as described above) will be made (a) in a manner consistent with the regulations of the China Securities Regulatory Commission, or CSRC, and the Shanghai Stock Exchange, (b) at a price no lower than the issue price of shares the STAR IPO and (c) following a pre-announcement of its intention to make such sale. Assuming the lockup period is not extended as described in the preceding paragraph, this agreement will terminate five years following the closing of the STAR IPO.
-

- Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of ACM Shanghai Within Three Years After Listing, pursuant to which ACM Research and certain of its officers and directors, including Dr. Wang, have severally agreed that if, during the three-year period following the STAR IPO, the daily closing price of the shares of ACM Shanghai for twenty consecutive trading days is lower than the audited net assets value per share (as defined) for the fiscal year prior to the STAR IPO, the parties agree that they will take measures to stabilize the ACM Shanghai share price by either (a) ACM Shanghai repurchasing shares purchased by minority shareholders or (b) ACM Research, Dr. Wang or other executive officers and directors purchasing additional ACM Shanghai shares.
 - Commitment Letter Regarding Fraudulent Issuance of Listed Shares, pursuant to which ACM Research, ACM Shanghai and Dr. Wang have represented that there has been no fraud in the STAR IPO and undertake to purchase any shares of ACM Shanghai issued pursuant to the STAR IPO if it is determined by the CSRC and other relevant authorities that fraud was so committed or that ACM Shanghai was ineligible for the STAR IPO.
 - Commitment Letter Regarding the Lack of False Records, Misleading Statements or Major Omissions, pursuant to which ACM Research has covenanted not to make any misrepresentations, misleading statements or major omissions in its disclosure documents relating to the STAR IPO and has agreed to compensate investors in ACM Shanghai for losses according to law in the event of a breach.
 - Commitment Letter Regarding Making Up for Diluted Immediate Returns, pursuant to which ACM Research has undertaken to prevent the risk of dilution to ACM Shanghai shareholders and to assert influence of ACM Shanghai's operations only to the extent of ACM Research's authority as a majority shareholder.
 - Commitment Letter Regarding Unfulfilled Commitment on Binding Measures, pursuant to which ACM Research and Dr. Wang have committed to fulfill the obligations of ACM Research set forth in the PID and have agreed to take certain corrective actions for failure to do so, including publicly explaining reasons for such failure, compensate investors in ACM Shanghai for losses according to law, foregoing dividends from ACM Shanghai, and returning any gains that resulted from such failure.
 - Letter of Commitment on the Avoidance of Competition in the Same Industry, pursuant to which ACM Research has agreed that it will not, without the prior consent of ACM Shanghai, compete with the principal business of ACM Shanghai, including supporting any companies that may compete with ACM Shanghai. If ACM Research engages in any competitive activity, it has agreed to terminate or otherwise transfer such activity and, in the case of transfer, grants to ACM Shanghai a right of first refusal to acquire such transferred activity. The commitment under this agreement will remain in effect so long as ACM Research remains the controlling shareholder of ACM Shanghai.
 - Commitment Letter Regarding the Standardization and Reduction of Related Transactions, pursuant to which ACM Research has agreed that any transactions between ACM Research and ACM Shanghai will be standardized, to the extent possible, at arm's-length and fair to ACM Shanghai.
 - Commitment Letter Regarding the Avoidance of Funds Occupation and Illegal Guarantee, pursuant to which ACM Research has agreed that the funds of ACM Shanghai and its controlled companies have not, and will not, be used for non-operating purposes, including that ACM Shanghai will not provide any guarantees in violation of applicable regulations.
 - Statement and Commitment Letter, pursuant to which ACM Research has covenanted as to its ownership of shares of ACM Shanghai and related matters.
 - Commitment Letter Regarding Property Lease Matters, pursuant to which ACM Research has guaranteed in full the payment of all costs of any relocation of ACM Shanghai resulting from ACM Shanghai being unable to continue to lease and use, due to certain property mortgage matters, either of the two properties it currently leases in Shanghai for ACM Shanghai's headquarters and manufacturing space.
-

- Commitment Letter Regarding Social Insurance and Housing Provident Fund Matters, pursuant to which ACM Research has guaranteed in full the payment of ACM Shanghai’s obligations to make certain social insurance and housing fund contributions.
- Commitment Letter Regarding Foreign Exchange Matters pursuant to which ACM Research has agreed to be responsible for any obligations imposed by the foreign exchange management department relating to the STAR IPO or for any foreign exchange matters existing before the STAR IPO.
- Confirmation and Commitment Letter Regarding the Historical Evolution Related Matters Regarding ACM Shanghai, pursuant to which ACM Research has covenanted as to historical developments regarding ACM Shanghai, including with respect to certain intellectual property of ACM Shanghai.
- Confirmation Letter, pursuant to which ACM Research has confirmed it did not use any intellectual property licensed under its Technology License Agreement dated January 31, 2007 with ACM Shanghai (under which ACM Research granted ACM Shanghai a worldwide exclusive license to the intellectual property owned or controlled by ACM Shanghai) in a manner inconsistent with such agreement, that it has not otherwise transferred or authorized anyone else to use the licensed intellectual property, and that no dispute exists with respect to the intellectual property of ACM Shanghai.

The foregoing summaries of the agreements of ACM Research with the STAR Market are qualified in their entirety by reference to the text of the agreements, which are being filed as Exhibits 10.01 through 10.16 to this report and which are incorporated in this report by reference.

David H. Wang Undertaking Agreements

In connection with ACM Shanghai’s submission with respect to the STAR IPO, David H. Wang, as our Chief Executive Officer, President and Chair of the Board and a significant stockholder of ACM Research, was required to enter into a series of agreements with the STAR Market in his individual capacity. As of the date of the submission, Dr. Wang beneficially owned approximately 15% of the outstanding shares of ACM Research Class A common stock (including shares issuable upon conversion of Class B common stock) and approximately 55% of the total voting power of ACM Research common stock. He did not beneficially own any ACM Shanghai shares as of that date.

In addition to his commitments made under four of the agreements described above, Dr. Wang agreed that:

- he will not voluntarily convert any Class B common stock held by him into Class A common stock for a three-year period after the completion of the STAR IPO;
 - he will lockup, and not sell, any shares of ACM Shanghai directly or indirectly owned by him for a three-year period after the completion of the STAR IPO, subject to a six-month extension if the daily closing price of ACM Shanghai shares for twenty consecutive trading days during the first six months following the STAR IPO is lower than the issue price of shares in the STAR IPO;
 - following the expiration of his lockup obligations, his sales of ACM Shanghai shares will be subject to volume limitations for a period of four years and as long as he continues to serve on the board of directors of ACM Shanghai;
 - he will cause ACM Shanghai to fulfill its obligations set forth in the PID and to take certain actions if it fails to do so, including compensating investors for losses and publicly explaining the reason for any failure;
 - he will refrain from competing, or causing any entities controlled by him to compete, with the primary business of ACM Shanghai;
 - he will, to the extent possible, cause related party transactions with ACM Shanghai to be standardized and ensure that such transactions are fair to ACM Shanghai; and
 - he will not use the funds of ACM Shanghai for personal gain or any other unlawful purpose.
-

Risk Factors

If the STAR Listing and the STAR IPO are completed, ACM Research and ACM Shanghai both will be public reporting companies but each will be subject to separate, and potentially inconsistent, accounting and disclosure requirements, which may lead to investor confusion or uncertainty that could cause decreased demand for, or fluctuations in the price of, one or both of the companies' publicly traded shares.

If ACM Shanghai completes the STAR Listing and the STAR IPO, it will be subject to accounting, disclosure and other regulatory requirements of the STAR Market. At the same time, ACM Research will remain subject to accounting, disclosure and other regulatory requirements of the SEC and Nasdaq. As a result, ACM Research and ACM Shanghai periodically will disclose information simultaneously pursuant to differing laws and regulations. Even though substantially all of the operations of ACM Research are currently conducted through ACM Shanghai, the information disclosed by the two companies will differ, and may differ materially from time to time, due to the distinct, and potentially inconsistent, accounting standards applicable to the two companies and disclosure requirements imposed by securities regulatory authorities, as well as differences in language, culture and expression habit, in composition of investors in the United States and PRC, and in the capital markets of the United States and the PRC.

Differing disclosures could lead to confusion or uncertainty among investors in the publicly traded shares of one or both companies. Differences between the price of ACM Shanghai shares on the STAR Market and the price of ACM Research Class A common stock on Nasdaq could lead to increased volatility, as some investors seek to arbitrage price differences. Moreover, such volatility could be exacerbated by the fact that ACM Shanghai shares currently represent substantially all of the assets of ACM Research.

We could be adversely affected if proposed legislation is adopted regarding improved access to audit and other information and audit inspections of accounting firms, including registered public accounting firms operating in the PRC such as our auditor.

BDO China Shu Lun Pan Certified Public Accountants LLP, our independent registered public accounting firm, is not inspected by the Public Company Accounting Oversight Board, or PCAOB. See “Item 1A. Risk Factors—Risks Related to Our Business and Our Industry—Our auditor, as a registered public accounting firm operating in the PRC, is not permitted to be inspected by the Public Company Accounting Oversight Board, and consequently investors may be deprived of the benefits of such inspections” in the Annual Report on Form 10-K for the fiscal year ended December 31, 2019 that we filed with the SEC on March 24, 2020.

On April 21, 2020, the SEC and the PCAOB issued a joint statement highlighting the significant disclosure, financial reporting and other risks associated with emerging market investments, including the PCAOB's continued inability to inspect audit work papers of auditors in the PRC. This statement is the latest in a series of recent proposed actions:

- In December 2018 the SEC and the PCAOB issued a joint statement highlighting continued challenges faced by U.S. regulators in their oversight of financial statement audits of U.S.-listed reporting companies with significant operations in the PRC.
- In June 2019 a bipartisan group of lawmakers introduced bills in both houses of the U.S. Congress that, if passed, would have required the SEC to maintain a list of reporting companies for which the PCAOB is not able to inspect or investigate an auditor report issued by a foreign public accounting firm. The proposed Ensuring Quality Information and Transparency for Abroad-Based Listings on our Exchanges Act, or EQUITABLE Act, would have prescribed increased disclosure requirements for these reporting companies and, beginning in 2025, provided for the delisting from U.S. stock exchanges of reporting companies included on the SEC's list for three consecutive years.

It remains unclear what further actions the SEC and the PCAOB will take to address these issues and what impact those actions will have on companies who have significant operations in the PRC and who have securities listed on a U.S. stock exchange.

Item 9.01. Financial Statements and Exhibits.**(d) Exhibits.**

Exhibit	Description
<u>10.01</u> [*]	Commitment Letter Regarding the Lock-up of Shares, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.02</u> [*]	Commitment Letter Regarding Shareholding Intent and Intent to Reduce Shareholding, effective as of May 26, 2020, of ACM Research, Inc. and David H. Wang
<u>10.03</u> [*]	Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of ACM Research (Shanghai), Inc. Within Three Years After Listing, effective as of May 26, 2020, of ACM Research, Inc., ACM Research (Shanghai), Inc., and certain individuals named therein
<u>10.04</u> [*]	Commitment Letter Regarding Fraudulent Issuance of Listed Shares, effective as of May 26, 2020, of ACM Research, Inc., ACM Research (Shanghai), Inc. and David H. Wang
<u>10.05</u> ^{*†}	Commitment Letter Regarding the Lack of False Records, Misleading Statements or Major Omissions in the Preliminary Information Document, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.06</u> [*]	Commitment Letter Regarding Making Up for Diluted Immediate Returns, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.07</u> ^{*†}	Commitment Letter Regarding Unfulfilled Commitment on Binding Measures, effective as of May 26, 2020, of ACM Research, Inc. and David H. Wang
<u>10.08</u> [*]	Commitment Letter Regarding the Avoidance of Competition in the Same Industry, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.09</u> [*]	Commitment Letter Regarding the Standardization and Reduction of Related Transactions, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.10</u> [*]	Commitment Letter Regarding the Avoidance of Funds Occupation and Illegal Guarantee, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.11</u> ^{*†}	Statement and Commitment Letter, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.12</u> [*]	Commitment Letter Regarding Property Lease Matters, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.13</u> [*]	Commitment Letter Regarding Social Insurance and Housing Provident Fund Matters, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.14</u> [*]	Commitment Letter Regarding Foreign Exchange Matters, effective as of May 26, 2020, of ACM Research, Inc.
<u>10.15</u> [*]	Confirmation and Commitment Letter Regarding the Historical Evolution Related Matters Regarding ACM Research (Shanghai), Inc., effective as of May 26, 2020, of ACM Research, Inc.
<u>10.16</u> [*]	Confirmation Letter, effective as of May 26, 2020, of ACM Research, Inc.
<u>99.01</u> ^{*†}	Preliminary Information Document of ACM Research (Shanghai), Inc.

^{*} Unofficial English translation of original document prepared in Mandarin Chinese.

[†] Certain information redacted and replaced with “[***]”.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

ACM RESEARCH, INC.

By: /s/ Mark McKechnie

Mark McKechnie

Chief Financial Officer and Treasurer

Dated: June 1, 2020

Commitment Letter Regarding the Lock-up of Shares

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to issue an initial public offering and be listed on the Science and Technology Board (hereinafter referred to as “this issuance and listing”), the company, as the controlling shareholder of the issuer, makes the following commitment with respect to the lock-up and reduction of the issuer’s shares:

1. Within 36 months from the date of the issuer’s stock listing, the company will not transfer or entrust others to manage the issuer’s direct and indirect holdings of the issuer’s shares issued before the listing (hereinafter referred to as the “pre-issuance shares”), nor will it propose that the issuer repurchase that part of the shares. The above mentioned commitment does not affect the normal trading of the company’s stocks on the US stock exchange, and the company’s financing, mergers and acquisitions in accordance with the provisions of the US securities laws.

2. Within 6 months after the issuer’s listing, if the issuer’s stock’s closing price for 20 consecutive trading days is lower than the issuer’s stock issue price at the time of listing (hereinafter referred to as the “issuer’s stock issue price”), or the closing price at the end of the 6-month period after listing is lower than the issuer’s stock issue price, then the lock-up period of the issuer’s shares held by the company is automatically extended by 6 months. If the issuer has incurred ex-rights and ex-dividends such as dividend payouts, bonus shares, capital reserve conversion to increase in share capital, and additional new shares, the above issue price refers to the adjusted price of the issuer’s shares.

3. If the issuer has a major violation of the law as specified in Article 12, Section 2 of the Shanghai Stock Exchange Science and Technology Board Listing Rules, and it involves the delisting standard, the company will not reduce the issuer’s shares from the date of the relevant administrative penalty decision or judicial decision until the issuer’s shares are terminated from listing.

4. If the company reduces its pre-issuance shares after the lock-up period expires, it will strictly abide by laws, administrative regulations, departmental rules, regulatory documents and relevant regulations of the Shanghai Stock Exchange, and perform the corresponding information disclosure obligations.

5. The company will promptly report to the issuer on the issuer’s shares held by the company and their changes.

6. If the company violates the above commitments and reduces the issuer’s shares, the actual gains (if any) obtained from the sale of the issuer’s shares shall belong to the issuer.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Lock-up of Shares)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: May 21, 2020

Commitment Letter Regarding Shareholding Intent and Intent to Reduce Shareholding

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “company”) intends to apply for an initial public offering of shares and be listed on the Science and Technology Board (hereinafter referred to as “this issuance and listing”), the enterprise / I as the controlling shareholder / actual controller of the company, make the following commitment regarding the company’s shareholding intent and intent to reduce shareholding:

1. After the lock-up period for holding the company’s shares has expired, the enterprise / I will decide whether to reduce the shareholding and the number of shares to be reduced according to the actual needs and secondary market conditions.

2. If the enterprise / I intend to reduce the company’s shares issued prior to the listing (hereinafter referred to as “pre-issuance shares”), the enterprise / I will strictly abide by the relevant regulations of the China Securities Regulatory Commission and the Shanghai Stock Exchange regarding shareholders’ holding reduction, carefully formulate shareholding reduction plans, and clarify and disclose the company’s control arrangements in advance to ensure the company’s continued stable operation; if the enterprise / I intend to reduce the company’s shares within two years after the expiration of the lock-up period, the price will not be lower than the issue price of the company’s initial public offering of stocks (if the company has incurred ex-rights and ex-dividends such as dividend payouts, bonus shares, capital reserve conversion to increase in share capital, and additional new shares after the company’s initial public offering, the price of reduction of shares shall be adjusted accordingly in accordance with the regulations), and the company will make announcements within the three trading days before the reduction or the time period stipulated by relevant laws and regulations, and disclose in the relevant information disclosure documents with respect to the reasons for the reduction of shares, the number of shares to be reduced, the intention to hold shares in the future, and the impact of the reduction of shareholding on the company’s governance structure, shareholding structure, and continuous operation.

3. If the enterprise / I reduce(s) the company’s pre-issuance shares after the expiration of the lock-up period, the methods and procedures for reducing the shareholding will strictly comply with the Company Law of the People’s Republic of China, Securities Law of the People’s Republic of China and other applicable laws and administrative regulations, departmental regulations, regulatory documents and relevant regulatory rules on share reduction and information disclosure.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Shareholding Intent and Intent to Reduce Shareholding)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Shareholding Intent and Intent to Reduce Shareholding)

/s/ Hui Wang

HUI WANG

Commitment Letter

Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing

In order to maintain the stability of the share price of ACM Research (Shanghai), Inc. (hereinafter referred to as the “company”) after listing, and fully protect the rights of the company’s shareholders, particularly small and medium shareholders, the company has specially formulated the Plan for Stabilizing the Stock Price of the Company Within Three Years After Listing of ACM Research (Shanghai), Inc. (hereinafter referred to as the “plan for stabilizing stock price”). According to the requirements of the Opinions on Further Promoting the Reform of the New Share Issuance System of the China Securities Regulatory Commission (hereinafter referred to as the “China Securities Regulatory Commission”), the company and its controlling shareholders, actual controllers, and directors receiving remuneration and/or allowances from the company (except for independent directors, the same below) and senior management personnel promise to strictly abide by the following plan to stabilize the stock price of the company:

1. Conditions for starting and stopping stock price stabilization measures

(1) Starting conditions: If the company has made an initial public offering of shares and the closing price of the stock price within three years after the listing on the Science and Technology Board is lower than the company’s audited net assets per share (net assets per share = total equity of common shareholders attributable to the parent company in the consolidated financial statements / total number of company shares at the end of the year. If the company’s net assets or total shares have changed due to the occurrence of ex-rights and ex-dividends such as dividend payouts, bonus shares, capital reserve conversion to increase in share capital, and additional new shares, or due to other reasons, then the relevant calculation and comparison methods shall be adjusted in accordance with the relevant regulations of the stock exchange or other applicable regulations, the same below) in the previous fiscal year for 20 consecutive trading days, the company will take one or more of the following measures in order to stabilize the stock price of the company: (1) The company buys back stocks; (2) The controlling shareholder increases the shareholding; (3) The directors and senior management personnel increase the shareholding.

(2) Stopping conditions: During the implementation period of the following specific stock price stabilization measures, if the company’s stock closing prices for 20 consecutive trading days are higher than the company’s audited net assets per share in the previous fiscal year, or the continuation to buy back and/or increase the company’s shares will result in the company’s equity distribution not meeting the listing conditions, the implementation of stock price stabilization measures shall stop.

2. Measures to stabilize the stock price

1. Measures by the company to stabilize the stock price

When triggering the starting conditions for the above stock price stabilization measures, on the premise of ensuring that the company’s equity distribution meets the listing conditions and does not affect the company’s normal production and operation, the company shall comply with the Company Law of the People’s Republic of China, Administrative Measures for the Repurchase of Public Shares by Listed Companies (Trial), Supplementary Provisions on the Repurchase of Shares by Listed Companies by Centralized Auction, and other laws, administrative regulations, departmental regulations, regulatory documents, relevant provisions of the stock exchange, the company’s articles of association and the requirements of the company’s internal governance system, after timely implementation of the relevant statutory procedures, buy back shares from the public shareholders.

The company shall convene a board meeting within 10 trading days from the date of triggering the stock price stabilization measures to review the company's share repurchase proposal, which must be passed by more than half of all directors of the company's Board of Directors, and within 2 trading days after the Board of Directors makes a resolution, a public announcement of the Board of Directors resolutions, relevant proposals and notice of convening a general meeting of shareholders shall be made. The proposal to repurchase shares shall include the price or price range of the shares to be repurchased, the number of shares, the period of repurchase, as well as the laws, administrative regulations, departmental regulations, regulatory documents and other information that shall be included in the relevant regulations of the stock exchange. The resolution of the company's general meeting of shareholders on the repurchase of shares must be passed by more than two-thirds of the voting rights held by the shareholders present at the general meeting of shareholders. The controlling shareholders of the company undertakes to vote in favor of such repurchase matters at the general meeting of shareholders. The company shall initiate the implementation of the specific plan for stabilizing the stock price within 5 trading days after the plan is reviewed and approved at the general meeting of shareholders. The repurchased shares will be cancelled according to law and the company's capital reduction procedures will be processed in a timely manner.

If the company passes the share repurchase proposal for the purpose of stabilizing the stock price, the number and number of shares repurchased by the company shall meet the following conditions:

1. The amount of funds used for a single share repurchase is not less than 10% of the net profit attributable to shareholders of the company audited in the previous fiscal year, but not higher than 20% of the net profit attributable to shareholders of the company audited in the previous fiscal year;
2. The total amount of repurchase funds used to stabilize stock prices in the same fiscal year shall not exceed 50% of the net profit attributable to shareholders of the company audited in the previous fiscal year.

If the above standards are exceeded, the relevant stock price stabilization measures will not continue to be implemented in the current year. However, when the situation that needs to initiate stock price stabilization measures continues to occur in the following year, the company will continue to implement the stock price stabilization plan in accordance with the above principles.

2. Measures by the controlling shareholder to stabilize the stock price

When the closing price of the company's stock repurchase plan is lower than the company's audited net assets per share in the previous fiscal year for 20 consecutive trading days after the expiration of the implementation period of the company's share repurchase plan, or when the company's share repurchase measures cannot be implemented, the controlling shareholder of the company shall initiate a plan to increase the company's shares through auctions in the secondary market:

1. Under the premise of compliance with the conditions and requirements of laws, administrative regulations, departmental rules, regulatory documents, and relevant provisions of the stock exchange, such as the Administrative Measures for the Acquisition of Listed Companies and the Shanghai Stock exchange Science and Technology Board Listing Rules, the controlling shareholder of the company shall increase the shareholding in the company's stock, and promise to vote in favor of the company's share price stabilization plan with all the votes it has at the general meeting of shareholders.

2. The controlling shareholder shall, within 10 trading days from the date of triggering the stock price stabilization measure, notify the company in writing of its specific plan to increase its shareholding in the company and the company will make an announcement. The controlling shareholder shall initiate the implementation of the specific stock price stabilization plan within 5 trading days after the announcement of the stock price stabilization plan.

3. If the controlling shareholder of the company increases the company's shares for the purpose of stabilizing the stock price, the number and amount of the company's shares increased shall meet the following conditions:

(1) The accumulative amount of capital held by the controlling shareholder to increase the company's shares within 12 consecutive months shall not be less than 30% of the after-tax cash dividend amount of the company obtained in the previous year, and shall not exceed the total after-tax cash dividend amount of the company obtained by the controlling shareholder in the previous year;

(2) The cumulative increase in the number of shares held within 12 consecutive months does not exceed 2% of the company's total shares. If this requirement conflicts with item (1), this item shall prevail.

If the above standards are exceeded, the relevant stock price stabilization measures will not continue to be implemented in the current year. However, when the situation that needs to initiate stock price stabilization measures continues to occur in the following year, the stock price stabilization plan will continue to be implemented in accordance with the above principles.

3. Measures by the directors and senior management personnel to stabilize the stock price

When the company initiates stock price stabilization measures and the closing share price of the company's stocks is lower than the company's audited net assets per share in the previous fiscal year for 20 consecutive trading days after the expiration of the implementation period of the shareholding increase plan of the controlling shareholder, or if the share price stabilization measures for controlling shareholders to increase their shares cannot be implemented, the directors and senior management personnel shall initiate a plan to increase the company's shares through auction transactions through the secondary market:

1. Under the premise of compliance with the conditions and requirements of laws, administrative regulations, departmental regulations, regulatory documents, and relevant regulations of the Stock exchange, such as the Administrative Measures for the Acquisition of Listed Companies and Management Rules for Shares of the Company Held by Directors, Supervisors and Senior Management Personnel of Listed Companies, the directors and senior management personnel shall increase their shareholding in the company's stock, and promise to vote in favor of the company's share price stabilization plan as its director (if any) on the Board of Directors.

2. The above mentioned directors and senior management personnel with the obligation to increase shareholding shall notify the company in writing of the specific plan to increase the company's shares within 10 trading days from the date of triggering the share price stabilization measure and the company shall make an announcement. These directors and senior management personnel shall initiate the implementation of the specific stock price stabilization plan within 5 trading days after the announcement of the stock price stabilization plan.

3. Except for force majeure, if the above mentioned directors and senior management personnel who have the obligation to increase their shareholdings increase their shareholdings for the purpose of stabilizing the stock price, the number and number of shares held by the company shall meet the following conditions:

Within one fiscal year from the date on which the conditions for starting the above stock price stabilization measures have been achieved, the amount of funds for directors and senior management to increase their holdings of the company's shares shall be not less than 10% but not more than 30% of the total amount of after-tax cash dividends (if any), salaries and allowances received from the company in the previous year.

If the above standards are exceeded, the relevant stock price stabilization measures will not continue to be implemented in the current year. However, when the situation that needs to initiate stock price stabilization measures continues to occur in the following year, the stock price stabilization plan will continue to be implemented in accordance with the above principles.

4. During the period of validity of the plan for stabilizing stock price, newly appointed directors and senior management personnel who meet the above conditions shall abide by the provisions on the obligations and responsibilities of the company's directors and senior management in the plan for stabilizing stock price. The company and its controlling shareholder, existing directors, and senior management personnel shall urge the newly appointed directors and senior management personnel to abide by the plan for stabilizing stock price and sign relevant commitments before they receive written nominations.

4. Other measures to stabilize the stock price

1. On the premise of complying with the laws, administrative regulations, departmental regulations, regulatory documents, and relevant provisions of the stock exchange and ensuring the company's operating capital requirements, the company may, through the review and approval of the meeting of the Board of Directors and general meeting of shareholders, stabilize the company's share price by implementing profit distribution or capital accumulation fund to increase share capital;

2. On the premise of complying with the laws, administrative regulations, departmental regulations, regulatory documents, and relevant provisions of the stock exchange, the company may improve the company's performance and stabilize the company's stock price by reducing expenditures, limiting senior management's remuneration, and suspending the equity incentive plan;

3. Other measures to stabilize stock prices as prescribed by laws, administrative regulations, departmental rules, and regulatory documents, and approved by the China Securities Regulatory Commission and the stock exchange.

3. Binding measures

1. The company has not fulfilled the binding measures to stabilize the stock price commitment

If the company fails to perform or fails to fulfill its commitment to stabilizing the stock price according to the schedule, it is necessary to publicly explain the specific reasons on the disclosure media designated by the general meeting of shareholders and the China Securities Regulatory Commission. If it is not caused by force majeure and causes losses to the investor, the company will bear the liability for compensation to the investor according to law and bear the corresponding responsibility according to the requirements of laws, administrative regulations and relevant regulatory agencies; if it is caused by force majeure, the company shall research the treatment plan as soon as possible to reduce the loss of investor's interests to the minimum, and submit it to the general meeting of shareholders for consideration, in order to protect the interests of the company's investors as much as possible.

2. Binding measures for controlling shareholder's failure to fulfill commitment to stabilize the stock price

If the controlling shareholder fails to perform or fails to fulfill its commitment to stabilize the stock price according to the schedule, the specific reason shall be publicly disclosed on the disclosure media designated by the general meeting of shareholders and the China Securities Regulatory Commission. If it is not caused by force majeure, the controlling shareholder shall agree not to receive the part of the company's distributed profits that belongs to the controlling shareholder until the completion of the relevant commitments. If it causes losses to the investor, compensation shall be made for the investor's losses according to law; if it is caused by force majeure, the controlling shareholder shall research the treatment plan as soon as possible to reduce the loss of investor's interests to the minimum, in order to protect the interests of the investors as much as possible.

3. Binding measures for directors and senior management personnel's failure to fulfill commitment to stabilize the stock price

If the above mentioned directors and senior management personnel who have an obligation to increase shareholdings fail to perform or fail to fulfill their commitment to stabilize the stock price according to the schedule, the specific reason shall be publicly disclosed on the disclosure media designated by the general meeting of shareholders and the China Securities Regulatory Commission. If it is not caused by force majeure, the salary and/or allowance of directors and senior management personnel should be reduced or stopped. If it causes losses to the investor, compensation shall be made for the investor's losses according to law; if it is caused by force majeure, the directors and senior management personnel shall research the treatment plan as soon as possible to reduce the loss of investor's interests to the minimum, in order to protect the interests of the investors as much as possible.

This letter of commitment will take effect from the date of the company's initial public offering and listing on the Science and Technology Board.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing)

/s/ ACM Research (Shanghai), Inc.

ACM Research (Shanghai), Inc.

(seal)

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing)

/s/ Hui Wang
HUI WANG

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing)

/s/ Luo Qianli

Luo Qianli

/s/ Haiping Dun

HAIPING DUN

/s/ Stephen Sun-Hai Chiao

STEPHEN SUN-HAI CHIAO

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Plan and Binding Measures for Stabilizing the Stock Price of the Company Within Three Years After Listing)

/s/ Wang Jian

Wang Jian

/s/ Lisa Yi Lu Feng

LISA YI LU FENG

/s/ Sotheara Cheav

SOTHEARA CHEAV

/s/ Chen Fuping

Chen Fuping

/s/ Luo Mingzhu

Luo Mingzhu

Date: Year Month Day

Commitment Letter Regarding Fraudulent Issuance of Listed Shares

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “company”) intends to apply for an initial public offering of shares and be listed on the Science and Technology Board (hereinafter referred to as “this issuance and listing”), the company as well as the controlling shareholder and actual controller of the company make the following commitment:

1. Ensure that the company does not have any fraudulent issuance in this issuance and listing.

2. If the company does not meet the conditions for issuance and listing, deceives the issuance registration through fraudulent means and the issuance and listing have already taken place, the company as well as the controlling shareholder and actual controller of the company will initiate the share repurchase process within 5 working days after the China Securities Regulatory Commission and other competent authorities have confirmed and which has become effective (if a lawsuit is involved, the final judgment of the judicial authority shall prevail), and repurchase all new shares of the company’s public offering this time. The specific responsibility for repurchase shall be subject to the final determination by the competent authority such as the China Securities Regulatory Commission.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Fraudulent Issuance of Listed Shares)

/s/ ACM Research (Shanghai), Inc.

Regarding ACM Research (Shanghai), Inc.

(seal)

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Fraudulent Issuance of Listed Shares)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Fraudulent Issuance of Listed Shares)

/s/ Hui Wang

HUI WANG

Date: Year Month Day

Attachment: Legal requirements

1. Article 93 of the Guidelines for Contents and Formats of Information Disclosure by Companies Offering Securities to the Public No. 41 - Prospectus of Science and Technology Board Companies: The issuer shall fully disclose the important commitments made by the issuer, shareholders, actual controllers, directors, supervisors, senior management personnel, core technical personnel of the issuer, and the sponsors and securities service institutions of this issuance, constraining measures for the failure to fulfill the commitments, as well as the performance of commitments that have triggered the fulfillment of conditions. Commitments mainly include:

(1) Restrictions on the sale of shares held by shareholders before the issuance, voluntary lock-up of shares, extension of lock-up period, and shareholders' intent to hold and reduce holdings;

(2) Measures and commitments to stabilize stock prices;

(3) Measures and commitments for share repurchase and share buyback;

(4) **Commitment to buy back shares with respect to fraudulent issuance and listing;**

(5) Measures and commitments to make up for the diluted immediate returns;

(6) Commitment of profit distribution policy;

(7) Commitment to bear compensation or liability for compensation according to law;

(8) Other commitments.

2. "Notice on Matters Concerning Effectively Improving the Quality of Prospectus (Application Draft) and the Quality of Inquiry Responses" 6 of the Shanghai Stock Exchange Science and Technology Board Listing Review Center regarding investor protection (commitment to fraudulent issue of share buybacks): 20. Sponsoring organizations are asked to urge issuers and their controlling shareholders and actual controllers, in accordance with Article 68 of the Administrative Measures on the Initial Public Offering of Stocks of Science and Technology Board (Trial)", to clarify the initiation of the share repurchase procedures within 5 working days after the company, its controlling shareholder and actual controller are confirmed by the competent authority such as the China Securities Regulatory Commission when the company is found to have made fraudulent issuance, and to make a commitment to buy back all the new shares of the company's public offering; if there is a placement of old shares, the shareholders implementing the placement shall also commit to repurchase the original restricted shares that have been transferred.

Commitment Letter
Regarding the Lack of False Records, Misleading Statements or Major Omissions in the [*]**

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to issue an initial public offering and be listed on the Science and Technology Board (hereinafter referred to as “this issuance and listing”), the enterprise, as the controlling shareholder of the issuer, makes the following commitment:

1. There are no false records, misleading statements or major omissions in the issuer’s [***] and other information disclosure materials for this issuance and listing, and the enterprise assumes individual and joint legal responsibility for its authenticity, accuracy, and completeness.
2. If the China Securities Regulatory Commission (hereinafter referred to as the “China Securities Regulatory Commission”), the Shanghai Stock Exchange or other competent authorities determine that the contents of the [***] contain false records, misleading statements or major omissions, and such circumstances have a significant and substantial impact on whether the issuer meets the issuance conditions prescribed by law, then the enterprise promises to repurchase the original restricted shares (if any) that the enterprise has transferred in accordance with the provisions of the Company Law of the People’s Republic of China and the Securities Law of the People’s Republic of China.
3. If the issuer’s [***] and other information disclosure materials contain false records, misleading statements or major omissions, causing investors to suffer losses in securities issuance and trading, the enterprise will compensate the investors for the losses according to law.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Lack of False Records, Misleading Statements or Major Omissions in the [***])

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Attachment: Legal requirements

1. Article 142 of the Company Law of the People’s Republic of China: The company shall not purchase shares of the company. However, except for one of the following situations:

- (1) To reduce the registered capital of the company;
- (2) To merge with other companies holding shares of the company;
- (3) To use the shares for employee stock ownership plans or equity incentives;
- (4) The shareholders make a resolution of disagreement at the shareholders’ general meeting regarding the company merger and division and requests the company to purchase its shares;
- (5) To use the shares on converting corporate bonds issued by the listed company that can be converted into stocks;
- (6) The listed company is necessary to maintain company value and shareholders’ rights and interests.

2. Article 24 of the Securities Law of the People’s Republic of China: If the issuer of the stock conceals important facts or fabricates major false content in the prospectus and other securities issuance documents, and the issuance and listing have already occurred, the securities regulatory authority under the State Council may order the issuer to repurchase securities, or order the responsible controlling shareholder and actual controller to buy back the securities.

3. Opinions of the China Securities Regulatory Commission on Further Promoting the Reform of the New Share Issuance System, Article 2, Item (1), point 3: The issuer and its controlling shareholder shall make a public commitment in the public offering and listing documents that if the issuer’s prospectus contains false records, misleading statements or major omissions, which have a significant and substantial impact on determining whether the issuer meets the issuance conditions prescribed by law, all new shares in the initial public offering will be repurchased according to law, and the controlling shareholder of the issuer will repurchase the original restricted shares that have been transferred. The issuer and its controlling shareholders, actual controllers, directors, supervisors, senior management personnel and other relevant responsible entities shall make public commitments in public offerings and listing documents: If the issuer’s prospectus and other information disclosure materials contain false records, misleading statements or major omissions, causing investors to suffer losses in the issuance and trading of securities, the losses of the investors will be compensated according to law.

4. Article 20 of the Guidelines for Contents and Formats of Information Disclosure by Companies Offering Securities to the Public No. 41 - Prospectus of Science and Technology Board Companies: The issuer shall make the following statement on the title page of the prospectus: “The issuer and all directors, supervisors and senior management personnel promise that there will be no false records, misleading statements or major omissions in the prospectus and other information disclosure materials, and shall bear individual and joint legal liabilities for their authenticity, accuracy and completeness”; the controlling shareholder and actual controller of the issuer promise that there will be no false records, misleading statements or major omissions in this prospectus, and bear individual and joint legal responsibility for its authenticity, accuracy and completeness”; “The issuer and all directors, supervisors, senior executives, the controlling shareholder and actual controller of the issuer, sponsors, and underwriting securities companies promise that if the issuer’s prospectus and other information disclosure materials contain false records, misleading statements or major omissions, causing investors to suffer losses in the issuance and trading of securities, the losses of the investors will be compensated according to law.”

5. Article 3 of Questions and Answers on Issuance Supervision and Administration - Implementation of Initial Commitments and Regulations on Transfer of Old Shares: What are the specific requirements for share repurchase commitments? Answer: The prospectus and relevant reporting documents shall make it clear that if the prospectus contains false records, misleading statements or major omissions that constitute a significant and substantial impact on the judgment of the issuer’s compliance with the issuance conditions prescribed by law, how the issuers and controlling shareholders will initiate share repurchase measures and at what price, etc.; commitments made by the company and its controlling shareholders, actual controllers, directors, supervisors, senior management personnel and relevant intermediaries regarding compensation for investor losses should be specific and clear to ensure that the legitimate rights and interests of investors are effectively protected.

6. Article 5 of the Memorandum No. 7 of Listed Companies on Daily Information Disclosure Work - Standard Requirements for Information Disclosure of Commitment to Fulfillment by Related Parties After the Issuance of New Shares: (1) The listed company and its controlling shareholder publicly promise that if the issuer’s prospectus contains false records, misleading statements or major omissions, which will have a significant and substantial impact on whether the issuer meets the issuance conditions prescribed by law, all new shares in the initial public offering will be repurchased according to law, and the controlling shareholder of the issuer will repurchase the original restricted shares that have been transferred.

Commitment Letter Regarding Making Up for the Diluted Immediate Returns

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to apply for an initial public offering and be listed on the Science and Technology Board, the enterprise, as the controlling shareholder of the issuer, now in accordance with the relevant laws, administrative regulations and relevant regulations of the China Securities Regulatory Commission, makes the following commitment with respect to the matters on making up for the diluted immediate returns:

The enterprise will urge the issuer to effectively implement the measures to make up for the diluted immediate returns, and promise that the directors of the company or nominated by the company will participate in the issuer's operation and management activities within the scope of its authority, and do its utmost to protect the legitimate interests of the issuer and its shareholders.

(There is no text below on this page)

(There is no text on this page, it is the signature page of Commitment Letter Regarding Making Up for the Diluted Immediate Returns)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: May 21, 2020

Commitment Letter Regarding Unfulfilled Commitment on Binding Measures

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to issue an initial public offering and be listed on the Science and Technology Board (hereinafter referred to as “this issuance and listing”), the enterprise / I, as the controlling shareholder / actual controller of the issuer, make(s) the following commitment:

I. The enterprise / I guarantee(s) to strictly fulfill all obligations and responsibilities in all public commitments disclosed in the issuer’s listing [***].

II. If the enterprise / I fail(s) to fully or effectively fulfill the public commitments for reasons other than force majeure, then the enterprise / I will promise to take the following measures according to the specific circumstances:

1. The enterprise / I will publicly explain the specific reasons for the failure to fulfill the commitments in the disclosure media designated by the general meeting of the shareholders and the China Securities Regulatory Commission (hereinafter referred to as the “China Securities Regulatory Commission”);

2. If the enterprise / I fail(s) to perform the public commitments causing the investor to suffer losses in the securities transaction, the enterprise / I will compensate the investor for the losses according to law ;

3. Until the enterprise / I completely eliminate(s) all adverse effects caused by the failure of the enterprise / myself to fulfill the relevant commitments, the enterprise / I will not temporarily receive dividends distributed or dividend shares distributed by the issuer;

4. If the enterprise / I obtain(s) economic benefits due to failure to perform the public commitments, the income belongs to the issuer, and the enterprise / I shall pay it within five working days from the date of obtaining such income to an account designated by the issuer.

III. If the enterprise / I fail(s) to fulfill the public commitments due to force majeure, the enterprise / I need(s) to make a new commitment (for the relevant commitments, relevant approval procedures need to be performed in accordance with laws and regulations and the issuer’s articles of association) and accept the following binding measures until the new commitment is fulfilled or the corresponding remediation measures are implemented:

1. Publicly explain the specific reasons for non-performance at the general meeting of the shareholders and the disclosure media designated by the China Securities Regulatory Commission;

2. Research the treatment plan as soon as possible to reduce the loss of investor’s interests to the minimum, in order to protect the investor’s interests as much as possible.

(There is no text below on this page)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

(There is no text on this page, it is the signature page of Commitment Letter Regarding Unfulfilled Commitment on Binding Measures)

/s/ Hui Wang

HUI WANG

Date: Year Month Day

Commitment Letter Regarding the Avoidance of Competition in the Same Industry

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to apply for an initial public offering and be listed on the Science and Technology Board, the enterprise, as the controlling shareholder of the issuer, now in accordance with the relevant laws, administrative regulations and relevant regulations of the China Securities Regulatory Commission, makes the following commitment with respect to the matters on avoiding competition in the same industry as the issuer’s main business:

1. The enterprise (including other enterprises controlled by the enterprise except the issuer and its holding enterprise, the same below) is currently not engaged in any form of business or activity that constitutes a competitive relationship with the issuer’s (including enterprises directly or indirectly controlled by the issuer, the same below) main business; the issuer’s assets are complete, and its assets, businesses, personnel, finances, and institutions are independent of the enterprise.

2. From the date of issuance of this letter, the enterprise will not engage in any form of business or activity that the issuer believes it constitutes a competitive relationship with the issuer’s main business, or support other enterprises except for the issuer in any form to engage in business or activities that the issuer believes it forms a competitive relationship with the issuer’s main business, but except relevant business or activities exempted from the performance of the aforementioned commitments as followed by review process of the issuer’s meeting..

3. From the date of issuance of this letter, if the enterprise will inevitably engage in business or activities that form a competitive relationship with the issuer in the future, the enterprise will transfer or terminate the above mentioned business or activities in a timely manner on its own initiative or after the issuer raises an objection to these business or activities the enterprise performed; and in the case where the enterprise transfers the aforementioned business or activities, the issuer shall enjoy the priority transfer right with respect to these business or activities.

4. The above mentioned commitments will continue to be effective during the period when the enterprise is the controlling shareholder of the issuer.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Avoidance of Competition in the Same Industry)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: May 21, 2020

Commitment Letter Regarding the Standardization and Reduction of Related Transactions

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to apply for an initial public offering of shares and be listed on the Science and Technology Board, the company, as the issuer’s controlling shareholder, makes the following commitment in order to ensure the sustainable development of the issuer’s business and standardize related transactions:

1. On the premise of not affecting the interests of the issuer and other shareholders, the company will take measures to standardize and reduce related transactions with the issuer.

2. For related transactions within the normal business scope or other reasonable causes that need to occur or cannot be avoided, the company and other companies controlled by the company will sign a transaction agreement with the issuer according to law, and in accordance with the relevant laws, administrative regulations, departmental regulations, regulatory documents and the then valid “ACM Research (Shanghai), Inc. Articles of Association”, perform the approval process, and ensure that these related transactions will be implemented based on the principle of fair pricing.

3. The company will strictly perform related obligations such as avoiding voting by related parties in strict accordance with relevant regulations, and fulfill the statutory approval procedures and information disclosure obligations to approve related transactions.

4. Ensure that the related transactions are not used to illegally transfer the issuer’s funds, profits or engage in other acts that damage the interests of the issuer and other shareholders and creditors .

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Standardization and Reduction of Related Transactions)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Commitment Letter Regarding the Avoidance of Funds Occupation and Illegal Guarantee

Given that ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to apply for an initial public offering and be listed on the Science and Technology Board, the company, as the issuer’s controlling shareholder, now in accordance with the relevant laws, administrative regulations and relevant regulations of the China Securities Regulatory Commission, in order to protect the legitimate rights and interests of the issuer and other shareholders, the company confirms and makes the following commitment:

1. As of the date of this letter, there is no non-operating occupation of the issuer or its holding company’s funds by the company and other companies controlled by the company, and there is no situation in which the issuer or its holding company provides guarantees for the company and other companies controlled by the company in violation of the regulations.

2. The company promises to exercise the rights of shareholders in accordance with the law, and to not abuse the rights of shareholders to damage the legitimate interests of the issuer or other shareholders of the issuer. The company and other companies controlled by the company will not illegally occupy the funds of the issuer or its holding company by borrowing, paying debts, making advances or otherwise, and will not require the issuer or its holding company to provide guarantees in violation of the regulations.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding the Avoidance of Funds Occupation and Illegal Guarantee)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Statement and Commitment Letter

As the controlling shareholder of ACM Research (Shanghai), Inc. (hereinafter referred to as the “company” or “ACM Shanghai”), the enterprise makes the following statements and commitments:

1. The investment funds corresponding to the registered capital of the company subscribed to or subject to transfer by the enterprise are all owned or raised by the enterprise, and the source is legal and compliant.
 2. The company’s equity held by the enterprise is the true holding of the enterprise, the ownership is clear, and there is no entrusted shareholding, trust shareholding or other special arrangements.
 3. As of the date of issuance of this letter, there is no special arrangement between the enterprise and other shareholders of the company for unanimous action relationship, voting entrustment / agency, etc.
 4. As of the date of issuance of this letter, the company’s shares held by the enterprise have not been pledged, frozen, sealed up or set up with other third party rights, nor have they been involved in any disputes or potential disputes.
 5. As of the date of issuance of this letter, except for the Commitment Letter issued by the enterprise on June 12, 2019 to Xinwei (Shanghai) Management Consulting Partnership (limited partnership), Jiaying Haitong Xuchu Equity Investment Fund Partnership (limited partnership), Shanghai Jinpu Lingang Smart Technology Equity Investment Fund Partnership (limited partnership), Wuxi Taihu Guolian Emerging Growth Industry Investment Enterprise (limited partnership), Xinshi (Shanghai) Management Consulting Partnership (limited partnership), Hai Feng Investment Holding Limited, Xingang (Shanghai) Management Consulting Partnership (limited partnership), as well as the contents stipulated in the Commitment Letter issued by the company on November 29, 2019 to Shanghai Yongkong Business Information Consulting Partnership (Limited Partnership), Shanghai Shanyi Enterprise Management Center (Limited Partnership), Shangrong Innovation (Ningbo) Equity Investment Center (Limited Partnership), Shanghai Shangrong Juyuan Equity Investment Center (Limited Partnership), Hefei Runguang Equity Investment Partnership (Limited Partnership), Shanghai Integrated Circuit Industry Investment Fund Co., Ltd., Shanghai Pudong Emerging Industries Investment Co., Ltd., and Shanghai Zhangjiang Technology Venture Capital (hereinafter collectively referred to as the “special agreement”), the enterprise and/or the company and other shareholders of the company do not have any written or oral agreement that involves and/or may involve investor investment return commitments, company performance commitments, related commitments related to the company’s listing, compensation clause, share buyback, agreement or commitment on valuation adjustment and other matters; from the date when the company submits its initial public offering of shares to the Shanghai Stock Exchange and the application documents for listing on the Science and Technology Board, the above mentioned special agreement automatically terminates, and there is no valid, written or oral agreement between the enterprise and/or the company and other shareholders of the company that involves and/or may involve investor investment return commitments, company performance commitments, related commitments related to the company’s listing, compensation clause, share buyback, agreement or commitment on valuation adjustment and other matters;
-

6. From January 1, 2017 to the date of issuance of this letter, the enterprise has no criminal offences of corruption, bribery, property embezzlement, misappropriation of property, or disruption of the socialist market economic order, there are no major violations involving national security, public safety, ecological security, production safety, public health and safety, etc., and there is no case of being investigated or subject to investigation by a judicial organ and the case has not been closed; there are no major litigation, arbitration or administrative punishment cases that have not been settled or can be reasonably foreseen by the enterprise.

7. The enterprise does not belong to a contract private equity fund, asset management plan (including fund subsidiary asset management plan, securities company asset management plan, etc., the same below) or a trust plan, nor is there a case of equity held by holding company for contract-type private equity funds, asset management plans or trust plans.

8. As of the date of issuance of this letter, except for the circumstances listed in Appendix 1, the enterprise has not directly or indirectly held any rights or interests in the company's main customers or suppliers; there is no connected relationships between the enterprise and intermediaries related to ACM Shanghai's application for initial public offering and listing on the Science and Technology Board (referring to [***], [***], Beijing Jindu Law Firm, Lixin Accounting Firm) (special general partnership), the same below) as well as the actual controllers, shareholders / partners, directors, supervisors, senior managers and managers of these units.

9. All original written materials, duplicate materials, photocopy materials, verbal information or testimonies provided by the enterprise to the company and its intermediaries in connection with the company's application for initial public offering and listing on the Science and Technology Board are true, complete and accurate, without any falsehood, concealment, omission or misleading; the copies provided by the enterprise or photocopies are consistent with the official copy or original content, and the seals and signatures on all documents are true. If the above mentioned commitment is violated, the enterprise will compensate the company and its intermediary institutions for all losses it has suffered in accordance with the law; if there are inconsistencies between the materials and information provided by the enterprise in the future, the enterprise will immediately notify the company and its intermediary institutions.

The commitment is hereby stated.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Statement and Commitment Letter)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Appendix 1 The enterprise’s shareholding in the major customers or suppliers of ACM Shanghai

Company name	Shareholding ratio (%)
NINEBELL CO., LTD	20

Commitment Letter Regarding Property Lease Matters

As the controlling shareholder of ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”), the enterprise now makes the following commitment with respect to the matters related to the issuer's lease of property:

1. With respect to the issuer’s lease of the property located at Floors 1-5, Building 4, No. 1690 Cailun Road, Zhangjiang Hi-Tech Park, Shanghai, with a total area of 5,900.28 square meters from Shanghai Zhangjiang (Group) Co., Ltd. (hereinafter referred to as “Zhangjiang Group”) where the property rights certificate has not been obtained and the issuer is unable to handle the leasing record registration for the leasing of such property, the enterprise promises that: during the validity period of the lease contract, if the issuer cannot continue to lease and use the above mentioned property due to the failure to obtain the property rights certificate and/or the failure to file the record, the enterprise is willing to unconditionally bear the costs and expenses (deducting the actual amount of insurance company claims) .
2. Regarding the situation where the entire property located at Building 2, No. 365 Chuanhong Road, Shanghai (a total area of 9,858.57 square meters) leased by the issuer from Shanghai Shengyu Cultural Development Co., Ltd. has been mortgaged and registered for mortgage, the enterprise promises that: Within the validity of the lease contract, if the issuer cannot continue to lease and use the above mentioned property due to such property mortgage matters, the enterprise is willing to unconditionally bear the costs and expenses incurred by the issuer due to the relocation (deducting the actual amount of insurance company claims); if the issuer is involved in litigation, arbitration and other disputes with the lessor and/or third party due to such mortgages, the enterprise is willing to unconditionally bear all costs and expenses such as the attorney's fees, litigation fees, and case acceptance fees paid by the issuer due to such disputes.

The commitment is hereby made.

(There is no text below on this page)

(There is no text on this page, it is the signature page of Commitment Letter Regarding Property Lease Matters)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: May 21, 2020

Commitment Letter Regarding Social Insurance and Housing Provident Fund Matters

The company, as the controlling shareholder of ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”), with respect to the relevant matters on the issuer’s failure to pay social insurance and housing provident fund for employees in accordance with regulations before the initial public offering of shares and listing on the Science and Technology Board, now makes the following commitment:

1. If the issuer’s employees pursue social insurance or housing provident fund and causes litigation or arbitration as a result, or are subject to administrative punishment by the relevant competent authorities, the enterprise will compensate the issuer in full and bear the responsibility for these matters. All expenses incurred that should be paid by the issuer.
2. If the competent department of labor, social security and housing provident fund require the issuer to make up payment for the employee’s social insurance and housing provident fund in the previous year, the enterprise will make up for the issuer on the amount approved by the competent authority.
3. If the issuer fails to pay social insurance and housing provident funds in accordance with the regulations and incurred any other expenses and economic losses, the enterprise will bear all the expenses on behalf of the issuer.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Social Insurance and Housing Provident Fund Matters)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Commitment Letter Regarding Foreign Exchange Matters

As the controlling shareholder of ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”), the enterprise now makes the following commitment with respect to the foreign exchange matters related to the issuer:

If the issuer or its holding company is subject to punishment by the foreign exchange management department for the company’s initial public offering of stock and related foreign exchange matters before the listing on the Science and Technology Board, the enterprise will unconditionally compensate the issuer and its holding company in full and bear all the expenses arising from these issues that should be paid by the issuer and its holding company.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Commitment Letter Regarding Foreign Exchange Matters)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

**Confirmation and Commitment Letter Regarding the Historical Evolution Related Matters
Regarding ACM Research (Shanghai), Inc.**

As the controlling shareholder of ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”), the enterprise now makes the following commitment with respect to the matters related to the issuer’s historical evolution:

1. In December 2006, the registered capital of the issuer’s predecessor, ACM Research (Shanghai), Inc. (hereinafter referred to as “ACMSH”) increased from USD \$1.2 million to RMB 174 million, of which the enterprise has performed valuation on the 45 patents for copper plating equipment and stress-free polishing equipment in the semiconductor copper process that it had obtained and the 62 patents being applied for at the time of valuation, as well as the exclusive license to use the patent technology and proprietary technology that will be applied for in the future development process, and an estimated price of RMB 84 million shall be provided as capital contribution to ACMSH. On January 31, 2007, the enterprise and ACMSH signed the Technology Licensing Agreement, but ACMSH failed to comply with the Technology Import and Export Management Regulations of the People’s Republic of China, Technology Import and Export Contract Registration Management Measure” and other relevant provision in the registration of technology import contracts for the Technology License Agreement. In this regard, the enterprise confirms and promises: The above mentioned capital contribution is true and effective. The enterprise has fulfilled its capital contribution obligations in full and on time. If the issuer is fined by the relevant government department for failing to register the technology import contract in the above mentioned Technology License Agreement, the enterprise will compensate the issuer for the fines in full in accordance with law.

2. In accordance with the Joint Venture Contract signed by the enterprise and Shanghai Venture Capital Co., Ltd. on March 19, 2007, the enterprise shall pay 2.5 million yuan in cash capital contribution and 37.5 million yuan in fixed assets capital contribution within 60 days (that is, June 24, 2007) after the new Business License for Corporate Legal Entity (April 25, 2007) is issued by ACMSH, however, the actual capital contribution time of the enterprise does not comply with the above mentioned provisions of the Joint Venture Contract. In this regard, the enterprise confirms and promises: As of the date of issuance of this letter, the other shareholders and creditors of the issuer and its predecessor ACMSH have not raised any objections or claims for breach of contract for the enterprise’s failure to pay its registered capital on time. The above mentioned failure of the enterprise to pay its capital contribution on time has not damaged the legitimate rights and interests of the issuer and its predecessor, ACMSH, creditors, and other shareholders, and there are no disputes or potential disputes.

Confirmation and commitment are hereby made.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Confirmation and Commitment Letter Regarding the Historical Evolution Related Matters of ACM Research (Shanghai), Inc.)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

Confirmation Letter

ACM Research (Shanghai), Inc. (hereinafter referred to as the “issuer”) intends to apply for an initial public offering of shares and be listed on the Science and Technology Board. As the controlling shareholder of the issuer, the enterprise signed the Technology License Agreement (hereinafter referred to as the “agreement”) with the predecessor of the issuer, ACM Research (Shanghai), Inc. (hereinafter referred to as “ACMSH”) on January 31, 2007”, and the relevant matters related to the agreement are now confirmed as follows::

1. From the effective date of the agreement to the date of issuance of this letter, the enterprise has not used the licensed intellectual property in the agreement in any form, nor has the agreement been assigned or transferred to any third party, nor has the enterprise transfer the licensed intellectual property to any third party in any form, permit any third party to use, or set any burden of rights on the licensed intellectual property rights.

2. The agreement represents the true meaning of the enterprise and ACMSH, that the content is legal and valid, and the enterprise does not have any controversies or disputes regarding the signing, content and performance of the agreement.

3. From the effective date of the agreement to the date of issuance of this letter, the enterprise does not have any controversies or disputes over intellectual property rights such as patents, patent application rights, trademarks, and proprietary technologies owned by the issuer (including its predecessor ACMSH) and its subsidiaries.

The commitment is hereby made.

(There is no text below on this page)

(There is no text on this page, it is the signature page of the Confirmation Letter)

ACM RESEARCH, INC.

Signature: /s/ Hui Wang

Name: HUI WANG

Title: Authorized representative

Date: Year Month Day

The shares in the Offering intends to be listed on the STAR Market, which has high investment risks. The listed companies on the STAR Market have the characteristics of large investment in research and development, high risk of operation, unstable performance and high risk of delisting, where Investors are facing high market risks. Investors should fully understand the investment risks of the STAR Market and the risk factors disclosed by the Company, and make investment decisions prudently.



ACM Research (Shanghai), Inc.

(Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone)

**An Initial Public Offering and Listing of
Shares on the STAR Market**

[*]**

(Declaration Version)

The application for the offering of the Company has yet not been approved by Shanghai Stock Exchange and the CSRC. This [***] does not have the legal force for stock issue, which is used only for advance disclosure purpose. Investors shall make investment decisions based on the officially announced [***].

Sponsor (Lead Underwriter)

[***]

([***])

Co-lead Underwriter

[***]

[***]

Issuer Statement

No decision or opinion issued by the China Securities Regulatory Commission (hereinafter referred to as the “CSRC”) or the Shanghai Stock Exchange represents any guarantee for authenticity, accuracy and completeness of the registration documents and the information disclosed, or any substantial judgment or guarantee on the profitability, the investment value of the Issuer or any returns to investors. Any statement to the contrary is false and untrue.

According to the provisions of *the Securities Law*, after the Offering of shares in accordance with the law, the Issuer shall be solely responsible for the changes in its operation and earnings; investors shall independently judge the investment value of the Issuer, make investment decisions independently, and bear the investment risks caused by changes in the Issuer’s operation and earnings or share price changes after the Offering of shares in accordance with the law.

The Issuer and all of its directors, supervisors and senior managers shall undertake that there are no false records, misleading statements or major omissions in the [***] and other information disclosure documents, and bear several and joint legal liabilities for their authenticity, accuracy and completeness.

The controlling shareholder and the de facto controller of the Issuer undertake that there are no false records, misleading statements or major omissions in the [***], and bear several and joint legal liabilities for its authenticity, accuracy and completeness.

The person in charge of the Company, the person in charge of the accounting work and the person in charge of the accounting institution shall ensure that the financial and accounting information in the [***] is true and complete.

The Issuer and all of its directors, supervisors and senior managers, its controlling shareholder, its actual controller, the Sponsor and the underwriting securities companies promise to compensate investors for their losses in the Offering and the transactions caused by any false records, misleading statements or major omissions in the [***] and other disclosure documents of the Issuer in accordance with the law.

The Sponsor and the securities service institutions promise to compensate investors for losses caused by any false records, misleading statements or major omissions in the documents prepared and issued by them for the Public Offering of the Issuer.

Overview of the Offering

Class of Shares	RMB Common Shares (Class A Shares)
Number of Shares in the Offering	The number of shares offered in the Public Offering shall not exceed 43,355,800, accounting for at least 10.00% of the total share capital of the Company after the Offering. The Offering does not involve any public offering of shares by shareholders.
Par Value per Share	1.00 Yuan
Offering Price per Share	[] Yuan
Estimated Offering Date	[MM][DD][YY]
The Stock Exchange and Board for Listing	the STAR Market of the Shanghai Stock Exchange
Total Share Capital after the Offering	Not more than 433,557,100 shares
Participation of the Sponsor's Relevant Subsidiaries in Strategic Placement	The Sponsor will arrange relevant subsidiaries to participate in the strategic placement in the Offering, which will be carried out in accordance with relevant regulations of the exchange. The Sponsor and its relevant subsidiaries will further clarify the specific plan of participating in the strategic placement in the Offering and submit relevant documents to the exchange as required.
Sponsor (Lead Underwriter)	[***]
Co-lead Underwriter	[***]
Signing Date	[MM][DD], 2020

Important Notice

The Company particularly prompts investors to read this [***] in full and pay special attention to the following major issues before they make investment decisions

I. The Company particularly prompts investors to pay attention to the following risk factors

(I) Risks of Technical Innovation

The Company operates in the semiconductor special equipment industry, which involves many academic fields including microelectronics, electricity, mechanics, chemical engineering, fluid dynamics, automation, image recognition, communications, software system, among others, resulting in a high threshold in technical research and development. The vigorous development of the global semiconductor industry is accompanied by the constant technical innovations in the semiconductor industry and varying customer demands. The Company has been adhering to the development strategy of differentiated competition and innovation for long. If the Company cannot continuously ensure sufficient research and development investment, or process nodes for chips are further reduced, or a new chip manufacturing technology comes out, the core technologies of the Company, including SAPS, TEBO, and Tahoe, and relevant products may become less advanced, which may cause adverse effects on the operating performance of the Company.

(II) Risks of Losing Key Technical Talents

Technical talents are a key factor of competitiveness in the semiconductor special equipment industry, which is a technology-intensive industry. After the development for over ten years, the Company has built up a technical research and development team with rich experience headed by Dr. Hui Want. The Company has provided competitive remunerations, share incentives, and option incentives to the technical research and development team in the hope of improving the loyalty and stability of the technical team. However, the continuous development of the semiconductor special equipment industry in Chinese mainland will lead to more intensive competition for technical talents. If the Company loses substantial key technical personnel due to remuneration or other reasons, or the Company could not motivate existing technical talents or could not attract outstanding technical talents, the Company may be short-handed in the technical team, hence could not continue the research, development, and sales of new products, or provide quality services to customers; moreover, the Company may have higher recruitment and training costs, which may cause adverse effects on the technical research and development capability and operating performance of the Company.

(III) Risks of Market Competition

The global market of the semiconductor special equipment industry is intensively competitive; since the market is dominated by international giants, the Company's products have to directly compete on the market with such international giants. Compared with semiconductor special equipment manufacturers in Chinese mainland, such international giants are stronger in funds, technical accumulation, sales team, manufacturing capability, sales channels, and market awareness, have relations with more customers and partners, and have longer operating histories, more abundant product portfolios, and wider geographical coverage, hence can identify and respond to changes in the market and customer demands in a better manner. Some international giants are capable of offering bundle discounts for customers purchasing multiple products at the same time.

With the constant growth of the semiconductor terminal application market in China, sub-industries, including semiconductor manufacturing, packaging, testing, material, and equipment, in China have been developing rapidly. During the third transition of the global semiconductor industry, it is estimated that the Chinese mainland market will become the main competition field for global semiconductor equipment manufacturers, hence the Company has to compete with both international giants and newcomers in China in the future. If the Company cannot effectively handle the competition with such competitors, the business incomes, results of operation, and

financial conditions of the Company may be affected adversely.

(IV) Risks of De Facto Controller Losing Control

ACMR, the controlling shareholder of the Company, has special voting rights. Specially, ACMR's shares are divided into shares of Class A common stock and shares of Class B common stock. The Class B common stock shares have 20 votes per share versus Class A common stock shares. As of the signing date of this [***], HUI WANG holds 168,006 shares of Class A common stock and 1,146,934 shares of Class B common stock, representing not less than 35% of total voting rights in ACMR.

ACMR was listed on NASDAQ in November 2017, and make the disclosure as follows in its U.S. prospectus:

"Each outstanding share of Class B common stock is convertible into one share of Class A common stock (a) at any time, at the option of the holder, or (b) upon any transfer of such share of Class B common stock, whether or not for value, except for certain transfers described in our restated charter, including transfers to family members, trusts solely for the benefit of the stockholder or their family members, and partnerships, corporations, and other entities exclusively owned by the stockholder or their family members.

In addition, on or after the date of this prospectus, all outstanding shares of Class B common stock will convert automatically into shares of Class A common stock, on a one for one basis, upon (a) the election of the holders of a majority of the then outstanding shares of Class B common stock or (b) on the first December 31 that occurs more than five years after the date of this prospectus if the October Market Cap with respect to the month of October immediately preceding such December 31 exceeds \$1.0 billion, provided that the conversion provided by this clause (b) shall not apply and no automatic conversion of Class B common stock into Class A common stock will ever occur pursuant to this clause (b) if the October Market Cap for the month of October immediately preceding a December 31 exceeds \$1.0 billion prior to the fifth anniversary of the date of this prospectus."

If all outstanding shares of Class B common stock of ACMR will be converted into shares of Class A common stock, on a one for one basis, according to the above provisions on conversion, then Hui WANG will hold less than 10% of voting rights in ACMR, and may lose the largest voting right status such that ACMR will be changed to a company without controlling shareholder and de facto controller, indirectly resulting in the ACMSH having no de facto controller.

HUI WANG, the de facto controller of the Company, holds more than 50% of the total shares of Class B common stock in ACMR, and HUI WANG has issued the letter of commitment with respect thereto which reads: "to ensure the stability of the de facto controller of the Issuer, I irrevocably make commitment that I will not voluntarily or actively convert shares of Class B common stock held by me in ACMR into shares of Class A common stock within 36 months from the date of this letter until the date of the IPO and listing of issuer's stocks on the STAR Market."

However, according to the aforesaid provisions on conversion, if the October Market Caps of October 2020, October 2021 and October 2022 will not exceed \$1.0 billion, and the October Market Cap of October 2023 will exceeds \$1.0 billion, then the shares of Class B of ACMR will be automatically converted into shares of Class A common stock, on a one for one basis, according to the aforesaid provisions on conversion, and accordingly ACMSH will face the risks on changes in de facto controller as early as December 31, 2023.

(V) Risk of Intellectual Property Disputes

The industry of special semiconductor equipment in which the Company is located is a typical technology-intensive industry, a leading enterprise with technical advantage in the industry needs to protect its own core technologies through applying for patents. The business results obtained by the Company, to some degree, rely on its own system of intellectual properties and the ability of the Company to maintain such intellectual properties and preserve confidential information, as well as the ability of the Company to engage in its business without infringing on any patent of others. As of December

31, 2019, the Company and its subsidiaries in which it owns controlling equity interest own 232 major patents which have been granted with patent rights, among which, 108 patents are domestic patents, 124 patents are foreign patents, and 227 patents are invention patents.

The Company will continue to apply for more patents according to actual needs of production and operation in the future, but cannot ensure that patent applications submitted by the Company will be actually granted with patents, the intellectual property regulatory and administrative authorities of each country will require the Company to observe numerous provisions and pay corresponding fees, a failure to observe such provisions or pay fees may result in the waiver or termination of patents or patent applications; the Company cannot ensure that granted patents are able to provide sufficient protection against a competitor which owns similar technologies, and a granted patent may be questioned, declared to be void, modified, cancelled, avoided or unable to be implemented, or cannot provide any competitive advantage due to other reasons.

The Company cannot protect its own intellectual properties globally as well, the Company chooses to apply for patents in the places where main production and operation, major and potential clients and major suppliers are located. If a competitor exists any infringement over intellectual properties of the Company within a region where patents of the Company cannot provide protection, then it may adversely affect businesses of the Company. In addition, the Company also takes measures to protect commercial secrets and non-patented technologies of the Company, including entering into confidentiality agreements with key employees, clients, suppliers and important third parties, but others may acquire knowledge of such commercial secrets and non-patented technologies, and then the operation of the Company may be adversely affected.

The Company may be involved in litigations for the purpose of protecting or enforcing its own patents, but such litigations may cost a great deal of money and take a long time, and the Company may be unable to win such litigations. Any potential intellectual property claims, or litigation raised by others against the Company may need a time-consuming and costly defense, regardless of whether a favorable result is obtained or not. This may result in that the Company will face the following results: the Company may be forced to cease the sale or use of parts or technologies which are accused of infringing on intellectual properties; the shipment of goods may be delayed; the Company may be required to compensate for damages or pay settlement fees to parties alleging to be infringed; the Company may need to obtain the license of relevant intellectual properties, but such license may be unable to be obtained at a reasonable price or cannot be obtained absolutely; the Company may be forced to redesign products containing technologies alleged to be infringing, but such redesign may be unrealizable or too costly; the Company may need to make compensation to clients, suppliers or other third parties for any loss arising from their use of technologies of the Company which are alleged to infringe on intellectual properties of third parties, which may have materially adverse effect on the financial status and business results of the Company.

As the period of patent application is relatively long, there may be applications under review but the Company does not have knowledge of such applications, these applications may ultimately be granted with patents, meanwhile, there may be granted patents which are relevant with products of the Company but the Company does not have knowledge of them, which will result in products or technologies of the Company being in infringing status.

The Company attaches great importance to protecting intellectual properties, assisting technology research and development personnel in generating patentable technology results, and improving the awareness of non-infringing intellectual properties of others. If an intellectual property dispute is brought by the Company against a competitor, or any intellectual property of the Company is infringed by a competitor, the production and operation of the Company will be adversely affected.

(VI) Risks of Reliance on Suppliers of Some Key Parts

At present, the Company relies on existing suppliers for some key parts used in the Company's equipment. For example, Product Systems, Inc. is the only supplier of megasonic wave generators, a key part for our wafer cleaning equipment; NINEBELL is the main supplier of robot arms used in the transport system of our wafer cleaning equipment; Advanced Electric Co., Inc. is the key supplier of valves in our wafer cleaning equipment. In the event of adverse changes in the cooperation between the Company and such suppliers, or such suppliers suffer difficulties in their operations, the production plans of the Company may be adversely affected; if the Company replaces the source of such key parts, the supply may be interrupted during the transition period, which may lead to delayed delivery of the Company's products and causing high expenses, hence causing adverse effects on the operating performance of the Company.

(VII) Risks of Adverse Effect on the Semiconductor Industry Caused by the Global COVID-19 Epidemic

Since early 2020, the COVID-19 epidemic breaks out globally. To handle such major epidemic, various provinces and cities in China launched the first-level reaction of serious and unexpected public health incident and take various measures, such as sealing off cities, quarantine and postponing start dates after Spring Festival. At present, China and other Asian countries have contained the COVID-19 epidemic to a great extent, but there remains risk of second outbreak of the epidemic due to persons entering China. The Company has strictly implemented notices and requirements on epidemic control and prevention issued by governmental authorities of each level in China, and all employees of factories in Mainland China have returned and such factories have started to produce at present, the effect of the epidemic on the Company is limited at present.

If a manager or employee of the Company is absent from work due to his/her infection of epidemic, or cannot carry out on-site works because of quarantine, or cannot visit clients to provide services for them due to quarantine or other restrictions imposed by governmental authorities, or journeys to or from Mainland China, the United States and other countries are limited for a long time, it may result in adverse situations, such as extending period of research and development or manufacturing.

Considering that the Company almost does not engage in the business of parts processing, main raw materials and parts are obtained through external purchase or external coordination, and suppliers of the Company are located in Mainland China, the United States, South Korea, Japan, China Taiwan and other countries and regions. If the epidemic lasts for a long term or continues to exacerbate, the supply capacity of major suppliers of the Company may be affected in the future, the Company may need to look for replacing suppliers, which may result in the increase in costs, or the Company may be unable to find replacing sources. It may also affect logistics transportation of raw materials and parts and result in the delay of shipment by suppliers to the Company, which may lead to the delay of shipment by the Company to clients. all of the above may affect business results of the Company.

Most of major clients of the Company are located in Mainland China and neighboring countries and regions. Among which, Yangtze Memory is located in Wuhan, although there is no change in purchase orders of Yangtze Memory for products of the Company, the period of product acceptance may be extended to some degree. If the epidemic lasts for a long term or continues to exacerbate, it may have adverse effect on the production and operation of major clients of the Company and result in the decrease in needs of special semiconductor equipment, which may lead to cancellation, decrease or postponement of orders for products of the Company by such major clients, all of the above may adversely affect businesses of the Company.

If the COVID-19 epidemic affects for a long term or exacerbates, or cannot be effectively controlled in Europe, North America, Japan, South Korea and other countries and regions for a long term, it may adversely affect the R&D and production of the Company, the supply of raw materials and parts of the Company, the sales of the Company to clients and other aspects, as well as economical and financial markets of

major countries in the world, resulting in the recession of global economy and changes in economic policies of various countries, which may lead to continuous depression of the semiconductor industry from the origin and have materially adverse effect on businesses, operating results and financial situations of the Company.

(VIII) Relevant Risks of the Company and ACMR, the Controlling Shareholder, being Listed on the STAR Market and the NASDAQ Stock Market Respectively

After A-share stocks in this Offering are listed, the Company and ACMR, the controlling shareholder of the Company, will be listed on the STAR Market of Shanghai Stock Exchange and the NASDAQ Stock Market in the U.S. respectively. The Company and ACMR need to comply with laws and regulations and regulatory requirements on listing issued by regulatory authorities in both places at the same time, and shall simultaneously disclose information in both places which are required to be publicly disclosed according to laws.

Due to discrepancies in terms of laws and regulations and regulatory policies in China and the United States, there are some discrepancies in terms of specific accounting treatment and financial information disclosure between the Company and ACMR as they are governed by different accounting standards. Meanwhile, the price of stocks of the Company listed on the STAR Market and the price of stocks of ACMR listed in NASDAQ stock market may be different due to differences in requirements of disclosing information on listed companies imposed by securities regulatory authorities, in language, culture and expression habit, in composition of investors in China and the United States and their investment ideas, and in specific situations of capital markets.

II. The Company particularly prompts investors to pay attention to the important commitments made by the relevant entities with respect to the Offering

The Company prompts investors to carefully read the important commitments made by the Company, its shareholders, directors, supervisors, officers, key technical personnel, and the sponsors and securities service providers of the Offering, the restraint measures for non-fulfillment, and the fulfillment of commitments triggering the fulfillment conditions. Please refer to “V. Important Commitments Made by Relevant Parties to the Offering and Their Fulfillment” in the “Section X Investor Protection” of this [***] for details.

III. State of Operation from Financial Report Audit Deadline to the Signing Date of this [***]

The Company’s financial report audit deadline is December 31, 2019. From the financial report audit deadline to the signing date of this [***], the Company’s operating conditions are good, and there have not been major changes in its business model, in the purchase scale and price of its main raw materials, revenue and sales price, in its customers and suppliers or in the overall operating environment.

Table of Contents

SECTION I INTERPRETATIONS	11
SECTION II OVERVIEW	16
I. Overview of the Issuer and the Intermediaries	16
II. Overview of the Offering	17
III. Major Financial Data and Indicators for the Issuer's Reporting Period	18
IV. Main Business and Operation of the Issuer	18
V. Technology Advancement, R&D Technology Industrialization and Future Development Strategies of the Issuer	20
VI . Listing Criteria Chosen by the Issuer	21
VII. Special Arrangements on the Issuer's Corporate Governance	21
VIII . Use of the Fund Raised by the Issuer	21
SECTION III - OVERVIEW OF THE OFFERING	22
I. Basic Information of the Offering	22
II. Relevant Parties in the Offering	22
III. Relationship between the Issuer and Other Related Parties in the Offering	23
IV. Important Dates for the Offering	24
SECTION IV RISK FACTORS	24
I. Technical Risks	24
II. Operating Risks	25
III. Risks of Management and Internal Control	30
IV. Financial Risks	31
V. Legal Risks	33
VI. Risks of Offering Failure	34
VII. Risks of Investment Projects of Raised Funds	34
VIII. Risks of Adverse Effect on the Semiconductor Industry Caused by the Global COVID-19 Epidemic	35
IX. Relevant Risks of the Company and ACMR, the Controlling Shareholder, being Listed on the STAR Market and the NASDAQ Stock Market Respectively	36
X. Other Risks	36
SECTION V - OVERVIEW OF THE ISSUER	37
I. Overview of the Issuer	37
II. Establishment and Reorganization of the Issuer	37
III . Equity Structure of the Issuer	44
IV. Majority Owned Subsidiaries and Equity Participation Companies of the Issuer	44
V. Basic Information of Major Shareholders Holding More than 5% of the Shares and the Actual Controller	49
VI. Share Capital of the Issuer	53
VII. Brief Information of Directors, Supervisors, Senior Managers and Core Technicians	73
VIII. Agreements between the Company and any of Directors, Supervisors, Senior Managers and Key technicians and their Performance	79
IX. Changes in Directors, Supervisors, Senior Managers and Key technicians of the Company within the Last Two Years	79
X. External Investments Made by Directors, Supervisors, Senior Managers and Key Technicians of the Company	80

XI. Shares Held by Directors, Supervisors, Senior Managers and Key technicians of the Company and their Immediate Relatives	81
XII. Information on Remuneration of Directors, Supervisors, Senior Managers and Key Technicians of the Company	83
XIII. Equity Incentives and Relevant Arrangements of the Issuer prior to this Offering	84
XIV. Employees of the Issuer and their Social Securities	88
SECTION VI BUSINESS AND TECHNOLOGY	90
I. Main Business and Main Products of the Issuer	90
II. The basic situation and competition condition of the issuer's industry	100
III. Issuer's Sales and Main Customers	134
IV. Issuer's Procurement and Main Suppliers	137
V. Situation of Key Resource Elements, Such as Fixed Assets, Intangible Assets, ETC. That Have a Major Impact on Main Business	142
VI. Core Technologies of the Issuer	149
VII. Overseas Operation of the Issuer	169
SECTION VII CORPORATE GOVERNANCE AND INDEPENDENCE	169
I. Establishment, Perfection and Operation of Systems of General Meeting of Shareholders, Board of Directors, Supervisory Board, Independent Directors, Secretary of Board of Directors, Special Committees of Board of Directors	169
II. Shares with Special Voting Rights of the Issuer	173
III. Structure of Contractual Control of the Issuer	173
IV. Self-appraisal of the Management and Certification Opinions of Certified Public Account on Internal Control	173
V. Funds Occupancy and External Securities of the Issuer	173
VI. Violations of Laws or Regulations by the Issuer	174
VII. Independent and Continuous Operation of the Issuer Directed to the Market	175
VIII. Horizontal Competition	177
IX. Related Party and Related Relationship	178
X. Related Transactions	185
XI. Decision-making Procedures and Opinions of Independent Directors of Related Transactions during the Reporting Period	194
XII. Changes in Related Parties	195
SECTION VIII FINANCIAL ACCOUNTING INFORMATION AND MANAGEMENT ANALYSIS	196
I. Audited Financial Statements	196
II. Preparation Basis of Financial Statements and Scope of Consolidated Statements	204
III. Audit Opinion of Certified Public Accountant	205
IV. Key Audit Matters and Judgment Criteria for Materiality Related to Financial Accounting Information	205
V. Potential Specific Impacts on or Risks to Issuer's Future Profitability (Operation) or financial position	206
VI. Significant Accounting Policies and Accounting Estimates Adopted in the Reporting Period	208
VII. Applicable Tax Rate and Main Fiscal and Tax Preferential Policies	226
VIII. Segment Information	228
IX. Non-recurring Profits or Losses	228
X. Main Financial Indicators	229

XI. Operating Results Analysis	231
XII. Asset Quality and Solvency Analysis	252
XIII. Dividend Distribution Policy	275
XIV. Cash Flow Analysis	275
XV. Capital Expenditure Analysis	278
XVI. Analysis of Going Concern Capability	278
XVII. Major Equity Acquisition and Merger	278
XVIII. Subsequent Matters, Contingencies, Other Important Matters, Major Guarantees and Litigation Matters	279
XIX. Profit Forecast	279
SECTION IX UTILIZATION OF RAISED FUNDS AND FUTURE DEVELOPMENT PLAN	280
I. Overview of Investment Projects with Raised Funds	280
II. Utilization of Raised Funds	285
III. Explanation on the Newly Acquired Land or Real Estate Involved in the Use of Raised Funds	293
IV. Strategic Planning of the Company	293
SECTION X INVESTOR PROTECTION	296
I. Main Arrangements by the Issuer on Investor Relations	296
II. Dividend Distribution Policy of the Issuer	297
III. Distribution Policy of Accumulated Profits before the Offering	300
IV. Voting Mechanism for Shareholders of the Issuer	300
V. Important Commitments Made by Relevant Parties to the Offering and Their Fulfillment	301
SECTION XI OTHER IMPORTANT MATTERS	319
I. Material Contracts	319
II. External Guarantee	323
III. Litigation and Arbitration	323
SECTION XII STATEMENTS	324
I. Statement by All Directors, Supervisors and Senior Executives of the Issuer	324
II. Statement by the Issuer's Controlling Shareholder	325
III. Statement by the Issuer's De Facto Controller	325
IV. Statement (I) by the Sponsor (Lead Underwriter)	326
IV. Statement (II) by the Sponsor (Lead Underwriter)	326
V. Statement by the Co-lead Underwriter	327
VI. Statement by the Issuer's Lawyer	327
VII. Statement by the Audit Institution	328
VIII. Statement by the Asset Appraisal Agency	328
IX. Statement by the Capital Verification Institution	329
SECTION XIII ATTACHMENTS	329
I. Documents for Future Reference	329
II. Access to Documents for Future Reference	329
SCHEDULE I: IMPORTANT PATENTS	330
SCHEDULE II: IMPORTANT TRADEMARKS	341

Section I Interpretations

In the [***], unless the context otherwise requires, the following terms have the following meanings:

I. Basic Terms		
Issuer, Company, the Company	means	ACM Research (Shanghai), Inc. and its predecessor ACM Research (Shanghai), Inc.(before restructuring)
Corporation, ACMSH	means	ACM Research (Shanghai), Inc.
ACMSH (before restructuring)	means	ACM Research (Shanghai), Inc., the predecessor of the Issuer
ACM Wuxi	means	ACM Research (Wuxi), Inc., a wholly-owned subsidiary of the Issuer
Shengwei Shanghai	means	Shengwei Semiconductor Equipment (Shanghai) Co., Ltd., a wholly-owned subsidiary of the Issuer
CleanChip HK	means	CleanChip Technologies Limited, a wholly-owned subsidiary of the Issuer
ACMKR	means	ACM Research Korea Co., Ltd., a wholly-owned subsidiary of CleanChip HK
ACM CA	means	ACM Research (CA), Inc., a wholly-owned subsidiary of CleanChip HK
Shengyi Technology	means	Shengyi Semiconductor Technology (Wuxi) Co., Ltd., an equity participation enterprise of the Issuer
Shixi Chanheng	means	Hefei Shixi Chanheng Integrated Circuit Venture Capital Fund (L.P.), an equity participation enterprise of the Issuer
ACMR	means	ACM Research, Inc., a Nasdaq stock market listed company and the controlling shareholder of the Issuer
Xinwei Consulting	means	Xinwei (Shanghai) Management Consulting Partnership (L.P.), a shareholder of the Issuer
SICIF	means	Shanghai Integrated Circuit Industry Fund Co., Ltd., a shareholder of the Issuer
PDHTI	means	Shanghai Pudong High-tech Investment Co., Ltd., a shareholder of the Issuer
HTXC	means	Jiaxing Haitong Xuchu Private Equity Fund (L.P.), a shareholder of the Issuer
Shangrong Innovation	means	Shangrong Innovation (Ningbo) Equity Investment Center (L.P.), a shareholder of the Issuer
Jinpu Investment	means	Shanghai Jinpu Lingang Intelligent Technology Private Equity Investment Fund (L.P.), a shareholder of the Issuer
Taihu Guolian	means	Wuxi Taihu Guolian Emerging Industry Investment Enterprise (L.P.), a shareholder of the Issuer
Xinshi Consulting	means	Xinshi (Shanghai) Management Consulting Partnership (L.P.), a shareholder of the Issuer
Yongkong Consulting	means	Shanghai Yongkong Business Information Consulting Partnership (L.P.), a shareholder of the Issuer
Hai Feng Investment	means	Hai Feng Investment Holding Limited, a shareholder of the Issuer
Runguang Investment	means	Hefei Runguang Equity Investment Partnership (L.P.), a shareholder of the Issuer
ZJTVC	means	Shanghai Zhangjiang Science and Technology Venture Capital Co., Ltd., a shareholder of the Issuer
SYEM	means	Shanghai Shanyi Enterprise Management Center (L.P.), a shareholder of the Issuer
Xingang Consulting	means	Xingang (Shanghai) Management Consulting Partnership (L.P.), a shareholder of the Issuer
SRJY	means	Shanghai Shangrong Juyuan Equity Investment Center (L.P.), a shareholder of the Issuer
Shengxin Shanghai	means	Shengxin (Shanghai) Enterprise Management Consulting Partnership (L.P.)
Zhangjiang Group	means	Shanghai Zhangjiang (Group) Co., Ltd.
Yangtze Memory	means	Yangtze Memory Technologies Co., Ltd., a customer of the Issuer
SMIC	means	Semiconductor Manufacturing International Corporation, a customer of the Issuer
Hynix	means	SK Hynix Inc., a customer of the Issuer
Hefei Changxin	means	Hefei Changxin Integrated Circuit Manufacture Co., Ltd., a customer of the Issuer
Huahong Group	means	Shanghai Huahong (Group) Co., Ltd., a customer of the Issuer
JCET	means	Jiangsu Changjiang Electronics Technology Co., Ltd., a customer of the Issuer
TFME	means	Tongfu Microelectronics Co., Ltd., a customer of the Issuer
SJsemi	means	SJ Semiconductor (Jiangyin) Limited, a customer of the Issuer

Nepes	means	Nepes corporation, a customer of the Issuer
Wafer Works	means	Wafer Works Corporation, a customer of the Issuer
JRH	means	Zhejiang QL Electronics Co., Ltd., a customer of the Issuer
ZING SEMI	means	Zing Semiconductor Corporation, a customer of the Issuer
PSI	means	Phoenix Silicon International Corporation, a customer of the Issuer
NCAP	means	National Center for Advanced Packaging Co., Ltd., a customer of the Issuer
ICRD	means	Shanghai IC R&D Center Co., Ltd., a customer of the Issuer
NINEBELL	means	NINEBELL Co., Ltd., a supplier of the Issuer
NOMURA	means	NOMURA MICRO SCIENCE CO., LTD., a supplier of the Issuer
Charter Base International	means	Charter Base International Logistics (Shanghai) Co., Ltd.
DNS	means	SCREEN Holdings Co., Ltd.
TEL	means	Tokyo Electron Ltd.
LAM	means	LAM Research Corporation
SEMES	means	SEMES Co. Ltd.
NAURA	means	NAURA Technology Group Co., Ltd.
KINGSEMI	means	KINGSEMI Co., Ltd.
PNC System	means	PNC Process System Co., Ltd.
AMEC	means	Advanced Micro-Fabrication Equipment Inc.
HZCCTECH	means	Hangzhou Changchuan Technology Co., Ltd.
ASML	means	ASML Holding N.V.
KLA	means	KLA Corporation
Applied Materials	means	Applied Materials, Inc.
MOST	means	Ministry of Science and Technology of the People's Republic of China
MIIT	means	Ministry of Industry and Information Technology of the People's Republic of China
NDRC	means	National Development and Reform Commission of the People's Republic of China
MOF	means	Ministry of Finance of the People's Republic of China
CSRC	means	China Securities Regulatory Commission
SASAC	means	State-owned Assets Supervision and Administration Commission of the State Council
<i>The Company Law</i>	means	<i>The Company Law of the People's Republic of China</i>
<i>The Securities Law</i>	means	<i>The Securities Law of the People's Republic of China</i>
<i>The Articles of Association</i>	means	<i>The Articles of Association of ACM Research (Shanghai), Inc.</i>
<i>The Articles of Association (Draft)</i>	means	<i>The Articles of Association of ACM Research (Shanghai), Inc. (Draft)</i> applicable to the Issuer after the Offering
NASDAQ	means	National Association of Securities Dealers Automated Quotations, the NASDAQ stock market
Sponsor, Lead Underwriter, [***]	means	[***]
Co-lead Underwriter	means	[***]
Issuer's Lawyer; King & Wood	means	King & Wood Mallesons
Reporting Accountant, Lixin	means	BDO CHINA SHU LUN PAN Certified Public Accountants LLP
Appraisal Agency, China United Appraisal	means	China United Assets Appraisal Group Co., Ltd.
Offering	means	the public offering of 43,355,800 shares
Reporting Period	means	the three years of 2017, 2018 and 2019
Yuan, RMB 10,000 Yuan	means	RMB Yuan and RMB RMB 10,000 Yuan
II. Technical Terms		
Semiconductors	mean	materials which have an intermediate conductivity between that of conductors and insulators at room temperature, which can be divided into integrated circuits (IC), discrete devices, optoelectronics and sensors in accordance with manufacturing technology. Semiconductors can be widely used in downstream communications, computers, consumer electronics, network technology, automobile, aerospace and other industries.
Silicon Slice	means	Silicon Wafer, a silicon slice of semiconductor used for the fabrication of semiconductor devices such as integrated circuits, discrete devices and sensors.

IC	means	Integrated Circuit, a circuit or system that uses a series of specific processing techniques to interconnect active components such as transistors and diodes and passive originals such as resistors and capacitors, integrate them on a semiconductor wafer according to a certain circuit, and package them in a shell to achieve specific functions.
Wafer	means	the Silicon Slice during the specific processing such as oxidation/diffusion, photolithography, etching, ion implantation, film growth, cleaning and polishing, metallization, etc.
Fab	means	a manufacturer that produces semiconductor devices on silicon wafers through a series of specific processing techniques.
Chip	means	an IC carrier, and also the result of design, manufacturing, packaging, and testing of IC.
Graphic Wafer	means	a wafer with a patterned structure on its surface.
Wafer Fabrication, Chip Fabrication	means	the process of manufacturing semiconductor silicon wafers into chips through a series of specific processing technology, which are divided into front wafer manufacturing and back packaging testing.
IDM	means	Integrated Device Manufacture, i.e., an Integrated Device Manufacturer completes the entire industrial chain from integrated circuit design, wafer manufacturing to test and packaging.
Storage Device	means	a memory device in an electronic system for holding programs and data.
Sensor	means	a detection device, which can feel the information measured and convert it to an electrical signal or information output in any other required form according to a certain law, thus to meet the information transmission, processing, storage, display, record and control requirements.
Power Device	means	a large-power electronic device for power conversion and control circuits in power equipment.
Discrete Device	means	a semiconductor device having a fixed single characteristic and function.
NAND Flash Memory	means	flash memory/data storage type flash memory.
5G	means	5th-Generation, i.e., the Fifth Generation of Mobile Phone Mobile Communications Standards.
Photoetching	means	a process in which the circuit graphics are transferred to the surface of a single crystal or dielectric layer to form effective graphics windows or functional graphics by using the optical-chemical reaction principle and chemical and physical etching methods.
Etching	means	the process of selectively removing unwanted material from a silicon surface by chemical or physical means, which is one of the main processes for photolithographic processing and a key step in semiconductor manufacturing.
Gluing	means	the process of applying photoresist evenly to the surface of a wafer.
Developing	means	the process of imaging the exposed wafer, by which the graphics imaged on the optical resistance are displayed.
CVD	means	Chemical Vapor Deposition
PVD	means	Physical Vapor Deposition
LPCVD	means	Low Pressure Chemical Vapor Deposition
ALD	means	Atomic Layer Deposition, a method that can plate the substance layer by layer in the form of monatomic film.
DRAM	means	Dynamic Random-Access Memory
RAM	means	Random Access Memory, a semiconductor memory.
LCD	means	Liquid Crystal Display
MEMS	means	Mechanical System
MOCVD	means	Metal-organic Chemical Vapor Deposition.
CMP	means	Chemical Mechanical Polishing, to make the surface of a wafer completely flat or flattened.

SFP	means	Stress Free Polish, a technology that uses the principle of electrochemical reaction to abandon the mechanical pressure of the polishing process during the process of discarding the metal film on the surface of the wafer to eliminate the damage of the mechanical pressure on the metal wiring.
VOC	means	Volatile Organic Compounds.
Pa	means	The unit of pressure pascal, referred to as Pa.
Dielectric Substance	means	all materials that can be polarized under the action of an external electric field, which usually present their electrical properties in the form of induction rather than conduction in the electric field.
Precursor Chemicals	means	a chemical that can be mutated into another chemical or used to make another chemical.
Yield	means	the percentage of the number of circuits whose test results are good accounting for the total number of circuits under test after the circuits under test have gone through all test procedures.
Front-End, Back-End	means	the front-end process and the back-end process in the manufacture of the semiconductor devices, with the front-end process mainly including Photoetching, Etching, cleaning, ion implantation, chemical machinery flat etc. and the back-end process mainly including routing, Bonder, FCB, BGA reballing, inspection, testing etc.
Packaging	means	the process of wrapping a small piece of material (such as a Chip) in a support housing during the final phase of Semiconductor development to prevent physical damage and corrosion and to allow the Chip to be connected to a circuit board.
Advanced Packaging	means	cutting-edge Packaging forms and technologies. At present, Packaging with Flip Chip (FC) structure, Wafer Level Packaging (WLP), System in a Package (SIP), 2.5D Packaging and 3D Packaging etc. are considered to belong to the category of Advanced Packaging
FC	means	Flip Chip, a DFN structure generally containing circuit units, which is designed to be electrically and mechanically connected to a circuit by an appropriate number of solder balls on its surface (covered by a conductive adhesive).
WLP	means	Wafer Level Packaging, reducing the size of the Packaging to the size of an integrated circuit Chip and the fact that it can be made in batches as a wafer reduces the cost of the Packaging.
SIP	means	System in a Package, which integrates a variety of functional Chips, including processors, memory and other functional Chips in a package, so as to achieve a basic complete function.
3D Packaging	means	the Packaging technology in which more than two Chips are stacked vertically in the same packaging body without changing the size of the package body, with the main characteristics of multi-function, high efficiency, large capacity, high density, diploid increase of the functions and applications in unit volume and low cost.
Fan-out	means	a wafer reconstruction technology, by which the Chip is re-embedded on the wafer, and then the Packaging is carried out according to the steps similar to the standard WLP process. The actual package area is larger than the chip area, and other active devices and passive components can be added to form SIP when the area is expanded.
Under Bump Metal, UBM	means	the metal transition layer between the solder pad and the solder ball, which is located on top of the wafer passivation layer. There are very good adhesion characteristics between UBM and the metallized layer on the wafer and UBM also has good wetting characteristics with the solder ball, which acts as the diffusion layer of solder between the welding ball and IC metal welding pad. As an oxidation barrier layer, UBM also plays a role in protecting the Chip.
UBM/RDL Technology	means	the Under-Bump Metal/redistribution layer technology, by which the undercut can be minimized while removing the barrier layer and seed layer, and the time to complete the etching step can be controlled and accurately monitored thus to reduce the undercut and ensure the critical feature (line or bump) size.
Pillar Bump	means	pillar bumps.

FinFET	means	Fin Field-Effect Transistor, a new complementary metal-oxide semiconductor transistor, which can improve circuit control, reduce leakage current and shorten the gate length of the transistor.
SC-1 Solution	means	Standard Clean 1, a solution prepared by mixing a certain proportion of ammonia water, hydrogen peroxide and water and used for cleaning semiconductor silicon wafers.
ppm	means	Parts per million, a concentration expressed in parts per million of the mass of the solute in the total solution mass, also known as parts per million concentration.
IPA Drying	means	the process of using low surface tension and volatile characteristics of isopropyl alcohol (IPA) to replace the water with high surface tension on the surface of silicon wafers and then blowing dry with nitrogen to completely dry the silicon water film.
PTFE	means	Poly Tetra FluoroEthylene, with the characteristics of anti-acid, anti-alkali, anti-various organic solvents, high temperature resistance and very low friction coefficient.
TSV	means	Through Silicon Vias, a three-dimensional (3D) vertical integration with through silicon vias (TSV) copper interconnect, which is currently considered to be one of the most advanced technologies in the Semiconductor industry.
Bernoulli Chuck	means	a device that uses the Bernoulli aerodynamic suspension principle to suck the wafer on the chuck during wafer cleaning.
Robot Arm	means	an automatic operation device that can imitate some action functions of human hand and arm to grab and carry objects or to operate tools according to fixed procedures. The feature is that it can complete various expected tasks through programming. The structure and performance of the device have the advantages of both human and manipulator machines.
SAPS Cleaning Technology	means	Space Alternative Phase Shift technology, which utilizes megasonic alternating phases to provide megasonic energy to the flat and patterned wafer surfaces in a highly uniform manner at the microscopic level, effectively removing random defects throughout the wafer and reducing the use of chemicals.
TEBO Cleaning Technology	means	Timely Energized Bubble Oscillation technology, which enables damage-free cleaning of patterned Chips through the use of a series of rapid pressure changes forcing the bubbles to oscillate in the specific size and shape, precise and multiparameter control of cavitation of bubbles in the mega-frequency ultrasonic cleaning process, and avoidance of any damage to the patterns caused by transient cavitation in traditional supersonic cleaning.
Tahoe Technology	means	the cleaning technology independently developed by the Issuer, which integrates the tank module and the single-chip module in a single wet cleaning equipment and has the advantages of both; the cleaning effect and process applicability of the Tahoe cleaner can be compared with that of single-chip cleaner, can also greatly reduce the use of sulfuric acid, help customers reduce production costs and better comply with energy conservation and environmental protection policies.
Damascus Process	means	a technique derived from the ancient Damascus craftsman, in which the dielectric layer is first etched with a film of a metal conductor and then filled with metal, with the feature that the metal layer does not need to be etched.
Process, Node and Manufacturing Procedure	means	the size of the transistor gate width, used to measure the level of semiconductor chip manufacturing.
Moore's Law	means	the Moore's Law put forward by Gordon Moore, i.e., the number of transistors on an integrated circuit doubles every 18 months, the corresponding performance doubles, and the cost drops by half.
ECP	means	Electro Chemical Plating, the process of coating the surface of a wafer with a thin layer of other metals or alloys by using the electrolysis principle.
Mm	means	Millimeter, 10^{-3} meter, a unit used to describe the diameter of a Semiconductor Wafer.
μm	means	Micrometer, 10^{-6} meter
nm	means	Nanometer, 10^{-9} meter
Gartner	means	a leading research and consulting company in the field of IT. Its research scope covers the entire IT industry from the upstream hardware design and manufacture and to the downstream terminal applications.
WSTS	means	World Semiconductor Trade Statistics, a data statistics company in the semiconductor industry whose members include the world's leading semiconductor manufacturers.
SEMI	means	Semiconductor Equipment and Materials International
VLSI Research	means	a leading research consultancy in the field of integrated circuits and pan-semiconductors, providing market research and economic analysis on technology, business and economics for the semiconductor industry chain. It rates and ranks the world's IC and pan-semiconductor manufacturing and equipment companies annually.
Yole	means	Yole Développement, which provides market research, technology analysis, strategy consulting, targeted media and financial advisory services.

As a result of rounding, there may be some differences in mantissas between the sum of some sums and the sum of the addends in the [***].

Section II Overview

This overview provides only a summary of the full [***]. Investors should read the full [***] carefully before making an investment decision.

I. Overview of the Issuer and the Intermediaries

(I) Overview of the Issuer			
Issuer’s Name	ACM Research (Shanghai), Inc.	Date of Establishment	May 17, 2005
Registered Capital	390,201,300 Yuan	Legal Representative	HUI WANG
Registered Address	Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone	Main Production and Operation Premises	Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone
Controlling Shareholder	ACM Research, Inc.	Actual Controller	HUI WANG
Classification of Industry	Manufacture of Computers, Communication and Other Electronic Equipment (Classification Code: C39)	Status of Listing (Applying to List on Another Exchange)	None
(II) The Intermediaries for the Offering			
Sponsor	***	Lead Underwriter	***
Issuer’s Lawyer	King & Wood Mallesons	Co-lead Underwriter	***
Audit Institution	BDO CHINA SHU LUN PAN Certified Public Accountants LLP	Appraisal Agency	China United Assets Appraisal Group Co., Ltd.

II. Overview of the Offering

(I) Basic Information of the Offering			
Class of Shares	RMB Common Shares (A Shares)		
Par Value per Share	RMB 1.00 Yuan		
Number of Shares in the Offering	No more than 43,355,800 shares	Proportion in the Total Share Capital after the Offering	No less than 10.00%
Thereinto: Number of New Shares	No more than 43,355,800 shares	Proportion in the Total Share Capital after the Offering	No less than 10.00%
Number of Shares Offered by Shareholders	-	Proportion in the Total Share Capital after the Offering	-
Total Share Capital after the Offering	No more than 433,557,100 shares		
Offering Price per Share	RMB [] Yuan		
Offering P/E	[] Times		
Net Asset Value per Share Prior to the Offering	RMB [] Yuan/Share	Earnings per Share Prior to the Offering	-
Net Asset Value per Share after the Offering	[]	Earnings per Share after the Offering	[]
Offering P/B	[] Times		
Pricing Mode	The Issuer and the Lead Underwriter make inquiries to professional institutional investors registered with the Securities Association of China such as securities companies, fund management companies, trust companies, finance companies, insurance companies, qualified foreign institutional investors and private equity fund managers to determine the offering price of the shares.		
Offering Mode	The combination mode of offline inquiry placing to inquiry objects and online fund subscription for offering, or any other offering mode approved by the securities regulatory authorities will be adopted.		
Offering Targets	Qualified inquiry objects and natural persons, legal persons and other investors opening accounts on the STAR Market of the Shanghai Stock Exchange (other than purchasers prohibited by national laws and regulations)		
Underwriting Mode	Stand-by Underwriting		
Name of Shareholders Proposing to Offer Shares to the Public	N/A		
Principle of Offering Expenses Sharing	-		
Total Fund Raised	RMB[] Yuan		
Net Fund Raised	RMB[] Yuan		
Projects to be Invested by the Fund Raised	[]		
	[]		
Estimated Offering Expenses	Sponsor and underwriting fee amounting to RMB [] Yuan; Audit and capital verification fee amounting to RMB [] Yuan; Lawyer’s fee amounting to RMB[] Yuan; Appraisal fee amounting to RMB [] Yuan; Offering fees in total amounting to RMB[] Yuan		
(II) Important Dates for the Offering			
Date for Publication of the Offering	[]		
Date to Start Inquiry Recommendation	[]		
Date for Publication of Pricing Notice	[]		
Subscription Date and Payment Date	[]		
Listing Date	[]		

III. Major Financial Data and Indicators for the Issuer's Reporting Period

Item	December 31, 2019	December 31, 2018	December 31, 2017
Total Assets (RMB 10,000 Yuan)	130,800.15	63,602.25	32,091.98
Owner's Equity Attributable to Parent Company (RMB 10,000 Yuan)	82,992.90	14,504.75	4,835.86
Debt Asset Ratio (Parent Company)	32.56%	76.34%	84.86%
Item	2019	2018	2017
Operating Income (RMB 10,000 Yuan)	75,673.30	55,026.91	25,358.73
Net Profit (RMB 10,000 Yuan)	13,488.73	9,253.04	1,086.06
Net Profit Attributable to the Shareholders of the Issuer (RMB 10,000 Yuan)	13,488.73	9,253.04	1,086.06
Net Profit Attributable to the Parent Company after Deduction of Non-recurring Profit and Loss (RMB 10,000 Yuan)	13,047.50	7,140.06	-229.84
Basic Earnings per Share (RMB 1 Yuan)	0.36	N/A	N/A
Diluted Earnings per Share (RMB 1 Yuan)	0.36	N/A	N/A
Weighted Average Return on Equity (%)	34.22	137.72	26.36
Net Cash Flow from the Operating Activities (RMB 10,000 Yuan)	7,270.65	3,881.03	-899.23
Cash Dividends (RMB 10,000 Yuan)	-	-	-
R & D Expenditure as a Percentage of Operating Income (%)	13.12	14.43	20.57

IV. Main Business and Operation of the Issuer

(I) Main Business

The Company is mainly engaged in the research and development, production and sales of semiconductor equipment, with the main products including semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet processing equipment. The Company insists on the development strategy of differentiation competition and innovation. Through independent research and development of single-wafer megasonic cleaning technology, single wafer wet bench combined cleaning technology, electro-plating technology, and stress-free polishing technology etc., it provides customers in the semiconductor industry with customized wet processing solutions such as semiconductor cleaning, semiconductor polishing and advanced packaging etc., effectively improving the production efficiency and yield of the customers and reducing their costs of production.

Based on independent innovation and research and development as well as many years of professional technique and technology accumulation, the Company has successfully developed the world's first SAPS/TEBO megasonic cleaning technology and single wafer wet bench combined cleaning technology applied to the wafer cleaning area with technology nodes 45 nm and below, which can effectively solve the cleaning problem of organic contamination and particles after etching and greatly reduce the usage of the chemical reagents such as sulfuric acid, helping customers reduce production costs while meeting the requirements of China's energy conservation and emissions reduction at the same time.

With its advanced technology and abundant product lines, the Company has developed into one of the few semiconductor equipment suppliers with certain international competitiveness in China, whose products have been recognized by many domestic and foreign mainstream semiconductor manufacturers and have gained a good reputation in the market. The Company's major customers are as follows:

No.	Field of the Customer	Names of Customers
1	Wafer Fabrication	Hynix, Huahong Group, Yangtze Memory, SMIC, Hefei Changxin
2	Advanced Packaging	JCET, TFME, SJsemi, Nepes
3	Semiconductor Wafer Manufacturing and Recycling	ZING SEMI, JRH, Wafer Works, PSI
4	Scientific Research Institutions	Institute of Microelectronics of the Chinese Academy of Sciences, Shanghai IC R&D Center Co., Ltd., NCAP

During the reporting period, the composition of the Company's main business income by product category is as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
Semiconductor Cleaning Equipment	62,522.30	84.10%	50,135.96	92.91%	21,492.48	86.27%
Thereinto: Single-wafer Cleaning Equipment	55,099.52	74.12%	50,135.96	92.91%	21,492.48	86.27%
Wet Bench Cleaning Equipment	4,801.36	6.46%	-	-	-	-
Single Wafer Wet Bench	2,621.43	3.53%	-	-	-	-
Combined Cleaning Equipment						
Semiconductor Electro-plating Equipment	7,857.39	10.57%	1,191.13	2.21%	-	-
Advanced Packaging Wet Processing Equipment	3,961.12	5.33%	2,634.07	4.88%	3,421.33	13.73%
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

During the reporting period, the Company's single-chip cleaning equipment accounted for a relatively high proportion and grew rapidly, and was the Company's main source of income. In addition, the Company has developed the first front-end brushing equipment, stress-free polishing equipment and vertical furnace tube equipment and such equipment has successfully entered the client verification; during the reporting period, no sales revenue has been achieved.

(II) Competitive Status

The global market of semiconductor cleaning equipment is highly concentrated, especially in the field of single-wafer cleaning equipment. DNS, TEL, LAM and SEMES have a combined market share of over 90%, among which DNS has the highest market share, i.e., over 40%.

At present, there are only a few companies in mainland China that can provide semiconductor cleaning equipment, mainly including ACMSH, NAURA, KINGSEMI and PNC System. Among them, ACMSH is a leading enterprise in the semiconductor cleaning equipment industry in China, with relatively rich product lines, mainly including single-wafer SAPS megasonic cleaning equipment, single-wafer TEBO megasonic cleaning equipment, single-wafer cleaning equipment, single-wafer backside cleaning equipment, single-wafer scrubbing equipment, Wet Bench Cleaning equipment, and single wafer wet bench combined cleaning equipment; the main

cleaning equipment products of NAURA are single-wafer and Wet Bench Cleaning equipment, which are suitable for chip manufacturing with 65nm and 28nm technology nodes; PNC System has the relevant technology to produce 8-12 inch high-level single wafer wet cleaning equipment and Wet Bench cleaning equipment, which can cover the market needs of many downstream industries including wafer manufacturing, advanced packaging, and solar; and KINGSEMI's current products are used in the field of integrated circuit manufacturing for single-wafer physical scrubbing.

Among the top 5 semiconductor equipment manufacturers in Mainland, China in 2018, ACMSH ranked the fourth. The details are as follows:

Ranking	Name of Enterprise
1	AMEC
2	NAURA
3	CETC Electronics Equipment Group Co., Ltd.
4	ACMSH
5	KINGSEMI

Source: *Shanghai IC Industry Development Report 2019*, Shanghai Municipal Commission of Economy and Informatization, Shanghai Integrated Circuit Industry Association.

In addition, according to the bidding result of Huahong Group's Wuxi Project, ACMSH won the bidding for 5 sets of cleaning equipment, accounting for 27% of the share and ranking No.1 in the cleaning equipment field when international competitors are included.¹

According to the bidding result of Yangtze Memory's 3D NAND 20,000 Pieces/Month Production Line, ACMSH won the bidding for 15 sets of cleaning equipment (all of which are single-wafer cleaning equipment), ranking No.2 only after 18 sets of DNS (including 12 sets of single-wafer cleaning equipment and 6 sets of Wet Bench Cleaning equipment). With respect to the single-wafer cleaning equipment, the number of orders won by ACMSH ranked No.1, accounting for 32.61%.²

According to the bidding results of the equipment from Yangtze Memory and Huahong Group (Wuxi Project and Huali Phase II Project), among the more than 200 cleaning equipment purchased in total, the suppliers are ranked in order of the number of bids winning: DNS, ACMSH, LAM, TEL, NAURA, KINGSEMI, etc., the proportions are 48%, 20.5%, 20%, 6%, 1%, 0.5% in order, ACMSH ranks second in market share, slightly higher than LAM.³

V. Technology Advancement, R&D Technology Industrialization and Future Development Strategies of the Issuer

Further, focusing on independent innovation, research and development, it has successfully developed SAPS/TEBO megasonic cleaning technology and Tahoe single wafer wet bench combined cleaning equipment to be applied in the wafer cleaning field of 45 nm or below technology nodes by virtue of its professional technology and process accumulation over the past years. The above technology and equipment effectively solve the problem of organic contamination and particle cleaning after etching and greatly reduce the use of concentrated sulfuric acid and other chemical reagents. What's more, its technology and equipment meet the energy-saving and emission-reduction requirements of the State while helping customers reduce production costs.

The Company has reached the international leading or international advanced level in the field of single-wafer megasonic cleaning equipment, single wafer wet bench combined cleaning equipment and copper interconnect and electroplate processing equipment. As of December 31, 2019, the Company and its majority-owned subsidiaries had 232 main patents granted, including 108 patents authorized in China

¹ Source: *Semiconductor Equipment Localization - Processing Equipment Led by NAURA, AMEC and ACMSH: See from the Bid-winning Data of Huahong (Wuxi) Project*, BOCI Securities, May, 2019

² Source: *3D NAND Industry Pattern & Elastic Measurement of Domestic Equipment in Yangtze Memory*, the Industrial Securities, November 2019

³ Source: *Topic 9 of Semiconductor Equipment Localization: Cleaning Equipment*, BOCI Securities, May 2020.

and 124 patents authorized abroad, including 227 invention patents, and won the title of “Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits”. The Company has been the main responsible unit for the Chinese “02 Special” major scientific research projects, such as “R & D and application for 20-14nm copper plating equipment of copper interconnection” and “R & D for 65-45nm stress-free polishing equipment of copper interconnection”.

Since its establishment, the Company has always focused on the field of semiconductor equipment, aiming to attract high-end professionals with continuous R&D team building and to improve the ability of scientific and technological innovation through independent research and development; to improve the market share through the powerful market development; to enhance its core competitiveness, to expand its revenue and profit scale, to create value for shareholders, and to continuously increase its market share by continuously introducing new products and technologies with differentiation.

The Company will strive to seize the opportunity for the rapid development of China’s semiconductor industry, give full play to its current market position, technological advantages, process accumulation and industry experience, pay close attention to the cutting-edge technologies of the global semiconductor equipment industry, ensure the industry leading position of its product quality and core technologies, and strive to catch up with and surpass the global advanced level. The Company will implement product performance and technology upgrading on the basis of existing products, and continuously track the changes in emerging end markets, thus to ensure the effective integration of the Company’s products with market demand.

VI . Listing Criteria Chosen by the Issuer

The listing criteria chosen by the Issuer are “the market value and financial indicators” stipulated in the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*: (IV) the expected market value shall not be less than 3 billion Yuan, and the operating income in the latest year shall not be less than 300 million Yuan.

VII. Special Arrangements on the Issuer’s Corporate Governance

As of the date of signing the [***], there are no special arrangements on the corporate governance structure of the Issuer.

VIII . Use of the Fund Raised by the Issuer

According to the second extraordinary general meeting of shareholders of the Company in 2020 held on May 15, 2020, the fund raised from the Offering will be invested in the following projects after deducting the Offering fees:

Unit: RMB 10,000 Yuan

No.	Investment Orientation of the Raised Fund	Total Investment	Amount of the Raised Fund to be Used
1	ACMSH Equipment R&D and Manufacturing Center	[***]	[***]
2	ACMSH High-end Semiconductor Equipment R&D Project	[***]	[***]
3	To Supplement Liquidity	[***]	[***]
Total		[***]	[***]

If the actual amount of fund raised in the Offering (after deducting the Offering fees) is lower than the fund demand of the proposed investment projects, the Company will arrange the fund raised according to the investment proportion of the projects, with the gap filled with self-raised funds. If the actual amount of fund raised in the Offering (after deducting the Offering fees) exceeds the above fund needs, the remaining part will be used for the development of the Company’s main business according to its actual operation needs and the relevant regulations of the CSRC and the Shanghai Stock Exchange. The fund raised in the Offering will be invested according to the priorities of the projects. Before the fund raised is in place, the Company may use the self-raised funds to invest in the proposed investment projects, and then replace such self-raised funds with the raised funds after the fund raised is in place.

Section III - Overview of the Offering

I. Basic Information of the Offering

(I) Class of Shares:	RMB Common Shares (A Shares)	
(II) Par Value per Share:	RMB 1.00 Yuan	
(III) Number of Shares in the Offering:	The number of shares in the Public Offering shall not exceed 43.3558 million, accounting for at least 10.00% of the Company's total share capital after the Offering, and the Offering does not involve the public sale of shares by the shareholders of the Company.	
(IV) Offering Price per Share:	RMB [] Yuan/Share, to be determined through making inquiries to the inquiry objects	
(V) Participation of the Issuer's Senior Managers and Employees in Strategic Placement:	[]. After the CSRC completes the registration procedures for the Offering, the Issuer will convene a board meeting to review relevant matters.	
(VI) Participation of the Sponsor's Subsidiaries in Strategic Placement:	The Sponsor will arrange relevant subsidiaries to participate in the strategic placement in the Offering, which will be carried out in accordance with relevant regulations of the Shanghai Stock Exchange. The Sponsor and its relevant subsidiaries will further clarify the specific plan for participating in the strategic placement in the Offering as required and submit relevant documents to the Shanghai Stock Exchange in accordance with relevant provisions.	
(VII) Offering P/E:	[] Times (calculated by the offering price dividing by the earnings per share; the earnings per share is calculated by dividing the lower of the audited net profits attributable to the parent company before and after deducting non-recurring profit and loss in the year [] by the total share capital after the Offering)	
(VIII) Net Asset Value per Share Prior to the Offering:	RMB [] Yuan/Share (calculated by dividing the audited shareholder's equity attributable to the parent company on the date of [MM][DD][YY] by the total share capital prior to the Offering)	
(IX) Net Asset Value per Share after the Offering:	RMB [] Yuan/Share (calculated by dividing the sum of the audited shareholder's equity attributable to the parent company on the date of [MM][DD][YY] plus the net proceeds of the Offering by the total share capital after the Offering)	
(X) Offering P/B:	[] Times (calculated by dividing the offering price per share by the net assets per share after the Offering)	
(XI) Offering Mode:	The combination mode of offline inquiry placing to inquiry objects and online fund subscription for offering, or any other offering mode approved by the securities regulatory authorities will be adopted.	
(XII) Offering Targets:	Qualified inquiry objects and natural persons, legal persons and other investors opening accounts on the STAR Market of the Shanghai Stock Exchange (other than purchasers prohibited by national laws and regulations)	
(XIII) Underwriting Mode:	Stand-by Underwriting	
(XIV) Estimated Offering Fees:	Sponsor and underwriting fee	RMB [] ×10,000 Yuan
	Audit and capital verification fee	RMB [] ×10,000 Yuan
	Lawyer's fee	RMB [] ×10,000 Yuan
	Appraisal fee	RMB [] ×10,000 Yuan
	Offering fees in total	RMB [] ×10,000 Yuan

II. Relevant Parties in the Offering

(I) Issuer	
Name	ACM Research (Shanghai), Inc.
Legal Representative	HUI WANG
Domicile	Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone
Telephone	021-50808868
Fax	021-50808860
Contact Person	MINGZHU LUO
(II) Sponsor (Lead Underwriter)	
Name	[***]
Legal Representative	[***]

Domicile	[***]
Telephone	[***]
Fax	[***]
Sponsor Representatives	[***]
Project Co-organizer	[***]
Project Managers	[***]
(III) Co-lead Underwriter	
Name	[***]
Legal Representative	[***]
Domicile	[***]
Telephone	[***]
Fax	[***]
Project Managers	[***]
(IV) Law Firm	
Name	King & Wood Mallesons
Person in Charge	LING WANG
Domicile	17th & 18th Floors, East Tower, World Financial Center 1, No.1 Dongsanhuan Zhonglu, Chaoyang District, Beijing
Telephone	010-58785588
Fax	010-58785599
Responsible Lawyers	HUI XU, FUAN CHEN, ANRONG WANG
(V) Accounting Firm	
Name	BDO CHINA SHU LUN PAN Certified Public Accountants LLP
Managing Partner	ZHIGUO YANG
Domicile	4 F, No.61 East Nanjing Road, Huangpu District, Shanghai
Telephone	0755-82584611
Fax	0755-82584611
Responsible Certified Public Accountants	YI TANG, JING Zhao
(VI) Asset Appraisal Agency	
Name	China United Assets Appraisal Group Co., Ltd.
Legal Representative	ZHI HU
Domicile	F4, East Block, Kaichen World Trade Center, 28 Fuxingmennei Street, Xicheng District, Beijing
Telephone	010-88000066
Fax	010-88000066
Responsible Certified Appraisers	WEI LIU and QIQUAN GE
(VII) Stock Registrar	
Name	China Securities Depository and Clearing Corporation Limited Shanghai Branch
Domicile	3/F, China Insurance Building, 166 Lujiazui East Road, Pudong New District, Shanghai,
Telephone	021-68870587
(VIII) Recipient Bank	
Account Name	
Account Number	
(IX) Stock Exchange Applied for Listing	
Name	Shanghai Stock Exchange
Domicile	Shanghai Stock Exchange Building, 528 Pudong South Road, Shanghai
Telephone	021-68808888

III. Relationship between the Issuer and Other Related Parties in the Offering

As of the signing date of the [***], [***], a wholly-

owned subsidiary of the Sponsor, holds 19.39% of the partnership shares of HTXC and serves as HTXC's [***]. HTXC holds 0.59% of the Company's shares, so the Sponsor indirectly holds 0.59% of the Company's shares.

As of May 19, 2020, [***], a Hong Kong subsidiary of the co-lead underwriter [***], holds 600 shares of Class A common stock in ACMR.

Other than the above situations, the Issuer does not have any direct or indirect equity relationship or other rights and interests relationship with the intermediaries related to the Offering. The person in charge, senior managers and responsible personnel of each intermediary do not directly or indirectly hold the shares of the Issuer, nor do they have any other right and interests relationship.

IV. Important Dates for the Offering

Date for Publication of the Offering	[MM][DD][YY]
Date to Start Inquiry Recommendation	[MM][DD][YY] - [MM][DD][YY]
Date for Publication of Pricing Notice	[MM][DD][YY]
Subscription Date and Payment Date	[MM][DD][YY] - [MM][DD][YY]
Listing Date	[MM][DD][YY]

Section IV Risk Factors

When assessing the shares issued by the Company in this Offering, investors should especially and carefully consider the following risk factors besides other information provided in the [*]. The risk factors below are sorted in the order of materiality and degree of possible impacts on decision-making by investors, but it does not necessarily mean that the risk factors will occur in such an order.**

I. Technical Risks

(I) Risks of Technical Innovation

The Company operates in the semiconductor special equipment industry, which involves many academic fields including microelectronics, electricity, mechanics, chemical engineering, fluid dynamics, automation, image recognition, communications, software system, among others, resulting in a high threshold in technical research and development. The vigorous development of the global semiconductor industry is accompanied by the constant technical innovations in the semiconductor industry and varying customer demands. The Company has been adhering to the development strategy of differentiated competition and innovation for long. If the Company cannot continuously ensure sufficient research and development investment, or process nodes for chips are further reduced, or a new chip manufacturing technology comes out, the core technologies of the Company, including SAPS, TEBO, and Tahoe, and relevant products may become less advanced, which may cause adverse effects on the operating performance of the Company.

(II) Risks of Technical Research and Development

To maintain its technical advancement, the Company needs to continuously develop new products and improve existing products in the future. It took 8 years for the Company to develop the TEBO technology, and it may take similar or even more time to develop any new technology in the future; meanwhile, the research and

development of new products require a large amount of fund investment. If the direction of the Company's technical research and development cannot adapt to market demands, technical changes, and constantly developing standards, or the research and development team of the Company cannot make breakthrough in key technical problems in an economic and efficient manner, or new products developed by the Company cannot meet customer requirements on costs, dimensions, acceptance standards, specifications, performance, and delivery period, or no supplier is available to promptly supply key parts for new products developed by the Company, or customer acceptance of the Company's new products is less than expected, or the service lives of the Company's new products cannot meet the expectations, the Company may face risks of failing to achieve expected effects with the investment in technical research and development.

In addition, certain improvement made by the Company on equipment products may reduce the customer demands on existing equipment products. When releasing new products, if the Company cannot properly handle the transition from existing products, customers may suspend purchasing, or existing products on stock may fail to be sold out. Moreover, customers may delay in making purchase in the hope of new products, resulting in less current orders for the Company, hence affecting the operating performance of the Company.

(III) Risks of Divulging Core Technologies

The Company has built up a series of technologies and process experiences in semiconductor cleaning equipment, semiconductor electroplating equipment, and advanced packaging wet equipment via continuous research and development investment over years. Meanwhile, the Company *per se* does not operate part manufacturing, but organizes part procurement and outsourcing according to product designs. Despite its constant attention on the protection of core technologies, if the network security system of the Company or suppliers cannot prevent unauthorized access and complicated network attacks, or the employees and suppliers of the Company handle sensitive data improperly, which divulges the intellectual properties and core technologies of the Company, the Company may suffer major liability claims from customers. This may cause serious damages to the reputation and competitive position of the Company, hence causing adverse effects on the business development and results of operation of the Company.

(IV) Risks of Losing Key Technical Talents

Technical talents are a key factor of competitiveness in the semiconductor special equipment industry, which is a technology-intensive industry. After the development for over ten years, the Company has built up a technical research and development team with rich experience headed by Dr. Hui Wang. The Company has provided competitive remunerations, share incentives, and option incentives to the technical research and development team in the hope of improving the loyalty and stability of the technical team. However, the continuous development of the semiconductor special equipment industry in Chinese mainland will lead to more intensive competition for technical talents. If the Company loses substantial key technical personnel due to remuneration or other reasons, or the Company could not motivate existing technical talents or could not attract outstanding technical talents, the Company may be short-handed in the technical team, hence could not continue the research, development, and sales of new products, or provide quality services to customers; moreover, the Company may have higher recruitment and training costs, which may cause adverse effects on the technical research and development capability and operating performance of the Company.

II. Operating Risks

(I) Risks of Fluctuation in the Macro Economy and Industry

The Company operates in the semiconductor special equipment industry, a key supporting industry for the semiconductor industry chain, and the demands are directly subject to the impact of the chip manufacturing and packaging industry and the terminal application market.

In the event of violent fluctuation in the macro economy in the future, reducing

the demands on terminal markets of 5G communication, computers, consumer electronics, network communications, automobile electronics, and Internet of Things, and causing surplus of capacity of wafer manufacturing and packaging enterprises, the sales volume and prices of chip products may decrease, hence reducing the operating incomes and profitability. Wafer manufacturing and packaging enterprises normally reduce their capital expenditures greatly during the recession of the industry, and the decrease of capital expenditures normally exceeds the decrease of their operating incomes; therefore, they may reduce the amounts of purchasing semiconductor special equipment. This will cause adverse effects on the business development and operating performance of the Company.

In the booming cycle of the semiconductor industry, the Company has to increase its production volume to meet customer demands, which requires the Company and suppliers to expand stock and improve their production capabilities. If the Company is unable to respond to a rapid increase in customer demands on a timely basis, or if the Company misjudges the timing, duration or magnitude of such an increase in demand, the Company may lose existing customers or incur increased costs disproportionate to any gains in revenue, which could have a material adverse effect on the business, results of operation, financial conditions, or cash flows of the Company.

(II) Risks of Escalated International Trade Dispute

The trade dispute between the US and China has escalated since 2018. The US government imposed additional custom duties on specific imported products originated from China in July, August, and September 2018, June and September 2019, and February 2020. For each round of changes in the custom duties imposed by the US, the Chinese government responded by imposing additional custom duties on specific products imported from the US. In the future, it is likely that the US and Chinese governments will continue to impose additional custom duties or set other trade barriers on specific products originated from each other.

The additional custom duties imposed by the US and Chinese governments, and the uncertainty in surrounding economies, could adversely affect the semiconductor industry, including the demands on semiconductor special equipment from wafer manufacturing, packaging, and testing enterprises. Further deterioration of trade policies, custom duties, additional taxes, export restrictions, or other trade barriers in the country of operation may adversely affect the production or sales capabilities of the Company's customers and harm the operating conditions of the Company's customers, leading to reduced demands of such customers for equipment products of the Company. In addition, if the Chinese government imposes additional custom duties on raw materials or parts purchased by the Company from the US, the operating costs of the Company may increase, leading to material adverse effects on the operating incomes, results of operation, or financial conditions of the Company.

(III) Risks of Market Competition

The global market of the semiconductor special equipment industry is intensively competitive; since the market is dominated by international giants, the Company's products have to directly compete on the market with such international giants. Compared with semiconductor special equipment manufacturers in Chinese mainland, such international giants are stronger in funds, technical accumulation, sales team, manufacturing capability, sales channels, and market awareness, have relations with more customers and partners, and have longer operating histories, more abundant product portfolios, and wider geographical coverage, hence can identify and respond to changes in the market and customer demands in a better manner. Some international giants are capable of offering bundle discounts for customers purchasing multiple products at the same time.

With the constant growth of the semiconductor terminal application market in China, sub-industries, including semiconductor manufacturing, packaging, testing, material, and equipment, in China have been developing rapidly. During the third transition of the global semiconductor industry, it is estimated that the Chinese mainland market will become the main competition field for global semiconductor

equipment manufacturers, hence the Company has to compete with both international giants and newcomers in China in the future. If the Company cannot effectively handle the competition with such competitors, the business incomes, results of operation, and financial conditions of the Company may be affected adversely.

(IV) Risks of Market Reputation

The Company operates in the industry of semiconductor special equipment, which is characterized by high industry concentration and intense competition. The Company has built up and maintained a favorable market reputation by adhering to the development strategy of differentiated competition and innovation and providing high-quality and highly reliable products. The Company has to compete with a few of international giants of semiconductor special equipment having longer operating histories, more comprehensive product portfolios, and higher market awareness; under such a competition pattern, the value of conventional marketing is limited, while the market reputation is crucial. If the market reputation of the Company is affected due to product quality accidents, delay in delivery, lag in technology, and delayed services, etc., the results of operation and financial conditions of the Company may be adversely affected.

(V) Risks of Product Quality

The Company operates in the semiconductor special equipment industry, a key supporting industry for the semiconductor industry chain, for which the quality, technical indicators, and operation stability of semiconductor special equipment is crucial for the quality of chip products. The semiconductor special equipment products of the Company are complicated, may have defects in designing and manufacturing, and may fail to meet specific specification requirements of customers; the test procedures of the Company may be insufficient to detect quality problems in the products. This may result in delayed acceptance or rejection of the Company's equipment products by customers, or even result in returns. The Company may have negative comments from customers, negative news reports, and reputation damages, which may reduce orders from existing customers and affect the development of new customers by the Company. The Company may have additional warranty or service obligations due to product quality problems, leading to additional costs. Moreover, quality defects in the Company's products may cause losses to customers, causing liability claims or litigations from customers with respect to the Company's products, hence the Company may have to pay high litigation costs or be liable for making high compensation for damages. The occurrence of quality problems above in the Company's products may adversely affect the operating performance and market reputation of the Company.

(VI) Risks of High Concentration of Customers

The industry of semiconductor wafer manufacturing, packaging, and testing is a highly concentrated industry. During the reporting periods, the total sales to top 5 customers of the Company amount for 94.99%, 92.49%, and 87.33%, respectively, in the total sales of the corresponding periods; moreover, the Company also has a highly concentrated customer base. Although the customers and products of the Company are becoming more diversified, incomes from a few major customers will still account for a high proportion in the Company's operating incomes in the future. The Company's incomes from existing major customers may not increase or continue, and the Company's results of operation may fluctuate in response to the purchase acts of major customers. In addition, the incomes of the Company may reduce if the Company loses any major customer, or the relation with any major customer changes. Moreover, our customers do not enter into long-term purchase commitments, and they may decrease, cancel or delay their purchase plans at any time.

In line with the industry practice, the sales of the Company are based on purchase orders from customers. The Company will not get binding purchase commitments before receiving formal purchase orders. Major customers of the Company may provide the Company with non-binding purchase predictions, but such predictions may be changed at any time without notifying the Company. However, due to the long delivery

period up to 6 months for the Company's products, the Company may have to arrange the procurement and outsourcing of raw materials and parts based on non-binding purchase predictions, despite that there is no assurance that the customers may place orders at the time expected by the Company. Meanwhile, the customers of the Company may place orders exceeding the predicted quantities, resulting in loss of sales opportunities because the Company may not deliver the ordered products on time. Due to the high concentration of the Company's customers, if there is a major deviation in the Company's prediction of sales to major customers, or major customers have serious problems in their production and operation, or have their financial conditions deteriorated, the sales of our products and the prompt collection of accounts receivable may be adversely affected.

(VII) Risks of Long Acceptance Period for the Company's Products

The equipment of the Company, being highly customized, has to be installed and commissioned on site at the customer's premise. The inspection and acceptance period of the equipment depends on a variety of factors including the maturity of the equipment and process, on-site preparation of customers, adjustment in customers' process requirements, customers' acceptance procedures, emergencies on site, and other accidental factors, hence may fluctuate to a large extent. In addition, the new products of the Company, including the stress-free polishing equipment and vertical furnace tube equipment may have a long period for inspection and acceptance. A long period of inspection and acceptance of the Company's products will lead to postponed recognition of revenues of the Company; meanwhile, the Company has risks of failing to pass equipment inspection and acceptance, delayed collection of payments, and increased stock of products, which may cause material adverse effects on the business operation, results of operation, and financial conditions of the Company.

(VIII) Risks of Reliance on Third-party Suppliers for Parts

The semiconductor special equipment products of the Company are highly complicated, requesting highly reliable and stable and high-precision parts. However, the Company *per se* almost does not have part manufacturing, hence relies on suppliers for purchasing or outsourcing parts required for our products; the Company has no direct control over the delivery time and quality of suppliers. If the Customer's suppliers delay in making delivery, or key parts of the Company have quality problems, the delivery of the Company's products may be delayed, or a defect may be caused in the Company's products; as a result, the Company may be in a disadvantage condition of cancelled orders, delayed inspection and acceptance by customers, or additional costs, hence adversely affecting the financial performance and results of operation of the Company.

(IX) Risks of Reliance on Suppliers of Some Key Parts

At present, the Company relies on existing suppliers for some key parts used in the Company's equipment. For example, Product Systems, Inc. is the only supplier of megasonic wave generators, a key part for our wafer cleaning equipment; NINEBELL is the main supplier of robot arms used in the transport system of our wafer cleaning equipment; Advanced Electric Co., Inc. is the key supplier of valves in our wafer cleaning equipment. In the event of adverse changes in the cooperation between the Company and such suppliers, or such suppliers suffer difficulties in their operations, the production plans of the Company may be adversely affected; if the Company replaces the source of such key parts, the supply may be interrupted during the transition period, which may lead to delayed delivery of the Company's products and causing high expenses, hence causing adverse effects on the operating performance of the Company.

(X) Risks of Failure in Market Development

The Company has a market development strategy of attracting global leading semiconductor manufacturers first to have the Company's technologies and products accepted by such manufacturers on the basis of long-term research, development, and technical accumulation, so as to build up the Company's reputation on the market. Then, on the basis of the performance and reputation acquired in the international industry, continuously expand to emerging semiconductor markets including Chinese mainland.

The Company presents the differentiated and innovative features of the SAPS, TEBO, Tahoe technologies, electroplating equipment, and stress-free polishing equipment, and the performance and reliability of vertical furnace tube serial products to customers, allowing global leading chip manufacturers to assess and verify the technologies and products of the Company. During the Company's efforts of market development, if such leading chip manufacturers do not accept and verify the equipment products of the Company, or do not recognize the high values in the Company's technologies, or despite the acceptance of the Company's technologies and equipment by such leading chip manufacturers, other chip manufacturers may not accept the Company's technologies and equipment, the market development for the Company's products may fail, which may cause material adverse effects on the business operation, results of operation, and financial conditions of the Company.

The sales cycle of the Company's products may be very long and uncertain. The sales procedure of the Company includes presentation of the Company's equipment to customers, assessment of customer demands, configuration of the Company's equipment based on specific customer demands, and verification of equipment by customers. The typical sales cycle of the Company is 6 to 24 months or even longer from the initial contact with customers to the execution of purchase orders. The lasting period or final success of the Company's sales cycle depend on the following factors: efforts of the Company's agencies and sales staff; compatibility of the manufacturing technologies of customers with the equipment and technologies of the Company; internal technical capability and maturity of the Company's customers; and the capital expenditure plan and procedures of the Company's customers, including budget limits, internal approvals, negotiation efficiencies, etc. Therefore, the Company could hardly predict when or even whether a potential customer will purchase from the Company, and could hardly make accurate prediction on whether the Company will have additional sales to existing customers. During the sales cycle, the Company will devote a large amount of time and funds to marketing activities, which may cause certain adverse effects on the results of operation and financial conditions of the Company.

In addition, due to the small scale of business at the beginning stage of the Company, it is hard to cover all potential customers, hence the Company mainly relies on agencies for market development. The Company has started to expand its own sales team on the basis of the constant expansion in the Company's business scale. If the agencies and the Company's own sales team could not continuously develop new customers, or the agencies opt not to cooperate with the Company any longer, the business operation and results of operation of the Company may be adversely affected.

(XI) Risks of Fluctuation in Quarterly Operating Performance

The Company's revenues and operating performance vary from quarter to quarter in each of the reporting periods. The main reasons are as follows: the semiconductor industry is a cyclical industry, and chip manufacturers normally make equipment purchase plans in advance on their judgment of the industry cycles, resulting in uncertain purchase orders for equipment from customers; moreover, due to the high concentration of customers, the cancellation of orders from any major customer, or accelerated or postponed product inspection and acceptance by major customer may affect the current operating incomes of the Company; in addition, the plans of the Company or competitors for product upgrade may also result in changes in the time for customers to place orders; due to the small number of customers and relative high average prices of individual equipment products, the order for individual equipment may substantially affect the incomes of the Company. In addition, it takes certain time for the Company's suppliers to supply parts and for the Company to implement production and manufacturing, and a certain period is also required for the transportation, inspection, and acceptance of the Company's equipment products.

The factors above are beyond control of the Company, and may cause fluctuation in quarterly operating performance of the Company during the reporting periods. Therefore, the Company could hardly predict its quarterly incomes accurately, and our results of operations for any quarter may not be indicative of results for future quarters. The Company has risks of quarterly fluctuation in its operating performance.

III. Risks of Management and Internal Control

(I) Risks of De Facto Controller Losing Control

ACMR, the controlling shareholder of the Company, has special voting rights. Specially, ACMR's shares are divided into shares of Class A common stock and shares of Class B common stock. The Class B common stock shares have 20 votes per share versus Class A common stock shares. As of the signing date of this [***], HUI WANG holds 168,006 shares of Class A common stock and 1,146,934 shares of Class B common stock, representing not less than 35% of total voting rights in ACMR.

ACMR was listed on NASDAQ in November 2017, and make the disclosure as follows in its U.S. prospectus: "Each outstanding share of Class B common stock is convertible into one share of Class A common stock (a) at any time, at the option of the holder, or (b) upon any transfer of such share of Class B common stock, whether or not for value, except for certain transfers described in our restated charter, including transfers to family members, trusts solely for the benefit of the stockholder or their family members, and partnerships, corporations, and other entities exclusively owned by the stockholder or their family members.

In addition, on or after the date of this prospectus, all outstanding shares of Class B common stock will convert automatically into shares of Class A common stock, on a one for one basis, upon (a) the election of the holders of a majority of the then outstanding shares of Class B common stock or (b) on the first December 31 that occurs more than five years after the date of this prospectus if the October Market Cap with respect to the month of October immediately preceding such December 31 exceeds \$1.0 billion, provided that the conversion provided by this clause (b) shall not apply and no automatic conversion of Class B common stock into Class A common stock will ever occur pursuant to this clause (b) if the October Market Cap for the month of October immediately preceding a December 31 exceeds \$1.0 billion prior to the fifth anniversary of the date of this prospectus."

If all outstanding shares of Class B common stock of ACMR will be converted into shares of Class A common stock, on a one for one basis, according to the above provisions on conversion, then Hui WANG will hold less than 10% of voting rights in ACMR, and may lose the largest voting right status such that ACMR will be changed to a company without controlling shareholder and de facto controller, indirectly resulting in the ACMSH having no de facto controller.

HUI WANG, the de facto controller of the Company, holds more than 50% of the total shares of Class B common stock in ACMR, and HUI WANG has issued the letter of commitment with respect thereto which reads: "to ensure the stability of the de facto controller of the Issuer, I irrevocably make commitment that I will not voluntarily or actively convert shares of Class B common stock held by me in ACMR into shares of Class A common stock within 36 months from the date of this letter until the date of the IPO and listing of issuer's stocks on the STAR Market."

However, according to the aforesaid provisions on conversion, if the October Market Caps of October 2020, October 2021 and October 2022 will not exceed \$1.0 billion, and the October Market Cap of October 2023 will exceeds \$1.0 billion, then the shares of Class B of ACMR will be automatically converted into shares of Class A common stock, on a one for one basis, according to the aforesaid provisions on conversion, and accordingly ACMSH will face the risks on changes in de facto controller as early as December 31, 2023.

(II) Risks of Improper Intervention By De Facto Controller

Before the Offering, the Company's de facto controller HUI WANG controlled 91.67% of the Issuer's equity interests through ACMR; if 43,355,800 shares will be publicly offered in the Offering, the de facto controller HUI WANG will still control 82.50% of the Issuer's equity interests after the Offering. The de facto controller HUI WANG may use its controlling position in the Company to exert a decisive influence on major issues such as personnel, financial and operating decisions of the Company through the exercise of voting rights at the shareholders' general meeting. If the

Company's governance structure is not sound enough, its operation is not standardized, and the Company fails to disclose information in a timely and comprehensive manner, the interests of small and medium shareholders would be damaged.

(III) Risks of Integration and Management of Subsidiaries

At the end of 2019, the Company merged CleanChip HK and its subsidiaries under the same control. CleanChip HK and its subsidiaries are mainly engaged in the development and sales of semiconductor special equipment. After the Company merged CleanChip HK, it has further conducted the integration in terms of operation management, R&D activities, etc. However, due to the short time for their inclusion in the Company's consolidated statements, if the Company's integration and management of its controlled subsidiaries cannot be effectively implemented, the Company's future business activities may be affected to a certain degree.

(IV) Risks of Management and Internal Control Caused by Expansion of the Company

During the reporting period, the Company's total assets were RMB320,919,800, RMB636,022,500 and 1,308,001,500.00, operating incomes were RMB253,587,300, RMB550,269,100 respectively. Both the asset and revenue scales achieved rapid growth. During the development process, the Company has established a business model that conforms to the Company's own business characteristics, set up a relatively complete corporate governance structure, cultivated a management team with advanced concepts, broadened horizons, and rich management experience, and established a relatively sound management system.

However, with the further expansion of the Company's assets, business, institutions and personnel, there is a continuous increase in the complexity of resource allocation and internal control management of the Company in terms of R&D, procurement, production, sales and other links, which requires the Company to improve its organizational structure and operational management capabilities. However, the Company's internal control system and management level would not be adapted to the rapid expansion of the Company's size, which may lead to a decline in the Company's operating efficiency, result in the Company's cost and expense growth rate exceeding the revenue growth rate and thereby damage the Company's competitiveness. Therefore, the Company will face the management and internal control risks caused by its scale expansion.

IV. Financial Risks

(I) Risks of Tax Preference

During the reporting period, the Company was entitled to high-tech corporate income tax preference and extra tax deductions for research and development costs. If there are major adjustments to China's laws, regulations and policies on tax incentives, or the Company cannot continue to obtain the qualification of a Chinese high-tech enterprise in the future or meet the conditions for extra tax deductions for research and development costs, the Company's operating performance will be affected to a certain degree.

(II) Risks of Government Subsidy Policy

During the reporting period, the amount of government subsidies included in other incomes of the Company was RMB15,909,700, RMB20,823,400 and RMB26,666,900 respectively. If the support for the Company's industry is weakened in the future according to the government authorities' policies, or other subsidy policies are adversely changed, the amount of government subsidies obtained by the Company will be reduced, which will have a certain adverse effect on the Company's operating performance.

(III) Risks of Fluctuation in Gross Profit Margin

The Company provides semiconductor special equipment for the semiconductor companies including wafer manufacturing, advanced packaging, and semiconductor wafer manufacturing companies. The Company's products have significant customized

characteristics. The different customers may have different product configuration, performance requirements and bargaining capabilities. The price of the first order and the repeat order for the same customer may also be different, resulting in a certain difference in the Company's product gross profit margin. During the reporting period, the Company's main business gross profit margins were 44.46%, 43.80% and 44.67% respectively, which was relatively stable. If there will be significant changes in the Company's operating scale, product structure, customer resources, cost control, technological innovation advantages and other aspects, or the industry competition will intensify, resulting in a decline in the Company's product sales price, an increase in costs, or greater changes in customer demand. Therefore, the Company will face the risks on fluctuations in the main business gross profit margin.

(IV) Risks of Exchange Rate Fluctuation

During the reporting period, most of the Company's product sales were denominated in U.S. dollars, some raw materials and parts were purchased in U.S. dollars and KRW, while other raw materials, parts, employee compensation, and other costs were denominated in RMB. The exchange rate of RMB against U.S. dollars and KRW will affect the Company's operating performance. During the reporting period, the exchange losses of the Company's financial expenses were RMB266,000, RMB7,169,500 and RMB9,246,500 (negative sign represents income). The RMB exchange rate fluctuates with changes in the international political and economic environment, and has certain uncertainties. As the Company's business scale continues to expand, if the exchange rate of RMB against the US dollar and KRW fluctuates sharply in the future, which will bring certain uncertainty to the Company's performance, lead to the exchange loss and adversely affect the operating performance and financial conditions.

(V) Risks of Net Assets Income Rate Falling

At the end of each reporting period, the Company's net asset balances were RMB48,358,600, RMB145,047,500 and RMB829,929,000 respectively. Since the Company and its subsidiaries leased office buildings and factories from others to operate, and there were unrecovered losses and small balance of net assets during the reporting period. In 2019, the Company raised two rounds and the scale of net assets has expanded, and the Company's weighted average return on net assets after being deducted non-recurring gains and losses was 30.67%. After the closing of the Offering, the Company's net assets will increase significantly in a short period of time, and the fund-raising investment project will take some time from construction to production. In the short term, the Company's net profit may be difficult to keep pace with net assets, so the Company has the risk of falling returns on net assets.

(VI) Risks of Decline in Value of Inventories

The Company's semiconductor special equipment needs to go through a long verification process to enter the market. The products need to be prepared in advance according to the order in the production stage, and the customers will complete the acceptance upon installation and commissioning after delivery. Therefore, the Company's raw materials and shipped commodities increase as the rapid expansion of the business, the rise in product types and the augmentation of orders in hand. At the end of each reporting period, the Company's inventory book value was RMB 135,531,900 Yuan, RMB264,159,900 Yuan and RMB307,274,100 Yuan, accounting for 46.79%, 46.52% and 25.42% of current assets respectively. The shipped products are the most important component of the Company's inventory. At the end of each reporting period, the Company's book value of shipped goods was high, i.e. RMB 77,077,100 Yuan, RMB 124,748,200 Yuan and RMB 137,624,600 Yuan, accounting for 56.87%, 47.22%, and 44.79% of the inventory book value. With the Company's business development, the book value has increased year by year.

The Company needs to effectively manage the inventory of raw materials and parts to meet changing customer demand. However, it is difficult for the Company to accurately predict customer demand. The Company's equipment demand forecast is based on multiple assumptions, including non-binding forecasts obtained from customers, but each assumption may make the Company's forecast incorrect, resulting

in the inventory of raw materials and parts exceeding the customers' needs, or the change in the list of parts or raw materials due to the change in product design scheme or the reduction of customer orders may cause some of the Company's parts and raw materials to become outdated or surplus during the inventory period, which may lead to decline in value of inventories.

If there is a significant adverse change in the future sales price of the products or the shipped products are rejected due to failure to pass the check of customers, the net realizable value of the inventory may be lower than the net book value, and the inventory depreciation reserve needs to be accrued, thereby affecting the Company's profitability.

(VII) Risks of Receivables Recovery

At the end of each reporting period, the Company's book value of accounts receivable was RMB 97,704,900 Yuan, RMB 173,605,500 Yuan and RMB 209,896,400 Yuan, accounting for 30.45%, 27.30% and 16.05% of total assets respectively. During the reporting period, the Company's large amount of accounts receivable caused a certain working capital pressure on the Company. However, the Company's main customers are domestic and foreign mainstream semiconductor companies, and the overall credit status is good. The Company has made provision for bad debts based on the principle of prudence. If the Company's accounts receivable is improperly managed in the future or the client has major operational difficulties, it may result in the Company's accounts receivable not being recovered in time, which will adversely affect the Company's operating performance.

V. Legal Risks

(I) Risk of Intellectual Property Disputes

The industry of special semiconductor equipment in which the Company is located is a typical technology-intensive industry, a leading enterprise with technical advantage in the industry needs to protect its own core technologies through applying for patents.

The business results obtained by the Company, to some degree, rely on its own system of intellectual properties and the ability of the Company to maintain such intellectual properties and preserve confidential information, as well as the ability of the Company to engage in its business without infringing on any patent of others. As of December 31, 2019, the Company and its subsidiaries in which it owns controlling equity interest own 232 major patents which have been granted with patent rights, among which, 108 patents are domestic patents, 124 patents are foreign patents, and 227 patents are invention patents.

The Company will continue to apply for more patents according to actual needs of production and operation in the future, but cannot ensure that patent applications submitted by the Company will be actually granted with patents, the intellectual property regulatory and administrative authorities of each country will require the Company to observe numerous provisions and pay corresponding fees, a failure to observe such provisions or pay fees may result in the waiver or termination of patents or patent applications; the Company cannot ensure that granted patents are able to provide sufficient protection against a competitor which owns similar technologies, and a granted patent may be questioned, declared to be void, modified, cancelled, avoided or unable to be implemented, or cannot provide any competitive advantage due to other reasons.

The Company cannot protect its own intellectual properties globally as well, the Company chooses to apply for patents in the places where main production and operation, major and potential clients and major suppliers are located. If a competitor exists any infringement over intellectual properties of the Company within a region where patents of the Company cannot provide protection, then it may adversely affect businesses of the Company. In addition, the Company also takes measures to protect commercial secrets and non-patented technologies of the Company, including entering into confidentiality agreements with key employees, clients, suppliers and important third parties, but others may acquire knowledge of such commercial secrets and non-patented technologies, and then the operation of the Company may be adversely

affected.

The Company may be involved in litigations for the purpose of protecting or enforcing its own patents, but such litigations may cost a great deal of money and take a long time, and the Company may be unable to win such litigations. Any potential intellectual property claims, or litigation raised by others against the Company may need a time-consuming and costly defense, regardless of whether a favorable result is obtained or not. This may result in that the Company will face the following results: the Company may be forced to cease the sale or use of parts or technologies which are accused of infringing on intellectual properties; the shipment of goods may be delayed; the Company may be required to compensate for damages or pay settlement fees to parties alleging to be infringed; the Company may need to obtain the license of relevant intellectual properties, but such license may be unable to be obtained at a reasonable price or cannot be obtained absolutely; the Company may be forced to redesign products containing technologies alleged to be infringing, but such redesign may be unrealizable or too costly; the Company may need to make compensation to clients, suppliers or other third parties for any loss arising from their use of technologies of the Company which are alleged to infringe on intellectual properties of third parties, which may have materially adverse effect on the financial status and business results of the Company.

As the period of patent application is relatively long, there may be applications under review but the Company does not have knowledge of such applications, these applications may ultimately be granted with patents, meanwhile, there may be granted patents which are relevant with products of the Company but the Company does not have knowledge of them, which will result in products or technologies of the Company being in infringing status.

The Company attaches great importance to protecting intellectual properties, assisting technology research and development personnel in generating patentable technology results, and improving the awareness of non-infringing intellectual properties of others. If an intellectual property dispute is brought by the Company against a competitor, or any intellectual property of the Company is infringed by a competitor, the production and operation of the Company will be adversely affected.

(II) Risk of Defects in Title of Certain Leased Premises

Main plant and land used by the Company for production and operation at present are acquired by the means of lease. Among which, the premise located at Building 4, No. 1690 Cailun Road, Zhangjiang Hi-tech Park, Shanghai leased by the Company from Zhangjiang Group, the total area of which is 5,900.28 m², has not obtained the certificate of property title, the area of such premise accounts for approximately 35% of main property area used for production and operation of the Company, such premise are mainly used for office, research and development and storage. The project of ACMSH high-end semiconductor equipment research and development, a project which will be invested by using funds raised in this Offering, will also be implemented on such premise. Zhangjiang Group, the lessor, has confirmed to the Company that it has the right to rent out such premise, the Issuer's lease and use of such premise will not be affected by the ownership of such premise.

In addition, the premise located at Building 2, No.365 Chuanhong Road, Shanghai leased by the Company from Shanghai Shengyu Culture Development Co., Ltd., the total area of which is 9,858.57 m², has been mortgaged and gone through the mortgage registration. Shanghai Shengyu Culture Development Co., Ltd., the lessor, has issued the Commitment Letter to warrant that the right of using plant by the Issuer will not be interrupted or suspended due to the mortgage of the above premise; in the case of such circumstances, the lessor will bear corresponding defaulting liabilities or is liable to make compensation for damages.

However, if any adjustment in local regional overall planning of Shanghai or other reason results in the demolition of the above premises, such premises cannot continue to be leased to the Company, or the realization of mortgage of such premises during the term of lease results in the Company's inability to continue to lease and use such premises, the day-to-day production and operation of the Company and the implementation of the project which will be invested by using funds raised in this Offering will be adversely affected.

VI. Risks of Offering Failure

According to requirements of relevant regulations, if the number of investors providing valid offers or investors making off-line subscriptions is less than the number as required by laws, or the total market value at the time of the Offering fails to reach the expected market value, this Offering shall be suspended. If the listing approval process of the Company exceeds the time limit as provided for by the exchange, or the offering registration process is suspended for more than 3 months and fails to be resumed, or there is any other adverse circumstance affecting the Offering, then the Company will exist risk of offering failure.

VII. Risks of Investment Projects of Raised Funds

(I) Risk of Failure of Investment Projects of Raised Funds to Realize Expected Economic Effect

The projects to be invested by using funds raised in this Offering are ACMSH equipment research and manufacturing center, ACMSH high-end semiconductor equipment research and development project and supplementary working capital project. Although investment projects of raised funds in this Offering have gone through feasibility study and market research, but such study and research are made on the basis of current market environment, technical capacity, development tendency and other

factors. In the course of actually implementing projects, it will be confronted with uncertainties, such as in overall economic situation, industrial market environment and technical innovation, and failure to realize breakthrough of key technologies in the course of research and development or failure of performance of researched and developed products to reach the anticipated effect, which will have adverse effect on the implementation of projects to be invested by funds raised by the Company.

(II) Risk of Newly Increased Depreciation and Amortization of Fixed Assets Affecting Profitability

After investment projects of raised funds in this Offering are built up, the total amount of newly increased depreciation and amortization of fixed assets is RMB 33.3574 million per year after they reach design capacity, which will result in a dramatic increase in fixed production costs and expenses of the Company. After investment projects of raised funds are completed, if such projects cannot bring benefits or actual benefits of them are lower than expected, then the newly increased depreciation and amortization of fixed assets will exacerbate operating risks of the Company, which will have adverse effect on profitability of the Company.

VIII. Risks of Adverse Effect on the Semiconductor Industry Caused by the Global COVID-19 Epidemic

Since early 2020, the COVID-19 epidemic breaks out globally. To handle such major epidemic, various provinces and cities in China launched the first-level reaction of serious and unexpected public health incident and take various measures, such as sealing off cities, quarantine and postponing start dates after Spring Festival. At present, China and other Asian countries have contained the COVID-19 epidemic to a great extent, but there remains risk of second outbreak of the epidemic due to persons entering China. The Company has strictly implemented notices and requirements on epidemic control and prevention issued by governmental authorities of each level in China, and all employees of ACMSH factories in Mainland China have returned and such factories have started to produce at present, the effect of the epidemic on the Company is limited at present.

If a manager or employee of the Company is absent from work due to his/her infection of epidemic, or cannot carry out on-site works because of quarantine, or cannot visit clients to provide services for them due to quarantine or other restrictions imposed by governmental authorities, or journeys to or from Mainland China, the United States and other countries are limited for a long time, it may result in adverse situations, such as extending period of research and development or manufacturing.

Considering that the Company almost does not engage in the business of parts processing, main raw materials and parts are obtained through external purchase or external coordination, and suppliers of the Company are located in Mainland China, the United States, South Korea, Japan, China Taiwan and other countries and regions. If the epidemic lasts for a long term or continues to exacerbate, the supply capacity of major suppliers of the Company may be affected in the future, the Company may need to look for replacing suppliers, which may result in the increase in costs, or the Company may be unable to find replacing sources. It may also affect logistics transportation of raw materials and parts and result in the delay of shipment by suppliers to the Company, which may lead to the delay of shipment by the Company to clients. All of the above may affect business results of the Company.

Most of major clients of the Company are located in Mainland China and neighboring countries and regions. Among which, Yangtze Memory is located in Wuhan, although there is no change in purchase orders of Yangtze Memory for products of the Company, the period of product acceptance may be extended to some degree. If the epidemic lasts for a long term or continues to exacerbate, it may have adverse effect on the production and operation of major clients of the Company and result in the decrease in needs of special semiconductor equipment, which may lead to cancellation, decrease or postponement of orders for products of the Company by such major clients, all of the above may adversely affect businesses of the Company.

If the COVID-19 epidemic affects for a long term or exacerbates, or cannot be effectively controlled in Europe, North America, Japan, South Korea and other countries and regions for a long term, it may adversely affect the R&D and production of the Company, the supply of raw materials and parts of the Company, the sales of the Company to clients and other aspects, as well as economical and financial markets of major countries in the world, resulting in the recession of global economy and changes in economic policies of various countries, which may lead to continuous depression of the semiconductor industry from the origin and have materially adverse effect on

businesses, operating results and financial situations of the Company.

IX. Relevant Risks of the Company and ACMR, the Controlling Shareholder, being Listed on the STAR Market and the NASDAQ Stock Market Respectively

After A-share stocks in this Offering are listed, the Company and ACMR, the controlling shareholder of the Company, will be listed on the STAR Market of Shanghai Stock Exchange and the NASDAQ Stock Market in the U.S. respectively. The Company and ACMR need to comply with laws and regulations and regulatory requirements on listing issued by regulatory authorities in both places at the same time, and shall simultaneously disclose information in both places which are required to be publicly disclosed according to laws.

Due to discrepancies in terms of laws and regulations and regulatory ideas in China and the United States, there are some discrepancies in terms of specific accounting treatment and financial information disclosure between the Company and ACMR as they are governed by different accounting standards. Meanwhile, the price of stocks of the Company listed on the STAR Market and the price of stocks of ACMR listed in NASDAQ stock market may be different due to differences in requirements of disclosing information on listed companies imposed by securities regulatory authorities, in language, culture and expression habit, in composition of investors in China and the United States and their investment ideas, and in specific situations of capital markets. Such differences and fluctuation in stocks of ACMR may affect the price of stocks listed on the STAR Market.

X. Other Risks

(I) Risk of Force Majeure

In the day-to-day operation of the Company, damages caused to assets, personnel and suppliers or clients of the Company arising from force majeure events (including political factors, natural disasters, wars) cannot be excluded, which may have adverse effect on the production and operation of the Company.

(II) Risk of Fluctuation in Stock Price

The fluctuation in market price of stocks is not only dependent on business results and development prospect of the Company, but affected by macroeconomic cycle, interest rate, capital supply and demand and other factors, and at the same time, such market price will fluctuate because of changes in international and domestic political and economic circumstances and psychological factors of investors. The fluctuation in price of stocks is a normal phenomenon. For this purpose, the Company specially reminds investors that they must have consciousness of risk in order to make correct investment decisions. At the same time, the Company will, on the one hand, make maximization of shareholders' interests as the ultimate goal, strengthen internal management, endeavor to reduce costs, actively develop market and improve profitability; on the other hand, the Company will normatively operate in strict compliance with requirements of the Company Law, the Securities Law, the Rules on the Listing of Stocks on the STAR Market of Shanghai Stock Exchange and other laws and regulations, and timely, fully and accurately disclose information in order to facilitate investors to make correct investment decisions.

The market price of stocks of the Company may dramatically fluctuate due to various factors, many of which are beyond the control of the Company, mainly including: fluctuation in macroeconomy, fluctuation in business performance and its expectation of listed companies in the industry in which the Company is located and relevant industries and price of stocks in the secondary market; changes in financial forecast of the Company's businesses and suggestion on holding stocks made by securities analysts, or the failure of the Company to realize estimates of the above financial forecast; changes in forecast on chip manufacturing industry or special semiconductor equipment industry made by third-party research institutions; sales of stocks of the Company by shareholders of the Company in the secondary market; fluctuation in indexes and trading amount in the stock market of China, as a whole, and the STAR Market; litigations brought by clients, suppliers, competitors and employees against the Company; litigations, disputes or controversies on patents involving the Company; disposals or investigations made by China Securities Regulatory Commission, Shanghai Stock Exchange and other regulatory authorities; geopolitical events, such as wars or terrorism acts, etc.

In conclusion, investment return coexists with investment risks in the stock market, investors shall make adequate preparations for this.

Section V - Overview of the Issuer

I. Overview of the Issuer

Name:	盛美半导体设备（上海）股份有限公司
English Name:	ACM Research (Shanghai), Inc
Legal Representative :	HUI WANG
Share Capital:	RMB 390,201,347 Yuan
Date of Establishment:	May 17, 2005
Date of Overall Change:	November 21, 2019
Domicile:	Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone
Post Code:	201203
Telephone:	021-50808868
Fax:	021-50808860
Internet Address:	www.acmrcsh.com.cn
Email Address:	ir@acmrcsh.com
Information Disclosure Department:	Board Office
Person in Charge of Information Disclosure:	MINGZHU LUO
Telephone of the Information Disclosure Department:	021-50276506

II. Establishment and Reorganization of the Issuer

(I) Establishment of ACM Research (Shanghai), Inc.

On April 25, 2005, Shanghai Songjiang Export Processing Zone Management Committee issued *the Approval for the Feasibility Study Report and the Articles of Association of the Wholly Foreign-Owned Enterprise ACM Research (Shanghai), Inc.* (Song Chu Pi Zi (2005) No.024), agreeing ACMR to establish ACM Research (Shanghai), Inc., with the registered capital of USD 1.2 million dollars, the business scope of the design, production, processing of electronic special equipment and parts, sales of self-produced products, and provision of after-sales technical services and consulting services (for the above items subject to the administrative permits, relevant permits shall be obtained for operation).

On April 29, 2005, Shanghai Municipal People’s Government approved and issued *the Certificate of Approval for Establishment of Enterprises with Foreign Investment* (Shang Wai Zi Hu Song Chu Du Zi Zi [2005] No.1229).

On May 17, 2005, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Shanghai Administration for Industry and Commerce.

On August 15, 2005, Shanghai Shangzi Accounting Firm Co., Ltd. verified the paid-up status of the registered capital of ACMSH and issued *the Capital Verification Report* (Shang Zi Kuai Yan (2005) No. 101), verifying that up to August 9, 2005, ACMSH, had received the registered capital of USD 180,088 dollars from the investors.

The equity structure of ACMSH upon establishment was as follows as of August 2005:

No.	Name of Shareholder	Subscribed Capital Contribution (Ten Thousand US Dollars)	Paid-up Capital Contribution (Ten Thousand US Dollars)	Proportion of Shareholding (%)
-----	---------------------	---	--	--------------------------------

1	ACMR	120	18.0088	100
Total		120	18.0088	100

(II) Establishment of ACMSH

ACMSH is a joint stock limited company established by the overall change of ACMSH (before restructuring). On October 30, 2019, the board of directors of ACMSH passed a resolution that the Company's name should be changed to “盛美半导体设备（上海）股份有限公司 (ACM Research (Shanghai), Inc.)” and the Company should be changed into a joint stock limited company as a whole by taking August 31, 2019 as the base date for restructuring. On October 30, 2019, all shareholders of ACMSH, as the promoters, signed *the Promoters' Agreement*, agreeing that on the basis of the net assets as of August 31, 2019 audited by BDO China RMB 552,890,000 Yuan, it shall be converted to 372,649,808 shares at the rate of 1: 0.6740, with the remaining RMB 180,240,200 Yuan included in the capital reserves and the registered capital of ACMSH RMB 372,649,800 Yuan.

On November 15, 2019, the Company handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

On November 21, 2019, the Company obtained the business license issued by Shanghai Municipal Administration for Market Supervision (Uniform Social Credit Code: 91310000774331663A).

BDO China verified the paid-up registered capital after the overall change and issued *the Capital Verification Report* (Xin Kuai Shi Bao Zi [2020] No. ZI10024)", confirming that the promoters' capital contributions had been paid in full and on time as of November 14, 2019.

The equity structure of ACMR upon establishment was as follows:

No.	Name of Shareholders	Shares Held (Ten Thousand Shares)	Proportion of Shareholding (%)
1	ACMR	35,769.2308	95.99
2	Xinwei Consulting	475.6154	1.28
3	HTXC	230.7692	0.62
4	Jinpu Investment	192.3077	0.52
5	Taihu Guolian	192.3077	0.52
6	Xinshi Consulting	178.1923	0.48
7	Hai Feng Investment	153.8462	0.41
8	Xingang Consulting	72.7115	0.20
Total		37,264.9808	100.00

1. The reason why the accumulative undistributed loss has been formed upon the establishment of the Company by the overall change

When ACMSH (before restructuring) was changed to ACMSH as a whole, the undistributed profit shown on the financial statements as of the base date for restructuring August 31, 2019 was RMB -14,168,800 Yuan. Such cumulative loss was mainly due to the facts that the Company had made large amount of investments in product technology research and development at the beginning of the business development and meanwhile the product development cycle was long while the Company obtained low sales income in the early market cultivation.

2. As of December 31, 2019, the Company's accumulative undistributed losses had been eliminated.

During the Reporting Period, with the continuous improvement of the Company's technical level, product maturity and market recognition of the Company's products, the Company's business was expanded rapidly, sales incomes continued to grow, and

continuous profits were maintained during the Reporting Period. As of December 31, 2019, the Company's accumulative undistributed losses had been eliminated, and the Company's undistributed profits had amounted to RMB 65,594,700 Yuan.

During the Reporting Period, the Company's earnings were as follows:

Unit: RMB 10,000 Yuan

Item	2019/ December 31, 2019	2018/ December 31, 2018	2017/ December 31, 2017
Consolidated Financial Statements			
Operating Income	75,673.30	55,026.91	25,358.73
Net Profit	13,488.73	9,253.04	1,086.06
Undistributed Profit	6,559.47	-7,598.98	-16,852.02
Financial Statements of the Parent Company			
Operating Income	72,799.03	53,826.81	25,358.73
Net Profit	14,076.03	8,785.44	1,091.39
Undistributed Profit	6,724.45	-8,021.29	-16,806.73

3. Specific Plan of the Overall Change and the Corresponding Accounting Treatments

As of August 31, 2019, as audited by BDO CHINA SHU LUN PAN Certified Public Accountants LLP ("BDO China"), the paid-up capital of ACMSH was RMB 372,649,800 Yuan, the undistributed profit was RMB -14,168,800 Yuan, and the net asset was RMB 552,890,000 Yuan.

On the basis of the net assets of ACMSH RMB 552,890,000 Yuan as of August 31, 2019, it was converted to 372,649,808 shares at the rate of 1:0.6740, with the remaining RMB 180,240,200 Yuan included in the capital reserves and the registered capital of ACMR RMB 372,649,800 Yuan, which was established by overall change from ACMSH.

The Company adopted the following accounting treatments upon the overall change:

Unit: RMB 10,000 Yuan

Debit/Credit	Accounting Name	Amount
Debit	Paid-up Capital	37,264.98
Debit	Undistributed Profit	-1,416.88
Debit	Capital Reserves	19,440.89
Credit	Share Capital	37,264.98
Credit	Capital Reserves - Share Premium	18,024.01

4. The Procedures Performed for the Overall Change, Legal Compliance and Legal Rights and Interests of Creditors in the Process of Restructuring

On October 30, 2019, the board of directors of ACMSH passed a resolution on its overall change to a joint stock limited company. BDO China audited the financial statements of ACMSH as of August 31, 2019 and issued *the Audit Report* (Xin Kuai Shi Bao Zi [2019] No. ZI10682). China United Assets Appraisal Group Co., Ltd. issued the *Asset Appraisal Report* (Zhong Lian Ping Bao [2019] No. 1812) taking August 31, 2018 as the base date of the asset appraisal. On October 30, 2019, all shareholders of ACMSH signed *the Promoters' Agreement*. On November 14, 2019, with the approval

of the founding meeting of the Issuer and the first shareholders' meeting, the Company as a whole was changed into a joint stock limited company with the audited net assets as of August 31, 2019.

After the overall change and establishment of the joint stock limited company, the Company inherited all the assets and liabilities of ACMSH (before restructuring), and there was no circumstance that infringed the legitimate rights and interests of its creditors; as of the date of signing of the [***], the Issuer has not had any dispute with its creditors over the overall change.

As of the date of signing the [***], the Company has completed the procedures related to the industrial and commercial registration and tax registration of the overall change in accordance with *the Company Law* and other laws and regulations.

(III) Changes in the Shareholders of the Issuer

During the Reporting Period, changes in the Issuer's share capital and shareholders were as follows:

1. Equity Structure of the Issuer at the Beginning of the Reporting Period

On January 1, 2017, the equity structure of the predecessor of the Company -ACMSH (before restructuring) was as follows:

No.	Name of Shareholder	Subscribed Capital Contribution (RMB 10,000 Yuan)	Paid-up Capital Contribution (RMB 10,000 Yuan)	Proportion of Shareholding (%)
1	ACMR	13,400.0000	13,400.0000	62.87
2	Shanghai Venture Capital Co., Ltd.	4,000.0000	4,000.0000	18.77
3	ZJTVC	1,615.1250	1,615.1250	7.58
4	PDHTI	2,297.3700	2,297.3700	10.78
Total		21,312.4950	21,312.4950	100.00

2. In August, 2017, the Second Equity Transfer of ACMSH

On January 4, 2017, the Office of Leading Group of Invigorating the City with Science and Education in Shanghai issued *the Reply to the Exit Plan of the Special Fund for Invigorating the City with Science and Education from ACM Research (Shanghai) Co., Ltd.* (Hu Tui Ban [2017] No.1), agreeing that Shanghai Venture Capital Co., Ltd. withdraws RMB 40 million Yuan Special Fund for Invigorating the City with Science and Education from ACMSH at its original value.

On March 23, 2017 and July 27, 2017, ACMR signed a *Share Subscription Agreement* and Supplementary Agreement respectively with Shanghai Science and Technology Venture Capital Co., Ltd., agreeing on matters including the subscription of ACMR by Shanghai Science and Technology Venture Capital Co., Ltd. Both Shanghai Science and Technology Venture Capital Co., Ltd. and Shanghai Venture Capital Co., Ltd. are wholly-owned subsidiaries of Shanghai Science and Technology Venture Capital (Group) Co., Ltd.

On May 2, 2017, Shanghai Venture Capital Co., Ltd. and ACMR signed a *Shanghai Assets and Equity Exchange Contract*, stipulating that Shanghai Venture Capital Co., Ltd. would transfer its 18.77% equity of ACMSH to ACMR for RMB 40 million Yuan.

On June 12, 2017, Shanghai United Assets and Equity Exchange issued *the Transaction Certificate (Type A2 - Unlisted)*, setting forth that with the approval of the Office of Leading Group of Invigorating the City with Science and Education in Shanghai, Shanghai Venture Capital Co., Ltd., as the transferor, transferred 18.77% equity of ACMSH held by it to the transferee ACMR, at the transfer price of RMB 40 million Yuan, which complied with the procedural provisions for the transaction.

On August 10, 2017, the board of directors of ACMSH passed the resolution on the above equity transfer. On the same day, ACMR, ZJTVC and PDHTI signed a new

Joint Venture Contract.

On August 15, 2017, ACMSH handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

On September 28, 2017, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Market Supervision Administration of China (Shanghai) Pilot Free Trade Zone. Upon completion of the change, the equity structure of ACMSH was as follows:

No.	Name of Shareholder	Subscribed Capital Contribution (RMB 10,000 Yuan)	Paid-up Capital Contribution (RMB 10,000 Yuan)	Proportion of Shareholding (%)
1	ACMR	17,400.0000	17,400.0000	81.64
2	ZJTVC	1,615.1250	1,615.1250	7.58
3	PDHTI	2,297.3700	2,297.3700	10.78
Total		21,312.4950	21,312.4950	100.00

3. In November, 2017, the Third Equity Transfer of ACMSH

On August 31, 2017, ACMR, ZJTVC and Zhangjiang AJ Company Limited, a wholly-owned subsidiary of ZJTVC signed a *Shares Subscription Agreement*, agreeing on matters including the transfer of whole shares of ACMSH held by ZJTVC to ACMR, and the issuance of Class A Common Shares to Zhangjiang AJ Company Limited by ACMR.

On the same day, ACMR, PDHTI and Pudong Science and Technology (Cayman) Co., Ltd., a wholly-owned subsidiary of PDHTI signed a *Shares Subscription Agreement*, agreeing on the transfer of whole shares of ACMSH held by PDHTI to ACMR, and the issuance of Class A Common Shares to Pudong Science and Technology (Cayman) Co., Ltd. by ACMR.

On November 2, 2017, ZJTVC and PDHTI signed a *Shanghai Assets and Equity Exchange Contract* with ACMR, which agreed that ZJTVC would transfer its 7.58% equity in ACMSH, and PDHTI would transfer its 10.78% equity in ACMSH, totaling 18.36% equity, to ACMR, for RMB 95,655,600 Yuan. The transfer price in this transaction was RMB 2.44 Yuan/unit registered capital, which had been determined according to *the Asset Appraisal Report* issued by Shanghai Orient Appraisal Co., Ltd. (Dong Zhou Ping Bao Zi (2017) No.0594). The appraisal value of ACMSH was RMB 521 million Yuan as of December 31, 2016.

On November 7, 2017, Shanghai United Assets and Equity Exchange issued *the Transaction Certificate of Shanghai United Assets and Equity Exchange (Type A1 - Listed)*, setting forth that ZJTVC and PDHTI, as the transferors, transferred 18.36% equity of ACMSH held by them to the transferee ACMR, at the transfer price of RMB 95,655,600 Yuan, which complied with the procedural provisions for the transaction.

On November 8, 2017, the board of directors of ACMSH passed the resolution on the above equity transfer.

On December 5, 2017, ACMSH handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

On May 3, 2018, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Market Supervision Administration of China (Shanghai) Pilot Free Trade Zone. Upon completion of the change, the equity structure of ACMSH was as follows:

No.	Name of	Subscribed Capital	Paid-up Capital	Proportion of
-----	---------	--------------------	-----------------	---------------

	Shareholder	Contribution (RMB 10,000 Yuan)	Contribution (RMB 10,000 Yuan)	Shareholding (%)
1	ACMR	21,312.4950	21,312.4950	100.00
Total		21,312.4950	21,312.4950	100.00

4. In May, 2019, the Fourth Capital Increase of ACMSH

On May 6, 2019, ACMR, the shareholder of ACMSH, made a shareholder's decision that the Company would increase the registered capital by RMB 144,567,357.69 Yuan, all of which would be subscribed by ACMR. The capital increase price would be RMB 1 Yuan/unit registered capital, which would increase the registered capital to RMB 357,692,307.69 Yuan.

On May 29, 2019, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Market Supervision Administration of China (Shanghai) Pilot Free Trade Zone.

On June 14, 2019, ACMSH handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

On July 4, 2019, BDO China verified the paid-up status of the registered capital of ACMSH, and issued *the Capital Verification Report* (Xin Kuai Shi Bao Zi [2019] No. ZI10586). As of June 26, 2019, ACMSH had received the newly increased capital of RMB 144,567,357 Yuan paid by ACMR.

Upon completion of the change, the equity structure of ACMSH was as follows:

No.	Name of Shareholder	Subscribed Capital Contribution (RMB 10,000 Yuan)	Paid-up Capital Contribution (RMB 10,000 Yuan)	Proportion of Shareholding (%)
1	ACMR	35,769.2308	35,769.2308	100.00
Total		35,769.2308	35,769.2308	100.00

5. In June, 2019, the Fifth Capital Increase of ACMSH

On June 26, 2019, the board of directors of ACMSH passed the resolution that the registered capital of the Company increased from RMB 357,692,307.69 Yuan to RMB 372,649,807.69 Yuan. The newly increased registered capital would be subscribed in cash by seven new shareholders including Xinwei Consulting, HTXC, Taihu Guolian, Jinpu Investment, Xinshi Consulting, Hai Feng Investment and Xingang Consulting. In June 2019, the above shareholders signed *the Capital Increase Agreement* with ACMSH: Xinshi Consulting and Xingang Consulting were the employee stock ownership platforms, the capital increase price of which was RMB 10.40 Yuan/unit registered capital, while the other five new shareholders' capital increase price was RMB 13 Yuan/unit registered capital. On the same day, ACMR signed a new *Joint Venture Contract* with the above new shareholders, agreeing on the aforesaid capital contribution matters.

On July 22, 2019, ACMSH handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

On August 20, 2019, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Market Supervision Administration of China (Shanghai) Pilot Free Trade Zone.

On August 29, 2019, BDO China verified the paid-up status of the registered capital of ACMSH, and issued *the Capital Verification Report* (Xin Kuai Shi Bao Zi [2019] No. ZI10620). As of August 22, 2019, ACMSH had received the newly increased capital of RMB 187,924,000 Yuan paid by the above shareholders, with RMB 14,957,500 Yuan included in the registered capital and RMB 172,966,500 Yuan included in the capital reserves.

Upon completion of the increase, the equity structure of ACMSH was as follows:

No.	Name of Shareholder	Subscribed Capital Contribution (RMB 10,000 Yuan)	Paid-up Capital Contribution (RMB 10,000 Yuan)	Proportion of Shareholding (%)
1	ACMR	35,769.2308	35,769.2308	95.99
2	Xinwei Consulting	475.6154	475.6154	1.28
3	HTXC	230.7692	230.7692	0.62
4	Jinpu Investment	192.3077	192.3077	0.52
5	Taihu Guolian	192.3077	192.3077	0.52
6	Xinshi Consulting	178.1923	178.1923	0.48
7	Hai Feng Investment	153.8462	153.8462	0.41
8	Xingang Consulting	72.7115	72.7115	0.20
Total		37,264.9808	37,264.9808	100.00

6. In November 2019, the Overall Change of ACMSH to Establish a Joint Stock Company Limited

With respect to the overall change of ACMSH to establish a joint stock company limited, please refer to "II (II) Establishment of A Joint Stock Company Limited" in Section V "General Information of the Issuer" of the [***].

7. In November, 2019, the First Capital Increase of ACMSH

On November 29, 2019, the first extraordinary general meeting of ACMSH passed the resolution that the registered capital of the Company increased from RMB 372,649,808 Yuan to RMB 390,201,347 Yuan. The newly increased registered capital would be subscribed in cash by eight new shareholders including Yongkong Consulting, SYEM, Shangrong Innovation, SRJY, Runguang Investment, SICIF, PDHTI and ZJTVC. In November 2019, the above shareholders signed *the Capital Increase Agreement* with ACMSH, with the capital increase price of RMB 13.00 Yuan/Share.

On December 13, 2019, ACMSH completed the industrial and commercial registration and obtained the business license issued by the Market Supervision Administration of China (Shanghai) Pilot Free Trade Zone.

On December 18, 2019, ACMSH handled the registration of change of foreign-invested enterprises at the Management Committee of China (Shanghai) Pilot Free Trade Zone and obtained *the Receipt of Registration of Change of Foreign-invested Enterprises*.

BDO China verified the paid-up status of the registered capital of ACMSH and issued *the Capital Verification Report* (Xin Kuai Shi Bao Zi [2020] No. ZI10025). As of December 10, 2019, ACMSH had received the newly increased capital of RMB 228,170,000 Yuan paid by the above shareholders, with RMB 17,551,500 Yuan included in the registered capital and RMB 210,618,500 Yuan included in the capital reserves

Upon completion of the capital increase, the equity structure of ACMSH was as follows:

No.	Name of Shareholder	Quantity of Shares Held (Ten Thousand Shares)	Proportion of Shareholding (%)
1	ACMR	35,769.23	91.67
2	Xinwei Consulting	475.62	1.22
3	SICIF	461.54	1.18
4	PDHTI	461.54	1.18
5	HTXC	230.77	0.59

6	Shangrong Innovation	207.69	0.53
7	Jinpu Investment	192.31	0.49
8	Taihu Guolian	192.31	0.49
9	Xinshi Consulting	178.19	0.46
10	Yongkong Consulting	176.92	0.45
11	Hai Feng Investment	153.85	0.39
12	Runguang Investment	153.85	0.39
13	ZJTVC	153.85	0.39
14	SYEM	116.69	0.30
15	Xingang Consulting	72.71	0.19
16	SRJY	23.08	0.06
Total		39,020.13	100.00

(IV) Material Assets Reorganization during the Issuer's Reporting Period

During the Reporting Period, no material assets reorganization of the Company has occurred.

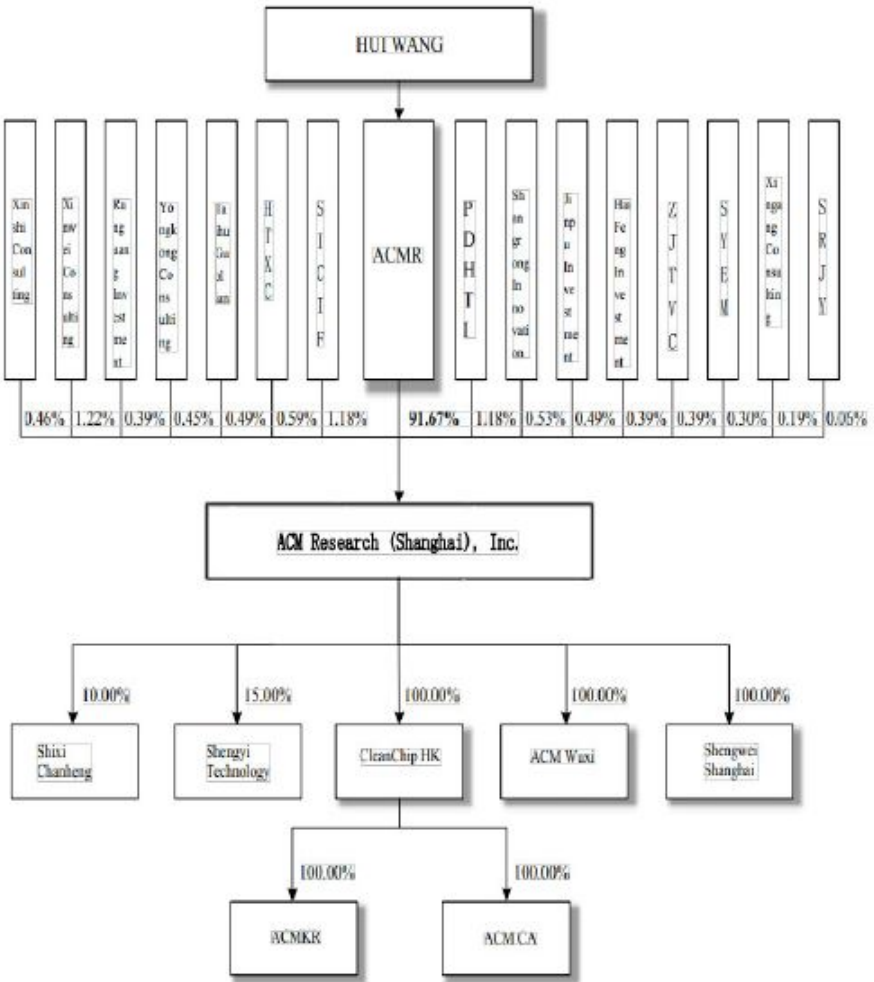
In November 2019, the Company acquired the 100% equity of CleanChip HK held by the controlling shareholder ACMR by way of equity transfer. For details, please refer to "IV (I) Majority Owned Subsidiaries" in this Section.

(V) Listing of the Issuer in Other Securities Markets

Since its establishment, the Company has not been listed in other securities markets. The controlling shareholder of the Issuer, ACMR, was listed on NASDAQ stock market in 2017 under the stock code ACMR. The details of ACMR are set forth in "V (I) Controlling Shareholders and Actual Controller" in this Section.

III . Equity Structure of the Issuer

As of the signing date of the [***], the equity structure of the Company is as follows:



IV. Majority Owned Subsidiaries and Equity Participation Companies of the Issuer

(I) Majority Owned Subsidiaries

As of the signing date of the [***], the Company has 5 majority owned subsidiaries, the details of which are as follows:

1. CleanChip HK

(1) Basic Information

Name	清芯科技有限公司
English Name	CleanChip Technologies Limited
Address	FLAT/RM K 15/F, MG TOWER, 133 HOI BUN ROAD, KWUN TONG KL, HONGKONG
Legal Representative	HUI WANG
Registered Capital	10 Hong Kong Dollars
Date of Establishment	June 9, 2017
Main Business and Its Relationship with Main Business of the Issuer	Sales of Special Equipment for Semiconductors; Sales Platform of the Issuer's Export Business
Shareholders	The Company holds its 100% equity interests.

CleanChip HK was established in June 2017 and it is mainly engaged in the sales of special semiconductor equipment. CleanChip HK was 100% owned by ACMR when it was established, and its equity structure had remained unchanged until the acquisition of CleanChip HK by ACMSH.

(2) Acquisition of CleanChip HK

On November 29, 2019, the Company's first extraordinary general meeting of shareholders in 2019 passed the resolution that ACMSH would acquire the 100% equity of CleanChip HK from ACMR in the form of cash. On the same day, ACMSH signed a *Share Transfer Agreement* with ACMR, under which ACMSH purchased all equities of CleanChip HK from ACMR for USD 3.5 million dollars. The price of this transaction was determined by the Company based on *the Assets Appraisal Report for the Project that ACM Research (Shanghai), Inc. Intends to Acquire All Shareholders' Equities of CleanChip Technologies Limited* (Zhong Lian Ping Bao Zi [2019] No.1879) issued by China United Assets Appraisal Group Co., Ltd. The appraised net asset value of CleanChip HK was RMB 24.875 million Yuan as of June 30, 2019.

In December, 2019, the Company received *the Notice of Recordation of an Overseas Investment Project* (Hu Zi Mao Guan Kuo Jing Wai Bei [2019] No.276) and *the Enterprise Overseas Investment Certificate* (Jing Wai Tou Zi Zheng No. N3100201901015) issued by the Management Committee of China (Shanghai) Pilot Free Trade Zone.

On February 24, 2020, the Company completed the foreign exchange registration procedures related to the payment of the purchase price in the acquisition, and paid the equity transfer fund of USD 3.5 million dollars to ACMR on the next day.

(3) Financial Data

The main financial data of CleanChip HK in the latest year audited by BDO China are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	35,226.43
Net Assets	-639.20
Net Profit	-1,053.14

Note: The above financial data comes from the separate financial statement of CleanChip HK.

2. ACM Wuxi

Name	ACM Research (Wuxi), Inc.
Uniform Social Credit Code	91320214579450405R

Domicile	J1-6, Export Processing Zone, Wuxi New District
Legal Representative	HUI WANG
Registered Capital	RMB 5 million Yuan
Paid-in Capital	RMB 5 million Yuan
Date of Establishment	July 14, 2011
Type of Company	Limited Liability Company (Sole Proprietorship by Legal Person)
Business Scope	The design, production, processing of electronic special equipment and parts, sales of self-produced products, and provision of after-sales technical services and consulting services (for the above items subject to the administrative permits, relevant permits shall be obtained for operation)
Main Business and Its Relationship with Main Business of the Issuer	After-sales services for semiconductor equipment; providing after-sales services for some clients of the issuer
Shareholder	The Company holds its 100% equity interests.

ACM Wuxi is 100% owned by ACMSH and its equity structure has remained unchanged since its establishment. The main financial data of ACM Wuxi in the latest year audited by BDO China are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	510.56
Net Assets	441.72
Net Profit	-7.66

3. Shengwei Shanghai

Name	Shengwei Semiconductor Equipment (Shanghai) Co., Ltd.
Uniform Social Credit Code	91310115MA1HAJFA8M
Domicile	Building C, No.888 Huanhu West II Road, Nanhui New Town, Lingang New Area, China (Shanghai) Pilot Free Trade Zone
Legal Representative	HUI WANG
Registered Capital	RMB 5 million Yuan
Paid-in Capital	RMB 1 million Yuan
Date of Establishment	March 25, 2019
Type of Company	Limited Liability Company (Sole Proprietorship by WFOE Legal Person)
Business Scope	The technology development, technical services, technical consulting and technology transfer in the field of semiconductor equipment technology, the design and sales of electronic equipment and its parts, the import and export of goods and technology. (for the above items subject to the administrative permits, relevant permits shall be obtained for operation)
Main Business and Its Relationship with Main Business of the Issuer	Intending to be engaged in research and development, production and sales of semiconductor special equipment; under construction, not yet carrying out any business.
Shareholder	The Company holds its 100% equity interests.

Shengwei Shanghai is 100% owned by ACMSH and its equity structure has remained unchanged since its establishment. The main financial data of Shengwei Shanghai in the latest year audited by BDO China are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	106.41
Net Assets	99.99
Net Profit	-0.01

4. ACMKR

Name	ACM Research Korea Co., LTD.
Registration No.	134411-0078948
Registered Address	No.402, 2106 Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do (Modern City Plaza)
CEO	YOUNG YOUL KIM
Registered Capital	KRW 100 Million
Number of Issued Shares	20,000 shares
Date of Establishment	December 5, 2017
Main Business and Its Relationship with Main Business of the Issuer	Research and development, production and sales of semiconductor special equipment; conducting research and development of semiconductor special equipment and the spare parts for the Issuer, and at the same time, purchasing the spare parts of semiconductor special equipment for the Issuer
Shareholders	CleanChip HK holds its 100% equity interests.

ACMKR is 100% owned by CleanChip HK and its equity structure has remained unchanged since its establishment. The main financial data of ACMKR in the latest year audited by BDO China are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	1,914.77
Net Assets	226.87
Net Profit	21.23

5. ACM CA

Name	ACM Research (CA), Inc.
Address	42307 Osgood Road, Suite #I, ROOM B, Fremont, CA 94539
Director	JIAN WANG
Number of Shares Outstanding	10,000 shares
Main Business and Its Relationship with Main Business of the Issuer	Purchase and sales of the spare parts of semiconductor special equipment; purchasing the spare parts of semiconductor special equipment for the Issuer
Date of Establishment	April 5, 2019
Shareholder	CleanChip HK holds its 100% equity interests.

ACM CA is 100% owned by CleanChip HK and its equity structure has remained unchanged since its establishment. The main financial data of ACM CA in the latest year audited by BDO China are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	882.06
Net Assets	-17.70

Net Profit	-17.64
------------	--------

(II) Equity Participation Companies

As of the signing date of the [***], the Company has 2 equity participation companies, the details of which are as follows:

1. Shengyi Technology

Name	Shengyi Semiconductor Technology (Wuxi) Co., Ltd.
Uniform Social Credit Code	91320214MA1XD32R1A
Domicile	E2-111, China Sensor Network International Innovation Park, Xinwu District, Wuxi
Legal Representative	BEIYI WANG
Registered Capital	RMB 5 million Yuan
Type of Company	Limited Liability Company
Business Scope	Semiconductor technology development, technical services, technical consultation and technology transfer; Semiconductor equipment production, sales, installation, maintenance, testing; Sales of electronic products, electrical and mechanical equipment, mechanical equipment and accessories, instrumentation, chemical raw materials and products (with the hazardous chemicals business permit), metal materials, environmental protection equipment, metal products, rubber and plastic products, electrical and mechanical equipment, hardware and electrical equipment, building materials, chemical raw materials (except dangerous goods), fire-fighting equipment, packaging materials, furniture supplies, office supplies, articles of daily use, cleaning supplies; Import and export of all kinds of commodities and technologies on its own behalf or on behalf of others (except for commodities and technologies whose import and export are restricted or prohibited by the state). (For the above items subject to the administrative permits, relevant permits shall be obtained for operation)
Main Business	Production and sales of components and parts of semiconductor special equipment
Date of Establishment	October 29, 2018

As of the signing date of the [***], the equity structure of Shengyi Technology is as follows:

No.	Name of Shareholder	Subscribed Capital Contribution (RMB 10,000 Yuan)	Proportion of Contributions (%)
1	BEIYI WANG	425	85
2	ACMSH	75	15
Total		500	100

The main financial data of Shengyi Technology in the latest year are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	756.89
Net Assets	517.94
Net Profit	24.77

Note: the above data have not been audited.

2 . Shixi Chanheng

Name	Hefei Shixi Chanheng Integrated Circuit Venture Capital Fund (L.P.)
------	---

Uniform Social Credit Code	91340111MA2U3KUJ5C
Domicile	Room 6103, Haiheng Building, No.6 Cuiwei Road, Hefei Economic and Technological Development Area, Anhui Province
Managing Partner	Beijing Shixi Qingliu Investment Co., Ltd.
Type of Enterprise	Limited Partnership
Business Scope	Venture project investment; Venture capital investment consulting; Provision of entrepreneurial management services for enterprises. (For projects subject to approval according to law, business activities can only be carried out after the approval of relevant departments)
Main Business	Venture capital investment, consulting and entrepreneurial management services
Date of Establishment	September 10, 2019

As of the signing date of the [***], the equity structure of Shixi Chanheng is as follows:

No.	Name of Partners	Subscribed Capital Contributions (RMB 10,000 Yuan)	Proportion of Contributions (%)
1	Hefei Tongyi Equity Investment Partnership (L.P.)	7,600	25.33
2	Hefei Economic and Technological Development Zone Industrial Investment Guide Fund Co., Ltd.	6,600	22.00
3	Infotech National Emerging Fund (L.P.)	6,500	21.67
4	Hefei Guozheng Assets Management Co., Ltd.	5,000	16.67
5	ACMSH	3,000	10.00
6	Shenzhen Waitan Technology Development Co., Ltd.	1,000	3.33
7	Beijing Shixi Qingliu Investment Co., Ltd.	300	1.00
Total		30,000	100.00

The main financial data of Shixi Chanheng in the latest year are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019/2019
Total Assets	29,931.86
Net Assets	29,931.86
Net Profit	-68.14

Note: the above data have not been audited.

V. Basic Information of Major Shareholders Holding More than 5% of the Shares and the Actual Controller

(I) Controlling Shareholder and Actual Controller

1. Controlling Shareholder

As of the signing date of the [***], ACMR holds 91.67% of the shares of the Company. ACMR is the controlling shareholder of the Company. ACMR exercises its shareholders' rights through the shareholder's meeting of the Company; the chairman and CEO of ACMR, HUI WANG, serves as the chairman of the Company, and ACMR nominates directors to the Company and promoting the Company's global development and implementation of business strategy through board of directors and shareholders'

meeting.

(1) Basic Information

Name	ACM RESEARCH INC
Stock Code	ACMR
Listing Date	November 3, 2017
Date of Establishment	January 18, 1998
Corporate Website	www.acmrcsh.com
Chairman	David H. Wang
Registered Address	c/o Corporation Service Company, 251 Little Falls Drive, County of New Castle, Wilmington, Delaware 19808
Office Address	42307 Osgood Road, Suite # #I, ROOM A, Fremont, CA 94539

Note: The name of the registered chairman of ACMR is David H. Wang, the same natural person as HUI WANG, with the passport number 5458224 * * (the same as below).

According to Legal Opinions issued by overseas lawyers in relation to ACMR and information disclosure announcements of ACMR, ACMR was founded in California, the USA in January 1998. In November 2016, ACM Research, Inc. (a wholly-owned subsidiary of ACMR) registered in Delaware, the USA, reorganized, absorbed and merged ACMR. After the reorganization, the former California Company no longer exists and ACM Research, Inc. registered in Delaware, the USA, continues to exist. ACMR was listed on NASDAQ stock market in November 2017 under the stock code ACMR. ACMR is a holding company, which holds 91.67% of the equity rights of ACMSH and 100% of the equity rights of ACM Research (Cayman), Inc. ACMR is not actually engaged in any other business except for with respect to the above companies, and ACM Research (Cayman), Inc. is not actually engaged in any business.

(2) The Setting and Conversion of Class A, B Common Shares

① The Setting of Class A, B Common Shares

According to Legal Opinions issued by overseas lawyers in relation to ACMR and information disclosure announcements of ACMR, as of December 31, 2019, ACMR issued 18,044,759 common shares in total. The above common shares are made up of Class A common shares and Class B common shares. Thereinto, the total number of Class A common shares stands at 16,182,151 and that of Class B common shares is 1,862,608. Each Class A common share enjoys 1 vote and each Class B common share 20 votes. There are no differences between Class A common shares and Class B common shares other than the voting right.

②The Disclosure of Conversion of Class A, B Common Shares

The disclosure of conversion of Class A, B common shares made in [***] for public offering by ACMR is as follows:

“In the event of the occurrence of the following circumstances, each Class B common share issued can be converted to one Class A common share: firstly, the holder of Class B common shares chooses to convert to Class A common shares at any time; secondly, the holder of Class B common shares transfers such shares, regardless of the consideration, except for the following specific transfer as stipulated in the restated Articles of Association of the Company: trust transfer to family members, for the benefit of shareholders or their family members, or transfer to partnerships, companies or other entities solely held by shareholders or their family members.

Besides, in case any of the following circumstances occurs on or after the date of issuing this [***], all Class B common shares outstanding will be automatically converted into Class A common shares at the ratio of 1:1: Firstly, the conversion is approved by the vote of a majority of shareholders of Class B common shares. secondly, where the “Market Value in October” exceeds USD 1 billion dollars in the October immediately before the first December 31 after the 5th anniversary of issuance of this

[***], the conversion will be automatically made on December 31; provided that the “Market Value in October” exceeds USD 1 billion dollars in the October immediately before December 31 of any given year within five years after issuance of this [***], the aforesaid conversion does not apply and Class B common shares will not be converted to Class A common shares in accordance with the above provisions.

“Market Value in October” refers to, for the purpose of any October that Class A common shares are traded on the registered stock exchange, the value obtained by multiplying the daily volume weighted average price of Class A common shares by the number of common shares issued on the last trading day of October.

③ Commitments made by the actual controller

HUI WANG, the actual controller, has issued a letter of commitment that says: “in order to ensure the stability of the issuer’s actual controller, I irrevocably undertake that from the date of the issuance of this letter to 36 months from the date of the issuer’s initial public offering of shares and listing on the STAR Market, I will not voluntarily convert Class B common shares of ACMR held by me to Class A common shares.”

(3) Major Shareholders

① Top 5 Shareholders of Class A Common Shares

According to Legal Opinions issued by overseas lawyers in relation to ACMR and information disclosure announcements of ACMR, as of December 31, 2019, the top 5 beneficial shareholders of ACMR Class A common shares are as follows:

No.	Name of Shareholder	Quantity of Shares Held	Proportion of Shareholding (%)
1	Shanghai Science and Technology Venture Capital Co., Ltd.	1,666,170	10.30%
2	Pudong Science and Technology (Cayman) Co., Ltd.	1,119,576	6.92%
3	Xinxin (Hongkong) Capital Co., Limited	833,334	5.15%
4	Zhangjiang AJ Company Limited	787,098	4.86%
5	HAIPING DUN	285,030	1.76%
Total		4,691,208	28.99%

As of December 31, 2019, HUI WANG held 168,006 Class A common shares of ACMR, accounting for 1.04% of total Class A common shares; David Hui Wang & Jing Chen Family Living Trust and David Hui Wang & Jing Chen Irrevocable Trust controlled by HUI WANG and his spouse JING CHEN held 206,667 Class A common shares and David Hui Wang & Jing Chen Irrevocable Trust held 60,000 Class A common shares respectively, accounting for 1.65% of total Class A common shares in total.

② Top 5 Shareholders of Class B Common Shares

According to Legal Opinions issued by overseas lawyers in relation to ACMR and information disclosure announcements of ACMR, as of December 31, 2019, the top 5 shareholders of ACMR Class B common shares are as follows:

No.	Name of Shareholder	Quantity of Shares Held	Proportion of Shareholding (%)
1	HUI WANG	1,146,934	61.58%
2	BRIAN WANG	117,334	6.30%
3	SOPHIA WANG	117,334	6.30%
4	HAIPING DUN	100,000	5.37%
5	STEPHEN SUN-HAI CHIAO	69,815	3.75%
Total		1,551,417	83.29%

Note: HUI WANG and SOPHIA WANG are father and daughter, and HUI WANG and BRIAN WANG are father and son.

As of December 31, 2019, HUI WANG held 1,146,934 Class B common shares of ACMR, accounting for 61.58% of total Class B common shares; David Hui Wang & Jing Chen Irrevocable Trust controlled by HUI WANG and his spouse JING CHEN held 7,334 Class B common shares, accounting for 0.39% of total Class B common shares in total.

(4) Information Disclosure and Corporate Governance of ACMR after its Listing on NASDAQ Stock Market

According to Legal Opinions issued by overseas lawyers in relation to ACMR and information disclosure announcements of ACMR, after ACMR listed on NASDAQ stock market, ACMR has not been subject to any penalty imposed by the regulators of US-listed companies for information disclosure in violation of the laws and regulations.

(5) Financial Data

The main financial data of ACMR in the latest year audited are as follows:

Unit: USD 1,000 dollars

Item	December 31, 2019/2019
Total Assets	217,703
Net Assets	157,483
Net Profit	19,458

Note: The above financial data has been audited by BDO China Shu Lun Pan Certified Public Accountants LLP in accordance with US GAAP.

2. Actual Controller

As of the signing date of the [***], HUI WANG holds 168,006 Class A shares and 1,146,934 Class B shares of ACMR, holding at least 35% of the voting rights of ACMR and in turn controlling 91.67% of the shares of the Company through ACMR. HUI WANG is the de facto controller of the Company. As the chairman of the Company, HUI WANG is in charge of overall strategic planning and providing guidance and support for the Company's R&D direction as core technician.

Mr. HUI WANG, born in November 1961, is an American citizen with the right of permanent residence in China. He is currently the chairman of the board of directors of the Company, and concurrently serves as the chairman and CEO of ACMR, the controlling shareholder of the Company. For details, please refer to "VII. (I) Members of the Board of Directors" in this Section.

3. Other Companies Controlled by the Controlling Shareholder

As of the signing date of the [***], in addition to the shares of ACMSH, ACMR also held 100% of the equity rights of ACM Research (Cayman), Inc. The basic information of the Company is as follows:

Name	ACM Research (Cayman), Inc.
Address	Suite #4-210, Governors Square, 23 Lime Tree Bay Avenue, PO Box 32311, Grand Cayman KY1-1209, Cayman Islands
Director	HUI WANG
Number of Issued Shares	10,000 Shares
Main Business	No actual business carried out
Shareholders	100% equity rights held by ACMR

ACMR has obtained 100% of the equity rights of ACM Research (Cayman), Inc. since April 29, 2019.

(II) Major Shareholders holding more than 5% Shares

As of the signing date of the [***], other than the controlling shareholder,

the Company has no shareholders directly holding more than 5% of the shares of the Issuer.

(III) Pledge or Other Disputes over the Shares of the Issuer

As of the signing date of the [***], there is no pledge or other disputes over the shares of the Company held by its shareholders.

VI. Share Capital of the Issuer

(I) Changes in the Share Capital before and after the Offering

The total share capital of the Company before the Offering is 390,201,300 shares, and the number of shares in the Public Offering is not more than 43,355,800 shares, all of which are new shares issued by the Company. After the completion of the Offering, the total share capital of the Company shall not exceed 433,557,100 shares, and the proportion of the shares issued in the Offering shall not be less than 10.00% of the total share capital of the Company after the Offering.

The changes in the share capital of the Company before and after the Offering are as follows:

No.	Name of Shareholder	Capital Structure before the Offering		Capital Structure after the Offering	
		Number of Shares Held (10,000 Shares)	Proportion of Shareholding (%)	Number of Shares Held (10,000 Shares)	Proportion of Shareholding (%)
1	ACMR	35,769.23	91.67	35,769.23	82.50
2	Xinwei Consulting	475.62	1.22	475.62	1.10
3	SICIF	461.54	1.18	461.54	1.06
4	PDHTI	461.54	1.18	461.54	1.06
5	HTXC	230.77	0.59	230.77	0.53
6	Shangrong Innovation	207.69	0.53	207.69	0.48
7	Taihu Guolian	192.31	0.49	192.31	0.44
8	Jinpu Investment	192.31	0.49	192.31	0.44
9	Xinshi Consulting	178.19	0.46	178.19	0.41
10	Yongkong Consulting	176.92	0.45	176.92	0.41
11	Hai Feng Investment	153.85	0.39	153.85	0.35
12	Runguang Investment	153.85	0.39	153.85	0.35
13	ZJTVC	153.85	0.39	153.85	0.35
14	SYEM	116.69	0.30	116.69	0.27
15	Xingang Consulting	72.71	0.19	72.71	0.17
16	SRJY	23.08	0.06	23.08	0.05
Shares in the Offering		-	-	4,335.58	10.00
Total		39,020.13	100.00	43,355.71	100.00

(II) Top 10 Shareholders before the Offering

The shareholdings of the top 10 shareholders in the Company are shown in "VI (I) Changes in the Share Capital before and after the Offering" in the Section.

(III) Top 10 Natural Person Shareholders and their Positions in the Issuer before the Offering

As of the date of signing the [***], the Company has no natural person shareholders.

(IV) State-owned Shares and Foreign-owned Shares

There are state-owned shareholders and foreign shareholders of the Company, the details of which are as follows:

1. State-owned Shareholders of the Issuer

As of the signing date of the [***], the Company has 3 state-owned shareholders, which respectively are SICIF, PDHTI and ZJTVC whose securities accounts should be marked "SS". The specific shareholding information is as follows:

No.	Name of Shareholder	Time of Acquisition	Quantity of Shares Held (Ten Thousand)	Proportion of Shareholding
1	SICIF	December 13, 2019	461.54	1.18%
2	PDHTI	December 13, 2019	461.54	1.18%
3	ZJTVC	December 13, 2019	153.85	0.39%

As of the signing date of the [***], the Company has not yet obtained approval documents for the setting of state-owned shares from the relevant competent authority. Currently the Company is actively working with relevant shareholders to go through the formalities.

2. Foreign-owned Shares of the Issuer

As of the date of signing the [***], the foreign shareholders of the Company are ACMR and Hai Feng Investment, holding 91.67% and 0.39% of the Company's shares, respectively.

(V) New Shareholders of the Issuer in the Latest Year

The new shareholders of the Company in the latest year are as follows:

No.	Name of Shareholder	Time of Acquisition	Method	Quantity of Shares Held (Ten Thousand)	Proportion of Shareholding	Capital Increase Price (Yuan/Share)	Pricing Basis
1	Xinwei Consulting	August 20, 2019	Capital Increase	475.62	1.22%	13.00	Negotiated Pricing
2	HTXC	August 20, 2019	Capital Increase	230.77	0.59%	13.00	Negotiated Pricing
3	Taihu Guolian	August 20, 2019	Capital Increase	192.31	0.49%	13.00	Negotiated Pricing
4	Jinpu Investment	August 20, 2019	Capital Increase	192.31	0.49%	13.00	Negotiated Pricing
5	Xinshi Consulting	August 20, 2019	Capital Increase	178.19	0.46%	10.40	Negotiated Pricing
6	Hai Feng Investment	August 20, 2019	Capital Increase	153.85	0.39%	13.00	Negotiated Pricing
7	Xingang Consulting	August 20, 2019	Capital Increase	72.71	0.19%	10.40	Negotiated Pricing
8	SICIF	December 13, 2019	Capital Increase	461.54	1.18%	13.00	Negotiated Pricing
9	PDHTI	December 13, 2019	Capital Increase	461.54	1.18%	13.00	Negotiated Pricing

10	Shangrong Innovation	December 13, 2019	Capital Increase	207.69	0.53%	13.00	Negotiated Pricing
11	Yongkong Consulting	December 13, 2019	Capital Increase	176.92	0.45%	13.00	Negotiated Pricing
12	Runguang Investment	December 13, 2019	Capital Increase	153.85	0.39%	13.00	Negotiated Pricing
13	ZJTVC	December 13, 2019	Capital Increase	153.85	0.39%	13.00	Negotiated Pricing
14	SYEM	December 13, 2019	Capital Increase	116.69	0.30%	13.00	Negotiated Pricing
15	SRJY	December 13, 2019	Capital Increase	23.08	0.06%	13.00	Negotiated Pricing

In May, 2019, the registered capital of ACMSH increased from RMB 357,692,307.69 Yuan to RMB 372,649,807.69 Yuan. The newly increased registered capital was subscribed in cash by seven new shareholders including Xinwei Consulting, HTXC, Taihu Guolian, Jinpu Investment, Xinshi Consulting, Hai Feng Investment and Xingang Consulting. The capital increase prices were determined through mutual agreement. Thereinto, Xinshi Consulting and Xingang Consulting were the employee stock ownership platforms, the capital increase price of which was RMB 10.40 Yuan/unit registered capital, while the other five new shareholders' capital increase price was RMB 13 Yuan/unit registered capital. The Company has confirmed a fee of RMB 6,523,500 Yuan for the capital increase of the above employee stock ownership platforms.

In November 2019, the registered capital of ACMSH increased from RMB 372,649,808 Yuan to RMB 390,201,347 Yuan. The new registered capital was subscribed in cash by eight new shareholders including Yongkong Consulting, SYEM, Shangrong Innovation, SRJY, Runguang Investment, SICIF, PDHTI and ZJTVC. The capital increase price was RMB 13.00 Yuan/share.

The basic information of the above new shareholders is as follows:

1. Xinwei Consulting

(1) Basic Information

Name	Xinwei(Shanghai) Management Consulting Partnership (L.P.)
Domicile	Room 4166, Building 1, No.63 Liantai Road, Baoshan District, Shanghai
Uniform Social Credit Code	91310113MA1GNJQF9E
Executive Partner	Xinrun Management Consulting (Shanghai) Ltd.
Capital Contributions	RMB 61.83 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market information consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll); conference services. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From June 11, 2019 to June 10, 2049

(2) As of the signing date of the [***], the shareholder structure of Xinwei Consulting is as follows:

Name of Partner	Category of Partner	Capital Contributions	Contribution Proportion (%)
-----------------	---------------------	-----------------------	-----------------------------

		(RMB 10,000 Yuan)	
BAOMING LI	Limited Partner	1,200	19.41
DAQUAN YU	Limited Partner	1,000	16.17
BEIYI WANG	Limited Partner	900	14.56
ZHONGPING LUO	Limited Partner	500	8.09
HONG HU	Limited Partner	350	5.66
QUAN ZHANG	Limited Partner	300	4.85
SHU ZHU	Limited Partner	300	4.85
YUN MA	Limited Partner	300	4.85
JIANBO ZHANG	Limited Partner	220	3.56
GANG HUANG	Limited Partner	220	3.56
XIAOHONG WANG	Limited Partner	210	3.40
QIAN DONG	Limited Partner	200	3.23
YU HOU	Limited Partner	152.5	2.47
SHOULEI JIANG	Limited Partner	130	2.10
XIAOLAN SU	Limited Partner	130	2.10
JINSONG LE	Limited Partner	70	1.13
Xinrun Management Consulting (Shanghai) Ltd.	General Partner	0.5	0.01
Total	--	6,183	100.00

(3) Basic Information of the General Partner

Name	Xinrun Management Consulting (Shanghai) Ltd.
Principal Place of Business	Room 239, 2/F, Whole Building, No.390-408 East Beijing Road, Huangpu District, Shanghai
Date of Establishment	May 22, 2019
Uniform Social Credit Code	91310101MA1FPEW358
Legal Representative	GANG HUANG
Registered Capital	RMB 500,000 Yuan
Business Scope	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market information consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll). [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

2. HTXC

(1) Basic Information

Name	Jiaxing Haitong Xuchu Private Equity Fund (L.P.)
Domicile	Room 116-71, Building 1, Fund Township, No.1856, Nanjiang Road, Nanhu District, Jiaxing City, Zhejiang Province
Uniform Social Credit Code	91330402MA2B990M4A

Executive Partner	[***]
Capital Contributions	RMB 323.625 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Investment and investment management of non-securities businesses. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From January 24, 2018 to January 23, 2028

(2) As of the signing date of the [***], the shareholding structure of HTXC is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Capital Proportion (%)
China Merchants Wealth	Limited Partner	25,890.00	80.00
[***]	General Partner	6,276.50	19.39
Jiaxing Xiyue Investment Management Partnership (L.P.)	Limited Partner	196.00	0.61
Total		32,362.5	100.00

(3) Basic Information of the General Partner

Name	[***]
Domicile	[***]
Date of Establishment	[***]
Uniform Social Credit Code	[***]
Legal Representative	[***]
Registered Capital	RMB 10,650 million Yuan
Business Scope	Using self-owned funds or setting up direct investment funds to make equity investment or equity-related debt investment in enterprises, or investing other investment funds related to equity investment; providing investment consultancy, investment management, financial consultancy service related to equity investment; other businesses approved by the CSRC. (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)

3. Taihu Guolian

(1) Basic Information

Name	Wuxi Taihu Guolian Emerging Industry Investment Enterprise (L.P.)
Domicile	5/F, Guolian Financial Building, No.8 Jinrongyi 1 st Street, Binhu District, Wuxi City
Uniform Social Credit Code	91320200MA1Y27GM1N
Executive Partner	Wuxi Guolian Industry Investment Co., Ltd.

Capital Contributions	RMB 5 billion Yuan
Type of Enterprise	Limited Partnership
Business Scope	Using self-owned funds to conduct foreign investment. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From March 13, 2019 to March 12, 2027

(2) As of the signing date of the [***], the shareholding structure of Taihu Guolian is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion (%)
Wuxi Guolian Financial Investment Group Co., Ltd.	Limited Partner	299,500	59.90
Wuxi Guolian Development (Group) Co., Ltd.	Limited Partner	200,000	40.00
Wuxi Guolian Industry Investment Co., Ltd.	General Partner	500	0.10
Total		500,000	100.00

(3) Basic Information of the General Partner

Name	Wuxi Guolian Industry Investment Co., Ltd.
Domicile	E1-202, China Sensor Network International Innovation Park, No. 200, Linghu Avenue, Xinwu District, Wuxi City
Date of Establishment	September 21, 2006
Uniform Social Credit Code	9132021479331907XR
Executive Partner	HAIJIANG MA
Registered Capital	RMB 200 million Yuan
Business Scope	Investment management; venture capital investment; industry investment (Except for sectors prohibited, restricted by the laws and regulations); high-tech industry investment and management. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

4. Jinpu Investment

(1) Basic Information

Name	Shanghai Jinpu Lingang Intelligent Technology Private Equity Investment Fund (L.P.)
Domicile	Room 865, No.888, West Huanhu’er Road, Nanhui New Town, Pudong New District, Shanghai
Uniform Social Credit Code	91310000MA1FL3Q357
Executive Partner	Shanghai Jinpu Intelligent Technology Investment Management Co., Ltd.

Capital Contributions	RMB1.2 billion Yuan
Type of Company	Limited Partnership
Business Scope	Equity Investment, investment management, investment consultancy, asset management, industrial investment. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From March 27, 2017 to March 26, 2037

(2) As of the signing date of the [***], the shareholding structure of Jinpu Investment is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion (%)
Shanghai Cangjie Industrial Co., Ltd.	Limited Partner	51,900	43.25
Shanghai Lingang Zhiyao Equity Investment Fund Partnership (L.P.)	Limited Partner	20,000	16.67
Shanghai Tianshou Real Estate Co., Ltd.	Limited Partner	20,000	16.67
Zhenjiang High-tech Investment Co., Ltd.	Limited Partner	10,000	8.33
JIYING HE	Limited Partner	5,000	4.17

Shanghai Lianming Investment Group Co., Ltd.	Limited Partner	5,000	4.17
RONGYAO LIAO	Limited Partner	2,000	1.67
ZHIMING RUI	Limited Partner	2,000	1.67
YAN JIN	Limited Partner	2,000	1.67
Shanghai Songjiang Chengqian Investment Co., Ltd.	Limited Partner	1,900	1.58
Shanghai Xuanhong Enterprise Management Partnership (L.P.)	General Partner	100	0.08
Shanghai Jinpu Intelligent Technology Investment Management Co., Ltd.	General Partner	100	0.08
Total		120,000	100.00

(3) Basic Information of the General Partner

① Shanghai Xuanhong Enterprise Management Partnership (L.P.)

Name	Shanghai Xuanhong Enterprise Management Partnership (L.P.)
Domicile	Building 1, No.139 Rongmei Road, Songjiang District, Shanghai
Date of Establishment	March 17, 2017

Uniform Social Credit Code	91310117MA1J21JHXM
Executive Partner	HUAFENG TIAN
Business Scope	Enterprise management consultancy; commercial information consultancy; exhibition services; enterprise marketing planning; enterprise image planning; cultural and art exchange activities planning; financial consulting; market information consulting and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll); the design and making of various advertisements; using self-owned media to publish advertisements. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

②Shanghai Jinpu Intelligent Technology Investment Management Co., Ltd.

Name	Shanghai Jinpu Intelligent Technology Investment Management Co., Ltd.
Domicile	Tower C, No.888 West Huanhu'er Road, Nanhui New Town, Pudong New District
Date of Establishment	March 15, 2017
Uniform Social Credit Code	91310115MA1H8Q3H7H
Legal Representative	HOUJUN LV
Registered Capital	RMB5 million Yuan
Business Scope	Investment management; asset management; industrial investment. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

5. Xinshi Consulting

(1) Basic Information

Name	Xinshi (Shanghai) Management Consulting Partnership (L.P.)
Domicile	Room 4162, Building 1, No.63 Liantai Road, Baoshan District, Shanghai
Uniform Social Credit Code	91310113MA1GNJDY1N
Executive Partner	Xindai Management Consulting (Shanghai) Ltd.
Capital Contributions	RMB 18.532 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll). [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From June 5, 2019 to June 4, 2049

(2) Xinshi Consulting is the issuer's employee shareholding platform. As of the signing date of this [***], the shareholding structure and employees' positions of Xinshi Consulting are as follows:

Name of Partner	Category of Partner	Contribution Proportion	Capital Contributions (RMB 10,000 Yuan)	Position
JUN WANG	Limited Partner	5.40%	100.00	Core Technician
XUEJUN LI	Limited Partner	5.40%	100.00	Core Technician
HUI SHEN	Limited Partner	4.32%	80.00	Core Management Personnel
XIAYUN YANG	Limited Partner	4.32%	80.00	Core Management Personnel
YAN LI	Limited Partner	4.32%	80.00	Core Management Personnel
SHENA JIA	Limited Partner	4.32%	80.00	Core Management Personnel
DEYUN WANG	Limited Partner	4.32%	80.00	Core Management Personnel
XIAOYAN ZHANG	Limited Partner	4.32%	80.00	Core Management Personnel
XI WANG	Limited Partner	4.32%	80.00	Core Management Personnel
XIAOFENG TAO	Limited Partner	3.24%	60.00	Core Business Personnel
JUN WU	Limited Partner	3.24%	60.00	Core Management Personnel
HU ZHAO	Limited Partner	3.24%	60.00	Core Business Personnel
GUANGYU XIA	Limited Partner	3.24%	60.00	Core Business Personnel
GUANZHONG LU	Limited Partner	3.24%	60.00	Core Business Personnel
HONGCHAO YANG	Limited Partner	3.24%	60.00	Core Business Personnel
YULU HU	Limited Partner	3.24%	60.00	Core Business Personnel
ZHAOWEI JIA	Limited Partner	3.24%	60.00	Core Management Personnel
YINUO JIN	Limited Partner	3.24%	60.00	Core Management Personnel
WENJUN WANG	Limited Partner	3.24%	60.00	Core Business Personnel
XIAOQUN WANG	Limited Partner	2.16%	40.00	Core Business Personnel
GUANGBO HAN	Limited Partner	2.16%	40.00	Core Business Personnel
WENQING JI	Limited Partner	2.16%	40.00	Core Management Personnel
FENG LIU	Limited Partner	2.16%	40.00	Core Business Personnel
QIANG WANG	Limited Partner	2.16%	40.00	Core Business Personnel
YANLI HU	Limited Partner	2.16%	40.00	Core Business Personnel
FANGYONG ZHEN	Limited Partner	2.16%	40.00	Core Business Personnel
ANYUN BI	Limited Partner	2.16%	40.00	Core Management Personnel
XINZHENG WANG	Limited Partner	2.16%	40.00	Core Business Personnel
SHUHONG KUANG	Limited Partner	1.62%	30.00	Resigned

XIAOWEI DI	Limited Partner	1.62%	30.00	Core Business Personnel
CHUANYUN ZHU	Limited Partner	1.08%	20.00	Core Business Personnel
BINGGENG LONG	Limited Partner	0.81%	15.00	Core Business Personnel
DONGHUI LU	Limited Partner	0.54%	10.00	Core Management Personnel
HAILANG DUAN	Limited Partner	0.54%	10.00	Core Business Personnel
JUNZHUO WU	Limited Partner	0.43%	8.00	Core Business Personnel
FEI ZHOU	Limited Partner	0.43%	8.00	Core Business Personnel
WENJUN HU	Limited Partner	0.11%	2.00	Core Business Personnel
Xindai Management Consulting (Shanghai) Ltd.	General Partner	0.01%	0.20	-
Total	-	100.00%	1,853.20	-

(3) Basic Information of the General Partner

Name	Xindai Management Consulting (Shanghai) Ltd.
Uniform Social	91310101MA1FPEW27D
Credit Code	
Principal Place of Business	Room 240, 2/F, Whole Building, No. 390-408 East Beijing Road, Huangpu District, Shanghai
Registered Capital	RMB10,000 Yuan
Legal Representative	XIAYUN YANG
Date of Establishment	May 22, 2019
Business Scope	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market information consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll). [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

6. Hai Feng Investment

Name	Hai Feng Investment Holding Limited
Address of Registered Office	Room 5301, 53/F, The Center, No.99 Queen's Road, Hong Kong
Company ID	2788115
Number of Issued Shares	1 share
Directors	CHONGJIU SHA, Youngjin KO
Composition of	100% equity rights held by SL Capital Fund I, L. P.

Shareholders	
---------------------	--

7. Xingang Consulting

(1) Basic Information

Name	Xingang (Shanghai) Management Consulting Partnership (L.P.)
Domicile	Room 4163, Building 1, No.63 Liantai Road, Baoshan District, Shanghai
Uniform Social Credit Code	91310113MA1GNJDX3U
Executive Partner	Xindai Management Consulting (Shanghai) Ltd.
Capital Contributions	RMB 7.562 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market information consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll); conference service. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From June 5, 2019 to June 4, 2049

(2) Xingang Consulting is the issuer's employee shareholding platform. As of the signing date of this [***], the equity structure and employees' positions of Xingang Consulting are as follows:

Name of Partner	Category of Partner	Contribution Proportion	Subscribed Capital Contributions (RMB 10,000 Yuan)	Position
XUFENG MENG	Limited Partner	2.64%	20.00	Core Business Personnel
ZHENMING CHU	Limited Partner	2.64%	20.00	Core Business Personnel
YUN SUN	Limited Partner	2.64%	20.00	Core Business Personnel
WEI ZHANG	Limited Partner	2.64%	20.00	Core Business Personnel
XIAOHUI ZHANG	Limited Partner	2.64%	20.00	Core Management Personnel
RONG CAO	Limited Partner	2.64%	20.00	Core Business Personnel
SHILIANG CHEN	Limited Partner	2.64%	20.00	Core Business Personnel
LAN XI	Limited Partner	2.64%	20.00	Core Management Personnel
YINGWEI DAI	Limited Partner	2.64%	20.00	Core Business Personnel
JUAN LI	Limited Partner	2.64%	20.00	Core Business Personnel

LEI WU	Limited Partner	2.64%	20.00	Core Business Personnel
HAIBO HU	Limited Partner	2.64%	20.00	Core Business Personnel
YU NIE	Limited Partner	2.64%	20.00	Core Management Personnel
DING XU	Limited Partner	2.64%	20.00	Core Business Personnel
YI SHI	Limited Partner	2.64%	20.00	Core Business Personnel
DANYING WANG	Limited Partner	2.64%	20.00	Core Business Personnel
MINLI GU	Limited Partner	2.64%	20.00	Core Management Personnel
WEIZHAN CAI	Limited Partner	2.64%	20.00	Core Business Personnel
ZHENJIANG QIN	Limited Partner	2.64%	20.00	Core Business Personnel
XIAOCHENG GU	Limited Partner	2.38%	18.00	Core Business Personnel
CHUNYANG HAN	Limited Partner	1.98%	15.00	Core Business Personnel
YANPING WANG	Limited Partner	1.98%	15.00	Core Business Personnel
YANJUN QIAN	Limited Partner	1.98%	15.00	Core Business Personnel
HONGXIN ZHANG	Limited Partner	1.98%	15.00	Core Business Personnel
HE WANG	Limited Partner	1.98%	15.00	Core Business Personnel
SHU YANG	Limited Partner	1.98%	15.00	Core Business Personnel
SONG WANG	Limited Partner	1.98%	15.00	Core Business Personnel
QI LI	Limited Partner	1.98%	15.00	Core Business Personnel
YANG XIANG	Limited Partner	1.98%	15.00	Core Business Personnel
SHAOSHUAI ZHANG	Limited Partner	1.98%	15.00	Core Business Personnel
ZERAN LI	Limited Partner	1.98%	15.00	Core Business Personnel
LI SUN	Limited Partner	1.98%	15.00	Core Business Personnel
BO XIONG	Limited Partner	1.98%	15.00	Core Business Personnel

YuanYuan XU	Limited Partner	1.98%	15.00	Core Business Personnel
GUANGXU ZHOU	Limited Partner	1.98%	15.00	Core Business Personnel
ZHAOMING ZHONG	Limited Partner	1.98%	15.00	Core Business Personnel
YING WANG	Limited Partner	1.98%	15.00	Core Business Personnel
XINXIN JIAO	Limited Partner	1.98%	15.00	Core Business Personnel
JIAN CHEN	Limited Partner	1.72%	13.00	Core Business Personnel
BAIGANG ZHUANG	Limited Partner	1.32%	10.00	Core Business Personnel
YANG HAN	Limited Partner	1.32%	10.00	Core Business Personnel
YUNCHEN YU	Limited Partner	1.32%	10.00	Core Business Personnel
YANYAN WANG	Limited Partner	1.32%	10.00	Core Management Personnel
CHUNYING LIU	Limited Partner	1.32%	10.00	Core Business Personnel
XINPING DENG	Limited Partner	1.32%	10.00	Core Business Personnel
HUA CHEN	Limited Partner	0.93%	7.00	Core Business Personnel
CHENG CHENG	Limited Partner	0.66%	5.00	Core Business Personnel
CHENHUA LU	Limited Partner	0.40%	3.00	Core Business Personnel
Xindai Management Consulting (Shanghai) Ltd.	General Partner	0.03%	0.20	-
Total	-	100.00%	756.20	-

(3) Basic Information of the General Partner

Xingang Consulting and Xinshi Consulting share the same general partner, i.e. Xindai Management Consulting (Shanghai) Ltd.

8. SICIF

(1) Basic Information

Name	Shanghai Integrated Circuit Industry Fund Co., Ltd.
Domicile	Unit A, Room 1201, No.289 Chunxiao Road, China (Shanghai) Pilot Free Trade Zone
Uniform Social Credit Code	91310000MA1FL3AW02
Executive Partner	WEIGUO SHEN
Registered Capital	RMB 28.5 billion Yuan
Type of Enterprise	Joint Stock Company Limited

Business Scope	Equity investment; venture investment. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From December 7, 2016 to December 6, 2024

(2) As of the signing date of this [***], the shareholding structure of SICIF is as follows:

Name of Shareholder	Number of Shares (Ten thousand)	Percentage of Shares
Shanghai Science and Technology Venture Capital (Group) Co., Ltd.	1,000,000	35.09
SAIC Group Equity Investment Co., Ltd.	600,000	21.05
Shanghai International Trust Corp., Ltd.	300,000	10.53
National Integrated Circuit Industry Investment Fund Co., Ltd.	300,000	10.53
Shanghai International Group	200,000	7.02
Shanghai Pudong High-tech Investment Co., Ltd.	200,000	7.02
Shanghai Guosheng Group Co., Ltd.	200,000	7.02
Shanghai Jiading Venture Capital Co., Ltd.	50,000	1.75
Total	2,850,000	100.00

9. PDHTI

(1) Basic Information

Name	Shanghai Pudong High-tech Investment Co., Ltd.
Domicile	4/F, No.416 Zhoushi Road, Pudong New District, Shanghai
Uniform Social Credit Code	91310115320776596T
Legal Representative	YUN ZHU
Capital Contributions	RMB 1,832.81 million Yuan
Type of Enterprise	Limited Company
Business Scope	Equity investment; industrial investment; investment management; investment consultancy; enterprise management consultancy; enterprise M&A consultancy (brokerage services not included in the above consultancy services). [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From October 24, 2014 to no fixed term

(2) As of the signing date of this [***], the shareholding structure of PDHTI is as follows:

Name of Shareholder	Capital Contributions (RMB 10,000 Yuan)	Percentage of Shareholding (%)
Shanghai Pudong Technology Innovation Group Co., Ltd.	183.281	100
Total	183.281	100

10. Shangrong Innovation

(1) Basic Information

Name	Shangrong Innovation (Ningbo) Equity Investment Center (L.P.)
Domicile	A0006, Zone C, Room 401, Building 1, No.88 Meishanqixing Road, Beilun District, Ningbo City, Zhejiang Province
Uniform Social Credit Code	91330206MA2AHTFM7E
Executive Partner	Beijing Shang Finance Corporation
Capital Contributions	RMB 1 billion Yuan
Type of Enterprise	Limited Partnership
Business Scope	Equity investment and related consultancy services.(being prohibited from engaging in financial businesses such as deposit taking, financing guarantee, financial management for clients, raising capital (financing) from the public without the approval of financial regulators) [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From March 29, 2018 to March 28, 2028

(2) As of the signing date of the [***], the shareholding structure of Shangrong Innovation is as follows:

Name of Partner	Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion(%)
-----------------	---------	---	----------------------------

Ningbo HeYuan Holding Co., Ltd.	Limited Partner	84,000	80.00
Ningbo HeYuan Holding Co., Ltd.	Limited Partner	14,000	14.00
RUIHUA ZHENG	Limited Partner	1,000	1.00
Beijing Shang Finance Corporation	General Partner	1,000	1.00
Total		100,000	100.00

(3) Basic Information of the General Partner

Name	Beijing Shang Finance Corporation
Domicile	A0002, Zone C, Room 401, Building 1, No.88 Meishanqixing Road, Beilun District, Ningbo City, Zhejiang Province
Date of Establishment	July 17, 2015
Uniform Social Credit Code	9133020634047013XJ
Legal Representative	HONGJIAN XIAO
Registered Capital	RMB 50 million Yuan
Business Scope	Asset management; investment management; investment consultancy, industrial investment; equity investment (being prohibited from engaging in financial businesses such as deposit taking, financing guarantee, financial management for clients, raising capital (financing) from the public without the approval of financial regulators) [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

11. Yongkong Consulting

(1) Basic Information

Name	Shanghai Yongkong Business Information Consulting Partnership (L.P.)
Domicile	Room 402, No.2, Lane 180, Zhangheng Road, China (Shanghai) Pilot Free Trade Zone
Uniform Social Credit Code	91310115MA1K4EMM7R
Executive Partner	Shanghai Jiuyou Chuangu Investment Management Co., Ltd.
Capital Contributions	RMB 23.2323 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Commercial information consultancy; enterprise management consultancy; marketing planning; enterprise image planning; exhibition services; etiquette services; graphic design; computer technology; technology development, technology consultancy, technology services, technology transfer and information technology consultancy services within the field of internet technology. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]
Business Term	From September 25, 2019 to September 24, 2049

(2) As of the signing date of the [***], the shareholding structure of Yongkong Consulting is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Capital Proportion (%)
Shanghai Shangguo Investment Asset Management Co., Ltd.	Limited Partner	1,400	60.26
Shanghai Jiushen Equity Investment Fund Partnership Enterprise (L.P.)	Limited Partner	800	34.43
FAN LIU	Limited Partner	100	4.30
Shanghai Jiuyou Chuangu Investment Management Co., Ltd.	General Partner	23.23	1.00
Total		2,323.23	100.00

(3) Basic Information of the General Partner

Name	Shanghai Jiuyou Chuangu Investment Management Co., Ltd.
Domicile	Room 08, 5/F, No.2 Office Building, Lane 180, Zhangheng Road, China (Shanghai) Pilot Free Trade Zone
Date of Establishment	January 16, 2013
Uniform Social Credit Code	91310115060900342P
Legal Representative	XIAOLONG LIU
Registered Capital	RMB 5 million Yuan
Business Scope	Industrial investment; investment management; investment consultancy; business consultancy, enterprise management consultancy (brokerage services are not included in the above consultancy services); asset management (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)

12. Runguang Investment

(1) Basic Information

Name	Hefei Runguang Equity Investment Partnership (L.P.)
Domicile	Room 560, Fund Tower, Building E1, Innovation Industrial Park Phase II, No.2800 Innovation Avenue, High-tech Zone, Hefei City
Uniform Social Credit Code	91340100MA2TER55XC
Executive Partner	Huaxin Yuanchuang (Qingdao) Capital Management Co., Ltd.
Registered Capital	RMB 100 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Using self-owned funds to make equity investment; enterprise management consultancy services. (being prohibited from engaging in financial businesses such as deposit taking, financing guarantee, financial management for clients without the approval of financial regulators) (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)
Business Term	From January 23, 2019 to January 22, 2026

(2) As of the signing date of the [***], the shareholding structure of Runguang Investment is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion (%)
Shenzhen Xiaoyezitan Investment Partnership (L.P.)	Limited Partner	5,772	59.94
Hefei Huadeng Integrated Circuit Industry Investment Fund Co., Ltd.	Limited Partner	3,848	39.96
Huaxin Yuanchuang (Qingdao) Capital Management Co., Ltd.	General Partner	9.53	0.10
Total		10,000	100.00

(3) Basic Information of the General Partner

Name	Huaxin Yuanchuang (Qingdao) Capital Management Co., Ltd.
Domicile	Room 2004, No.658, Jinggangshan Road, Huangdao District, Qingdao City, Shandong Province
Date of Establishment	September 20, 2016
Uniform Social Credit Code	91370211MA3CH4UD45
Legal Representative	Hing Wong
Registered Capital	RMB 100 million Yuan
Business Scope	Entrusted to manage the investment business of investment enterprises; providing investment consultancy and investment management consultancy services; enterprise management consultancy. (The above services do not involve fund business; being prohibited from engaging in financial services such as deposit taking, financing guarantee, financial management for clients without the approval of financial regulators) (The above business scope does not include any project restricted, prohibited and ousted by state laws and regulations, and projects subject to approval according to law shall be approved by the relevant departments before carrying out business activities) (Projects subject to approval according to law shall be approved by the relevant departments before carrying out business activities)

13. ZJTVC

(1) Basic Information

Name	Shanghai Zhangjiang Science and Technology Venture Capital Co., Ltd.
Domicile	Room 209, Building 1 Complex, No.3000 Longdong Avenue, China (Shanghai) Pilot Free Trade Zone
Uniform Social Credit Code	913100007679066259
Legal Representative	HONGLIANG YU
Registered Capital	RMB 1billion Yuan
Type of Enterprise	Limited Company
Business Scope	Venture capital investment; providing agency services for other venture capital investment enterprises and other institutions or individuals as to their venture capital investment, venture capital investment consultancy

	businesses; providing venture capital management service business for venture capital enterprises; participating in the set up of venture capital investment enterprises and venture capital management consultancy institutions. (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)
Business Term	From October 9, 2004 to October 8, 2054

(2) As of the signing date of the [***], the shareholding structure of ZJTVC is as follows:

Name of Shareholder	Capital Contributions (RMB 10,000 Yuan)	Percentage of Shareholding (%)
Zhangjiang Group	100,000	100
Total	100,000	100

14. SYEM

(1) Basic Information

Name	Shanghai Shanyi Enterprise Management Center (L.P.)
Domicile	Room 601-31, No.198 Wudong Road, Yangpu District, Shanghai
Uniform Social Credit Code	91310110MA1G92DE5Y
Executive Partner	SULAN LV
Capital Contributions	RMB 15.17 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Enterprise management and consultancy; commercial information consultancy; financial consultancy. (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)
Business Term	From September 19, 2019 to September 18, 2029

(2) As of the signing date of the [***], the shareholding structure of SYEM is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion (%)
SULAN LV	General Partner	1,316.756	86.80
JUN JIANG	Limited Partner	100.122	6.60
XU LU	Limited Partner	100.122	6.60
Total	-	1,517.000	100.00

15. SRJY

(1) Basic Information

Name	Shanghai Shangrong JuYuan Equity Investment Center (L.P.)
Domicile	Room 1206, 12/F, No.407-1 Yishan Road, Xuhui District, Shanghai
Uniform Social Credit Code	91310000MA1FL3X64K
Executive Partner	Beijing Shang Finance Corporation

Capital Contributions	RMB 460 million Yuan
Type of Enterprise	Limited Partnership
Business Scope	Equity investment; industrial investment; investment management; asset management. (For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained)
Business Term	From May 8, 2017 to May 7, 2027

(2) As of the signing date of the [***], the shareholding structure of SRJY is as follows:

Name of Partner	Category of Partner	Capital Contributions (RMB 10,000 Yuan)	Contribution Proportion (%)
Gongqingcheng Shangrong Investment Management Partnership (L.P.)	Limited Partner	45,100	98.04
Beijing Shang Finance Corporation	General Partner	450	0.98
Ningbo Ronghui Investment Center (L.P.)	Limited Partner	450	0.98
Total		46,000	100.00

(3) Basic Information of the General Partner

Shangrong Innovation and SRJY share the same general partner, i.e. Beijing Shang Finance Corporation.

(VI) The Relationship between the Associated Shareholders and their Respective Shareholding Proportions before the Offering

Before the Offering, the association relationships between the shareholders are as follows:

1. Xinshi Consulting and Xingang Consulting

The managing partner of Xinshi Consulting and Xingang Consulting is Xindai Management Consulting (Shanghai) Co., Ltd. Xinshi Consulting and Xingang Consulting hold 0.46% and 0.19% of the Company's shares respectively.

2. SICIF and PDHTI

PDHTI holds 7.02% of SICIF's shares. SICIF and PDHTI hold 1.18% of the Company's shares respectively.

3. Shangrong Innovation and SRJY

The managing partner of Shangrong Innovation and SRJY is Beijing Shang Finance Corporation. Shangrong Innovation and SRJY holds 0.53% and 0.06% of the Company's shares respectively.

(VII) The Influence of Public Offering of Shares by the Shareholders of the Issuer on the Control, Governance Structure and Production and Operation of the Issuer

The Offering does not involve any public offering of shares by any shareholder of the Issuer.

VII. Brief Information of Directors, Supervisors, Senior Managers and Core Technicians

(I) Members of the Board of Directors

The Company's board of directors is composed of nine directors, including three independent directors. The details are as follows:

No.	Name	Position	Nominator	Term of Office
1	HUI WANG	Chairman	ACMR	Nov.14,2019 -Nov.13,2022
2	HAIPING DUN	Director	ACMR	Nov.14,2019 -Nov.13,2022
3	STEPHEN SUN-HAI CHIAO	Director	ACMR	Nov.14,2019 -Nov.13,2022
4	Charles Law	Director	ACMR	Nov.14,2019 -Nov.13,2022
5	JIANG LI	Director	SICIF	Mar 30, 2020 -Nov.13,2020
6	CHEN HUANG	Director	PDHTI	Mar 30, 2020 -Nov.13,2020
7	DI ZHANG	Independent Director	Board of Directors	Nov.14,2019 -Nov.13,2022
8	MINGXIU PENG	Independent Director	Board of Directors	Nov.14,2019 -Nov.13,2022
9	ZHANBING REN	Independent Director	Board of Directors	Nov.14,2019 -Nov.13,2022

The resumes of the board members are as follows:

HUI WANG, male, born in November, 1961, an American citizen with the permanent residency in China, PH.D. of Precision Engineering, winner of Shanghai Pujiang Talent Plan. From February, 1994 to November, 1997, Mr. WANG served as the research and development manager of Quester Technology Inc. in the USA. From May, 1998 to now, Mr. WANG has served as the chairman and CEO of ACMR and the chairman of ACMSH.

HAIPING DUN, male, born in December, 1949, a Chinese Taiwan citizen with the permanent residency in USA, Ph.D. in material science and engineering. From 1983 to 2004, Mr. DUN served as a senior director in Intel Corporation. From 2008 to 2018, Mr. DUN served as the president and executive director of Champion Microelectronic Corporation. From 2003 to now, Mr. DUN has served as a director of ACMR. From May, 2005 to now, Mr. DUN has served as a director of ACMSH.

STEPHEN SUN-HAI CHIAO, male, born in April, 1948, an American citizen without the permanent residency in other countries, Ph.D. in material science and engineering. From January, 1977 to July, 1980, Stephen served as a senior scientist of Varian Medical Systems. From July, 1980 to September, 1983, Stephen served as a project manager of Hewlett Packard Enterprise Development LP. From September, 1983 to September, 1986, Stephen served as the manager of R&D Department of U.S. AMIS Company. From September, 1986 to June, 2015, Stephen served as a professor of San Jose State University. From September, 1989 to September, 2003, Stephen served as the vice president of the global enterprise development department of Mosel Vitelic Inc. From September, 1999 to now, Stephen has served as a manage director of Sycamore Management Corporation. From May, 2005 to now, Stephen has served as a director of ACMSH.

Charles Law, male, born in December, 1959, a Chinese Taiwan citizen without the permanent residency in other countries, with Master of Laws degree. From November, 1992 to January, 2001, Charles served as a managing partner of U.S. Zhongzhi Law Firm. From January, 2001 to July, 2017, Charles served as a partner of King and Wood Mallesons. From July, 2017 to now, Charles has served as a partner of U.S. Sycamore

Venture. From February, 2018 to now, Charles has served as the managing partner of Law & Law. From November, 2019 to now, Charles has served as a director of ACMSH.

JIANG LI, male, born in March, 1980, a Chinese citizen without permanent residency in a foreign country, master of management science and engineering. From September 2003 to August 2005, Mr. LI served as the sales manager of the foreign trade department of Shanghai Light Industrial International Development Corp., Ltd. From September 2005 to October 2010, Mr. LI served as the manager of the investment and development department of Shanghai Zhangjiang Medicine Public Service Platform Co., Ltd. From October 2010 to December 2016, Mr. LI served as the senior investment manager of the project investment department of Shanghai STVC (Group) Co., Ltd. From January 2017 till now, he has served as the investment director of Shanghai Integrated Circuit Industry Investment Fund Co., Ltd. From March, 2020 to now, Mr. LI has served as a director of ACMSH.

CHEN HUANG, male, born in January, 1991, a Chinese citizen without permanent residency in a foreign country, master of East Asian Development Studies, master of Business Administration, senior economist. From August 2014 to August 2015, Mr. HUANG served as the assistant of the strategic department of Shanghai Pudong Financing Guarantee Co., Ltd. From September, 2015 to October, 2016, Mr. HUANG served as the risk control manager of Shanghai Pudong Financing Guarantee Co., Ltd. From October, 2016 to January, 2020, Mr. HUANG served successively as the manager of the strategic planning and information department, the investment manager of the second investment department, and the assistant to the general manager of the second investment department of SPINNOTECH Group Co., Ltd. From February 2020 to now, Mr. HUANG has served as the assistant to the general manager of the first investment department of SPINNOTECH Group Co., Ltd. From March 2020 till now, Mr. HUANG has served as a director of ACMSH.

DI ZHANG, male, born in March, 1957, a Chinese citizen without permanent residency in a foreign country, Ph.D. in material science, winner of the National Natural Science Award (Second Class Prize), and winner of “May 1 Labor Medal” in Shanghai. From 1988 to now, Mr. ZHANG has served as a teacher in Shanghai Jiaotong University. In December, 1993, Mr. ZHANG served as a professor in Shanghai Jiaotong University. Currently he serves as a chair professor in Shanghai Jiaotong University, the director of the State Key Laboratory of Metal Matrix Composites and a distinguished professor of “Cheung Kong Scholars” of the Ministry of Education. From June, 2019 to now, Mr. ZHANG has served as a director of ACMSH.

MINGXIU PENG, female, born in February, 1962, a Chinese Taiwan citizen, without the permanent residency in other countries, Master of Business Administration and EMBA. From January 1999 to July 2019, she served successively as the chief financial officer, deputy general manager, chairman, CEO of Champion Microelectronic Corporation. Currently she serves as the chairman of Haiye Investment Co., Ltd. From November, 2019 to now, she has served as a director of ACMSH.

ZHANBING REN, male, born in May, 1959, a Swiss citizen with the permanent residency in China, Doctor of Engineering, an academician of Swiss Academy of Engineering Sciences. From September, 1994 to September, 1996, Mr. REN served as a production engineer in Swiss Bobst. From October, 1996 to August, 2011, Mr. REN successively held the posts of the production manager (Shanghai), general manager (Shanghai), president (Greater China) and top management member, regional operations manager (Asia), and president (Great China and Southeast Asia) in Bobst Group. From September, 2011 to December, 2013, Mr. REN served as the president (Asia Pacific) in GF Piping Systems. From January, 2014 to now, Mr. REN has served as the managing director at Shanghai SinoSwiss International Trading Co., Ltd. From July, 2015 to October, 2017, Mr. REN served as the general manager of China Banknote SICPA Security Ink Co., Ltd. From January, 2018 to now, Mr. REN has served as the managing director of Shanghai Mengtebao International Trade Co., Ltd. From November, 2019 to now, Mr. REN has served as a director of ACMSH.

(II) Members of the Supervisory Board

The Supervisory Board of the Company consists of three supervisors, among

which, one supervisor is an employee representative supervisor, specifically:

No.	Name	Position	Nominator	Term of Office
1	TRACY DONG LIU	Supervisor	ACMR	Nov.14,2019 -Nov.13,2022
2	QIAN DONG	Supervisor	ACMR	Mar 30, 2020 -Nov.13,2020
3	QIAN LI	Employee Representative Supervisor	General Meeting of Employee Representative	Nov.14,2019 -Nov.13,2022

The resumes of the supervisory board members are as follows:

TRACY DONG LIU, female, born in November 1964, an American citizen without permanent residence of other countries. She has obtained an accounting master degree and registered as U.S. certified public accountant. She served as a Financial Controller of the San Jose Radisson Hotel in the U.S. from January 1994 to June 1995, as an Accounting Manager of KPMG from January 1996 to April 2000, as a Senior Accounting Manager of Deloitte from May 2000 to May 2005, and she has served as a Founder and Managing Partner of H&M Int'l CPAs, LLP from June 2005 to date, as a director of ACMR from September 2016 to date, and as a supervisor and president of the supervisory board of ACMSH from November 2019 to date.

QIAN DONG, female, born in March 1955, a Chinese citizen without permanent residency in a foreign country. She is a bachelor majoring in Chinese. She served as a worker of Shanghai Fengshou Tractor Factory from November 1972 to February 1979, as deputy secretary of Youth League Committee, HR head of Shanghai Light Industry School from March 1979 to March 1989, as general manager's assistant and office director of Shanghai Dongfang Storage Tank Ltd. from April 1989 to January 1997, as secretary of board of directors and office director of Shanghai Belling Co., Ltd. from February 1997 to October 2001, as deputy general manager of business development of Premier Devices Inc. from October 2001 to February 2004, as deputy general manager and office director of Spreadtrum Communications, Inc. from March 2004 to November 2014, and she has held the post of consultant of Ruizhang Technology Co., Ltd. from November 2014 to date, and of general manager of Yunnan Energy Investment Ruizhang Internet of Things Technology Ltd. from April 2019 to date. She has served as a supervisor of ACMSH from March 2020 to date.

QIAN LI, female, born in January 1995, a Chinese citizen without permanent residency in a foreign country. She is a bachelor majoring in management. She has served as an assistant of the chairman's office of ACMSH from July 2017 to date. She has served as a supervisor of ACMSH from November 2019 to date.

(III) Senior Managers

The Company has 5 senior managers in total, including general manager, deputy general manager, person in charge of financial matters and secretary of board of directors, etc., specifically:

No.	Name	Position
1	JIAN WANG	General Manager
2	FUPING CHEN	Deputy General Manager
3	SOTHEARA CHEAV	Deputy General Manager
4	LISA YI LU FENG	Person in Charge of Financial Matters
5	MINGZHU LUO	Secretary of Board of Directors

The resume of each senior manager of the Company is as follows:

JIAN WANG, male, born in February 1965, a Chinese citizen without permanent residency in a foreign country. He is a master majoring in mechanics and computer

science. He served as a technician of Hangzhou Xihu Television Factory from July 1986 to April 1987, as a technician of Japan Fuji Fine Printing Corporation from April 1996 to December 1999, as a process engineer and deputy general manager of ACMSH from December 2001 to April 2019 and as General Manager of ACMSH from May 2019 to date, and he has successfully researched and developed stress-free copper polishing and electrochemical copper plating technology, participated in and applied for more than 100 patents, and been responsible for various significant scientific research projects.

FUPING CHEN, male, born in August 1981, a Chinese citizen without permanent residency in a foreign country. He is a master majoring in materials science. He successively served as an engineer and deputy manager of SK Hynix semiconductor (China) Co., Ltd. from April 2006 to January 2010, and as a project manager, technical manager, technical director and senior director of ACMSH from January 2010 to December 2017. He has served as Deputy General Manager of ACMSH from January 2018 to date, who has participated in and successfully researched and developed advanced packaging wet processing equipment, SAPS uniwafer cleaning equipment, TEBO uniwafer cleaning equipment, Tahoe uniwafer tank combined cleaning equipment and full automatic tank cleaning equipment, he has published 5 academic papers and participated in and applied for more than one hundred patents.

SOTHEARA CHEAV, male, born in March 1952, an American citizen without permanent residency of other countries. He is a bachelor majoring in technology of electronics. He successively served as a manager of manufacturing department, director of manufacturing department from March 2007 to December 2014. He has served as deputy general manager of ACMSH from January 2015 to date.

LISA YI LU FENG, female, born in April 1958, an American citizen without permanent residency of other countries. She has obtained an accounting mater degree. She served as a regional financial director of Lumenis Inc. from January 2004 to August 2008, as financial director of Amlogic (CA) Co., Inc. from August 2008 to September 2017, as financial director of ACMR from September 2017 to November 2019, and has served as a person in charge of financial matters of ACMSH from May 2019 to date.

MINGZHU LUO, female, born in August 1983, a Chinese citizen without permanent residency in a foreign country. She is a bachelor majoring in veterinary medicine. She has successively served as assistant of president, manager of president office and director of president office of ACMSH from December 2006 to October 2019. She has served as secretary of board of directors of ACMSH from November 2019 to date.

(IV) Key Technician

The Company determines key technicians based on the following standards: (1) responsible persons or core members of the Company and departments in connection with research and development; (2) relevant persons responsible for the direction of research and development and processing improvements which are significant to the business development and future development strategy of the Company; (3) relevant persons who have contributed to intellectual property rights and core technologies of the Company. The Company has 6 key technicians in total, specifically:

No.	Name	Position
1	HUI WANG	Chairman
2	JIAN WANG	General Manager
3	FUPING CHEN	Deputy General Manager
4	SOTHEARA CHEAV	Deputy General Manager
5	JUN WANG	Vice President of Electrical Engineering
6	XUEJUN LI	Vice President of After-sale Services

The resume of each key technician of the Company is as follows:

HUI WANG, please refer to “VII (I) Members of Board of Directors” in this Section for his resume.

JIAN WANG, please refer to “VII (III) Senior Managers” in this Section for his resume.

SOTHEARA CHEAV, please refer to “VII (III) Senior Managers” in this Section for his resume.

FUPING CHEN, please refer to “VII (III) Senior Managers” in this Section for his resume.

JUN WANG, male, born in March 1984, a Chinese citizen without permanent residency in a foreign country. He is a master majoring in electronics and communication engineering. He successively served as an electrical engineering manager, senior manager and director of electrical engineering of ACMSH from May 2007 to April 2020, and has served as vice president of electrical engineering of ACMSH from May 2020 to date, being responsible for the design of all equipment and electrical control system and team building. He has participated in relevant patent applications of TEBO uniwafer cleaning equipment and Tahoe uniwafer tank combined cleaning equipment and been responsible for Chinese 02 Technology Significant Special Research and Development Projects-“Research and Development of 65-45nm Copper Interconnection Stress-free Polishing Equipment” and “Research, Development and Application of 20-14nm Copper Interconnection Copper Plating Equipment”, and the development of electronical control system of the project of “Research, Development and Industrialization of Uniwafer Tank Combined Cleaning Equipment” which is a Significant Project of Shanghai Strategic Emerging Industry.

XUEJUN LI, male, born in May 1970, being a Chinese citizen without permanent residency in a foreign country. He is a bachelor majoring in electric automatization. He successively served as a manager of after-sale services, senior manager, director of after-sale services from May 2009 to April 2020. He has served as vice president of after-sale services of ACMSH from May 2020 to date, being responsible for the provision of technical services to clients and the construction of after-sale service team. He has participated in the research and development and patent applications of technologies in connection with semiconductor cleaning equipment, provided product technical supports and solutions to main clients of the Company, and focused on the improvement of production efficiency and product yield of clients.

(V) Information on Positions in other Companies held by Directors, Supervisors, Senior Managers and Key technicians of the Company

As of the date of signing the [***], positions in other companies held by the directors, supervisors, senior managers and key technicians of the Company are as follows:

Name	Position in the Company	Name of Employer	Position	Relationship with the Issuer
HUI WANG	Chairman	ACMR	Chairman, CEO	Controlling Shareholder
		ACM Research (Cayman)	Director	Related party
		NINEBELL	Director	Related party
HAIPING DUN	Director	ACMR	Director	Controlling Shareholder
STEPHEN SUN-HAI CHIAO	Director	Sycamore Management Corporation	Managing Partner	Related party
		Silicon Technology Investment (Cayman) Corp.	Director	Related party
Charles Law	Director	Law and Law	Managing Partner	Related party

		Sycamore Management Corporation	Partner	Related party
		Nanjing Shuige Investment and Management Consultancy Co., Ltd.	Supervisor	None
CHEN HUANG	Director	Shanghai Pudong Technology Innovation Group Co., Ltd.	Investment I Department Assistant General Manager	None
		ASR Microelectronics (Shanghai) Co., Ltd.	Director	Related party
		Ideal Energy (Shanghai) Sunflower Thin Film Equipment Ltd.	Director	Related party
JIANG LI	Director	Shanghai Integrated Circuit Industry Investment Fund Management Co., Ltd.	Investment Director	None
		SMIC Southern Integrated Circuit Manufacturing Co., Ltd.	Supervisor	None
		Shanghai Jita Semiconductor Co, Ltd.	Director	Related party
		EverDisplay Optonics (Shanghai) Limited	Director	Related party
		Shanghai Qiyuji Sports Technology Development Co., Ltd.	Supervisor	None
DI ZHANG	Independent Director	School of Materials Science and Engineering, Shanghai Jiao Tong University	Professor	None
MINGXIU PENG	Independent Director	Haihua Investment Co., Ltd.	Chairman	None
		Avision Inc.	Independent Director	None
		Qifa Electronics Co., Ltd.	Director	None
		Longcai Technology Co., Ltd.	Director	None
		Mars Semiconductor Corp.	Independent Director	None
ZHANBING REN	Independent Director	Shanghai Mengtebao International Trading Co., Ltd.	Executive Director	None
		Shanghai Ruizhong International Trading Co., Ltd.	Executive Director	None
		Black Peony (Group) Co., Ltd.	Independent Director	None
TRACY DONG LIU	Supervisor	ACMR	Director	Controlling Shareholder
		H&M Int'l CPAs, LLP	Managing Partner	Related party
QIAN DONG	Supervisor	Yunnan Energy Investment Ruizhang Internet of Things Technology Ltd.	Director and General Manager	Related party
		Shanghai Viewnoon Information Technology Co., Ltd.	Director	Related party
		Shanghai Zhaonengkun Information	Director	Related party

		Technology Co., Ltd.		
		Shanghai Zhimeng Internet of Things Technology Co., Ltd.	Executive Director and General Manager	Related party
JIAN WANG	General Manager	ShengYuan Management Consulting (Shanghai) Co., Ltd.	Executive Director	Related party
FUPING CHEN	Deputy General Manager	Wuxi Hengchuang Micro-Technology Ltd.	Supervisor	None
MINGZHU LUO	Secretary of Board of Directors	ShengYuan Management Consulting (Shanghai) Co., Ltd.	Supervisor	Related party
		Shengyi Technology	Director	Shareholding Subsidiary

(VI) Family Relation among Directors, Supervisors, Senior Managers and Key technicians of the Company

As of the date of signing the [***], except for the brotherhood relation between the Chairman, HUI WANG, and the General Manager, JIAN WANG, there is no family relation among directors, supervisors, senior managers and key technicians of the Company.

VIII. Agreements between the Company and any of Directors, Supervisors, Senior Managers and Key technicians and their Performance

As of the date of signing the [***], the Company has entered into the *Labor Contract*, the *Non-competition Agreement* and the *Confidentiality and Intellectual Property Protection Agreement* regarding horizontal competition and confidentiality matters with each director, supervisor, senior manager and key technician who works in and receives remuneration from the Company, and the Company and directors, supervisors, senior managers and key technicians are protected and bound by provisions of relevant labor contracts.

The first Extraordinary General Meeting of the Company in 2019 resolved to pass the *Proposal on 2019 Stock Option Incentive Plan (Draft) of the Company* on November 29, 2019, pursuant to which, the Company entered into the *Stock Option Grant Agreement* with its directors, senior managers, key technicians, key employees, etc.

Except for the above, none of director, supervisor, senior manager and key technician of the Company enters into any other contract or agreement with the Company. As of the date of signing the [***], the above contracts or agreements are performed normally without any default.

IX. Changes in Directors, Supervisors, Senior Managers and Key technicians of the Company within the Last Two Years

(I) Changes in Directors of the Company

The board of directors of ACMSH consisted of HUI WANG, HAIPING DUN, STEPHEN SUN-HAI CHIAO early 2018.

The board of directors of ACMSH resolved that Charles Law and DI ZHANG

were elected as additional members of the board of directors of the Company on June 26, 2019.

The establishment meeting and the first general meeting of shareholders of the Company elected HUI WANG, HAIPING DUN, STEPHEN SUN-HAI CHIAO, Charles Law, DI ZHANG, MINGXIU PENG and ZHANBING REN as members of the first-session board of directors of the Company on November 14, 2019.

The first Extraordinary General Meeting of the Company in 2020 elected CHEN HUANG, JIANG LI as members of the first-session board of directors of the Company on March 30, 2020.

In the last two years, the reasons for changes in directors of the Company are the nomination of newly elected directors after changes in shareholders of the Company and the establishment of independent director system after the Company is changed into a joint stock company in its entirety.

(II) Changes in Supervisors of the Company

The supervisor of ACMSH was TRACY DONG LIU early 2018.

The establishment meeting and the first general meeting of shareholders of the Company elected TRACY DONG LIU and SHOULEI JIANG as members of the supervisory board of the Company, and the first-session supervisory board of the Company comprised the above two supervisors and QIAN LI, the employee representative supervisor elected by the general meeting of employees of the Company, on November 14, 2019.

SHOULEI JIANG, a supervisor of the Company, resigned as supervisor for personal reasons and the first extraordinary general meeting of shareholders of the Company in 2020 elected QIAN DONG as a member of the first-session supervisory board.

In the last two years, the main reasons for changes in supervisors of the Company are the nomination of newly elected supervisors after changes in shareholders of the Company and further perfection of the governance structure of the Company and election of employee supervisor after the Company became a joint stock company.

(III) Changes in Senior Managers

The senior managers of the Company comprised HUI WANG. The board of directors of ACMSH resolved to pass the appointment of JIAN WANG as the general manager of the Company and LISA YI LU FENG as the person in charge of financial matters in May 2019.

In November 2019, the first meeting of the first-session board of directors of ACMSH resolved to approve the appointment of JIAN WANG as the general manager of the Company, FUPING CHEN and SOTHEARA CHEAV as deputy general managers, LISA YI LU FENG as the person in charge of financial matters and MINGZHU LUO as the secretary of board of directors.

In the last two years, HUI WANG, a senior manger of the Company, no longer held his position for personal reasons, and other senior managers were engaged by the board of directors after the Company was changed into a joint stock company in its entirety. All of the above persons hold positions in the Company during the Reporting Period, and there is no material change in senior managers of the Company.

(IV) Changes in Key Technicians

In the last two years, there is no change in key technicians of the Company.

X. External Investments Made by Directors, Supervisors, Senior Managers and Key Technicians of the Company

As of the date of signing the [***], external investments made by directors, supervisors, senior managers and key technicians of the Company are as follows:

Name	Position in the Company	Name of Investee	Shareholding Percentage	Relationship with the Issuer
STEPHEN SUN-HAI CHIAO	Director	Green Expedition LLC	100%	Related party
ZHANBING REN	Independent Director	Shanghai Mengtebao International Trading Co., Ltd.	50%	Related party
		Shanghai Ruizhong International Trading Co., Ltd.	30%	Related party
QIAN DONG	Supervisor	Shanghai Zhimeng Internet of Things Technology Co., Ltd.	60%	None
		Shanghai Lianwan Investment Management Center (Limited Partnership)	50%	Related party
		Shanghai Zhaonengkun Information Technology Co., Ltd.	12.14%	None
		Xinwei Consulting	3.23%	Shareholder
JIAN WANG	General Manager	ShengYuan Management Consulting (Shanghai) Co., Ltd.	100%	Related party
FUPING CHEN	Deputy General Manager	Shengxin Shanghai	2.94%	Related party
MINGZHU	Secretary of Board of		1.55%	
LUO	Directors			

XI. Shares Held by Directors, Supervisors, Senior Managers and Key technicians of the Company and their Immediate Relatives

As of the date of signing the [***], none of director, supervisor, senior manager and key technician of the Company and their immediate relatives directly hold any share of the Company, information on shares of the Company indirectly held by the above persons is as follows:

Company holding the shares of the Company	Relationship with the Issuer	Name	Position/Family Relation	Information on Shareholding
ACMR	Holding 91.67% of shares in the Company	HUI WANG	Chairman	Holding 168,006 Class A shares and 1,146,934 Class B shares of ACMR, indirectly holding 206,667 Class A shares and 60,000 Class A shares of ACMR through David Hui Wang & Jing Chen Family Living Trust and David Hui Wang & Jing Chen Irrevocable Trust respectively, and indirectly holding 7,334 Class B shares of ACMR through David Hui Wang & Jing Chen Irrevocable Trust
		JING CHEN	Spouse of HUI	Holding 33,334 Class B shares of ACMR, indirectly holding 206,667

			WANG	Class A shares and 60,000 Class A shares of ACMR through David Hui Wang & Jing Chen Family Living Trust and David Hui Wang & Jing Chen Irrevocable Trust respectively, and indirectly holding 7,334 Class B shares of ACMR through David Hui Wang & Jing Chen Irrevocable Trust
		BRIAN WANG	Son of HUI WANG	Holding 117,334 Class B shares of ACMR
		SOPHIA WANG	Daughter of HUI WANG	Holding 15,279 Class A shares and 117,334 Class B shares of ACMR
		HAIPING DUN	Director	Holding 285,030 Class A shares and 100,000 Class B shares of ACMR
		STEPHEN SUN-HAI CHIAO	Director	Holding 69,815 Class B shares of ACMR, indirectly holding 55,000 Class A shares of ACMR through Green Expedition LLC, and indirectly holding 30,000 Class B shares of ACMR through Stephen Sun-Hai And Mary Wu-Chun Chiao Revocable Trust
		Charles Law	Director	Holding 30,112 Class A shares of ACMR
		ZHANBING REN	Independent Director	Holding 3,334 Class B shares of ACMR
		TRACY DONG LIU	Supervisor	Holding 16,924 Class A shares of ACMR
		JIAN WANG	Deputy General Manager	Holding 84,386 Class A shares and 50,001 Class B shares of ACMR
		SOTHEARA CHEAV	Deputy General Manager	Holding 43,334 Class A shares of ACMR
		LISA YI LU FENG	Person in Charge of Financial Matters	Holding 6,943 Class A shares of ACMR
		XUEJUN LI	Key Technician	Holding 800 Class A shares of ACMR
Xinwei Consulting	Holding 1.22% of shares in the Company	QIAN DONG	Supervisor	Holding 3.23% of shares in Xinwei Consulting
Xinshi Consulting	Holding 0.46% of shares in the Company	JUN WANG	Key Technician	Holding 5.40% of shares in Xinshi Consulting
		XUEJUN LI	Key Technician	Holding 5.40% of shares in Xinshi Consulting

Note: The data on the percentage of shares held by the above persons in ACMR is as of December 31, 2019.

XII. Information on Remuneration of Directors, Supervisors, Senior Managers and Key Technicians of the Company

(I) Composition, Basis of Determination, Procedures Performed of Remuneration and its Percentage

The remuneration of directors, supervisors, senior managers and key technicians who hold positions responsible for specific business in the Company consists of basic salary, year-end bonus, etc. Based on the needs of each position, duties and working performance, the Company will pay equitable and reasonable salary in accordance with remuneration regulations and ensure that all of remuneration and benefits of employees are competitive in the same industry and market. The Compensation and Appraisal Committee of the Company formulates remuneration policies and plans of directors and senior managers, conducts appraisals on performance of duties of directors and senior managers and submits the results to the board of directors or the general meeting of shareholders for review and deliberation; independent directors of the Company receive fixed allowances.

During the Reporting Period, the total remuneration for directors, supervisors, senior managers and key technicians of the Company are RMB 3,178,800 Yuan, RMB 4,467,700 Yuan and RMB 5,780,600 Yuan respectively, accounting for 23.83%, 4.34% and 3.76% of total profit of the Company for each period.

(II) Remuneration Received by Directors, Supervisors, Senior Managers and Key technicians from the Issuer in the Latest Year

Information on remuneration received by directors, supervisors, senior managers and key technicians from the Company in 2019 is as follows:

Unit: RMB 10,000 Yuan

No.	Name	Position	Remuneration in 2019
1	HUI WANG	Chairman	61.87
2	HAIPING DUN	Director	-
3	STEPHEN SUN-HAI CHIAO	Director	-
4	Charles Law	Director	-
5	CHEN HUANG	Director	-
6	JIANG LI	Director	-
7	DI ZHANG	Independent Director	5.14
8	MINGXIU PENG	Independent Director	1.30
9	ZHANBING REN	Independent Director	1.30
10	TRACY DONG LIU	Supervisor	0.78
11	QIAN DONG	Supervisor	-
12	QIAN LI	Employee Representative Supervisor	9.18
13	JIAN WANG	General Manager	65.81
14	FUPING CHEN	Deputy General Manager	74.74
15	SOTHEARA CHEAV	Deputy General Manager	76.58
16	LISA YI LU FENG	Person in Charge of Financial Matters	98.81
17	MINGZHU LUO	Secretary of Board of Directors	41.56
18	JUN WANG	Key Technician	74.83

19	XUEJUN LI	Key Technician	65.38
----	-----------	----------------	-------

Note: 1. Certain directors of the Company do not receive any remuneration from the Company; 2. The allowance of each independent director of the Company is RMB 100,000 Yuan/year; 3. QIAN DONG served as supervisor in March 2020, and did not receive any remuneration in 2019.

(III) Other Treatments and Pension Plans for the Above Persons of the Company

As of the date of signing the [***], the Company has not formulated any other treatments, pension plans, etc. for its directors, supervisors, senior managers and key technicians.

XIII. Equity Incentives and Relevant Arrangements of the Issuer prior to this Offering

(I) Employee Shareholding Platform

As of the date of signing the [***], the Issuer has established two employee shareholding platforms prior to the submission and application of this Offering: Xinshi Consulting and Xingang Consulting, each of which holds 0.46% and 0.19% of shares of the Company respectively.

1. Basic Information on Employee Shareholding Platforms

(1) For basic information on Xinshi Consulting, please refer to “(5) Xinshi Consulting” of “VI(V) New Shareholders of the Issuer in the Latest Year” of this Section.

(2) For basic information on Xingang Consulting, please refer to “(7) Xingang Consulting” of “VI(V) New Shareholders of the Issuer in the Latest Year” of this Section.

2. Employee Shareholding Platforms’ Confirmation of Share-based Payment

The above employee shareholding platforms become shareholders of the Company by the means of increase in capital, the price at which the capital is increased is lower than the price in the same comparable transaction, and the Company has confirmed costs of share-based payment. For specific information on the increase in capital, please refer to “(4) the Fourth Increase in Capital of ACMSH in May 2019” of “II (III) Information on the Changes of Shareholders of the Issuer”.

3. Operation of Employee Shareholding Platforms Not Subject to the “Closed Loop Principle”

Pursuant to the partnership agreement of employee shareholding platforms, all or part of property shares in a partnership may be transferred among limited partners, and also may be transferred to a person other than partners. Therefore, such transfer has not been limited to internal transfer among specific employees only by shareholding platforms, operation of which does not conform to the “closed loop principle”.

4. Employee Shareholding Platforms Not Being Private Investment Funds

The above employee shareholding platforms have never raised funds from investors and formed in a non-public manner, and thus are not private investment funds under *the Interim Measures on the Supervision and Administration of Private Investment Funds*, there is no need to go through private investment fund filings in accordance with *the Measures on the Registration of Private Investment Fund Managers and Filing of Funds (Trial)* or other provisions.

5. Share Lock-up Commitments of Employee Shareholding Platforms

Each of the above employee shareholding platforms undertakes that:

(1) During 12 months as of the date on which stocks of the Issuer are listed, it will not transfer shares which are held by this enterprise and have been issued by the Issuer prior to this Offering and listing (hereinafter referred to as the “Pre-initial Offering Shares”), entrust others to manage such shares, or propose to repurchase such part of shares by the Issuer.

(2) If this enterprise decreases the Pre-initial Offering Shares held by it after the lock-up period expires, it will strictly comply with laws, administrative regulations, departmental rules, normative documents and relevant provisions of the Shanghai Stock Exchange and perform corresponding obligations of information disclosure.

(3) If this enterprise decreases its shares of the Issuer in violation of the above commitments, then actual proceeds (if any) received from the sale of such part of shares of the Issuer shall belong to the Issuer, and all losses and legal consequences resulting therefrom shall be borne by this enterprise.

(II) Option Incentive Plan Made by the Issuer for Employees

The Issuer has an option incentive plan which is formulated prior to the application of initial public offering and will be implemented after it is listed (hereinafter referred to as the “Incentive Plan”), the specific information of the plan is as follows:

1. Procedures of Formulating the Incentive Plan

On November 14, 2019, the Company held the first session meeting of the first board of directors and resolved to pass *the Proposal on the Stock Option Incentive Plan of the Company in 2019 (Draft), the Proposal on Measures on Implementing Appraisal and Administration of the Stock Option Incentive Plan of the Company in 2019, the Proposal on the Submission and Application to the General Meeting of Shareholders for Authorizing the Board of Directors to Deal With Matters in connection with 2019 Stock Option Incentive* and other proposals. Independent directors issued their independent opinions consenting to the above proposals.

On November 14, 2019, the Company held the first session meeting of the first supervisory board and resolved to pass *the Proposal on the Stock Option Incentive Plan of the Company in 2019 (Draft), the Proposal on Measures on Implementing Appraisal and Administration of the Stock Option Incentive Plan of the Company in 2019* and other proposals.

On November 15, 2019, the Issuer published name and position of each incentive

object in the Company internally through on-site posting in the Company and other means, the period of publicity shall not less than 10 days.

On November 25, 2019, the Company held the second session meeting of the first supervisory board and resolved to pass *the Proposal on the Supervisory Board’s Explanation on Reviewing Opinions and Publicity of the List of Stock Option Incentive Objects*.

On November 29, 2019, the Company held the first-session extraordinary meeting of shareholders in 2019 and resolved to pass *the Proposal on the Stock Option Incentive Plan of the Company in 2019 (Draft), the Proposal on Measures on Implementing Appraisal and Administration of the Stock Option Incentive Plan of the Company in 2019, the Proposal on the Authorization to the Board of Directors to Deal With Matters in connection with 2019 Stock Option Incentive* and other proposals.

The Compensation and Appraisal Committee of the board of directors of the Company held the first-session extraordinary meeting in 2019 and resolved to pass *the Proposal on the Adjustment of Incentive Objects and Granting Amounts of Stock Option Incentive Plan, the Proposal on Granting Stock Options to Incentive Objects* and other documents, and submitted to the board of directors of the Company for review and deliberation on December 20, 2019.

On December 31, 2019, the Company held the second session meeting of the first board of directors and the third session meeting of the first supervisory board respectively, and resolved to pass *the Proposal on the Adjustment of Incentive Objects and Granting Amounts of Stock Option Incentive Plan, the Proposal on Granting Stock Options to Incentive Objects* and other proposals. Independent directors issued their independent opinions consenting to the above proposals.

In conclusion, the formulation of this incentive plan by the Issuer has performed necessary procedures.

2. Basic Content of the Incentive Plan

The basic content of this incentive plan is as follows:

(1) Incentive Objects

The number of incentive objects involved in this incentive plan is 88 in total, including directors, senior managers of the Company and middle-level management personnel and core business employees of the Company and its controlled subsidiaries. The above incentive objects shall not include any independent directors or supervisors of the Company. The directors and senior managers of the Company must be elected by the general meeting of shareholders of the Company or engaged by the board of directors of the Company. Each incentive object must enter into a labor contract or engagement contract with the Company or any of controlled subsidiaries of the Company within the appraisal period of this incentive plan.

Accordingly, incentive objects under the incentive plan do not exist any circumstance as described in paragraph 2 of Article 8 of *the Measures on the Administration of Equity Incentives of Listed Companies*, and comply with provisions of Article 10.4 of *the Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*.

(2) Relevant Clauses of the Incentive Plan

Article 1 of Chapter III of *the Incentive Plan* provides that “This Plan adopts stock options as tools of equity incentive. The source of stocks under this Plan shall be stocks issued by the Company specifically to incentive objects. Subject to conditions as provided for under this Plan, each stock option granted to an incentive object shall have the right to purchase one ordinary share from ACMSH at the exercise price within the exercisable period. None of stock options granted to incentive objects may be transferred or used for creating any security or repaying any debt.”

Chapter IV of *the Incentive Plan* provides for effective period, date of grant, waiting period and exercise arrangement of stock options, among which, Article 4 of Chapter IV provides that “The stock options will be exercised in two installments upon the expiration of 36 months after such options are granted, the exercisable options in each instalment shall account for 1/2 and 1/2 of the total amount of granted stock options respectively. Within exercisable days, subject to the fulfillment of conditions of exercise as stipulated under this Plan, each incentive object may exercise his/her stock options which have been granted to him/her in two installments in accordance with arrangements as stipulated in the table below. The period of exercise for exercisable options shall be 12 months, the beginning date of the next period of exercise shall not be earlier than the expiration date of the last period of exercise, and relevant interests shall not be deferred to the next period when conditions of exercise for stock options in each installment fail to be fulfilled.”

Chapter IX of *the Incentive Plan* provides for how to deal with special circumstances of the incentive plan and specifies circumstances under which the Company repurchases options or incentive objects terminate their exercise of options.

Chapter XII of *the Incentive Plan* provides for the formulation of this incentive plan, granting and exercising of options and other aspects.

In conclusion, the definitions of incentive tools, restrictions of rights, exercise arrangements, repurchasing or terminating exercise of options, procedures of implementation and other content involved in the incentive plan are formulated by reference to relevant provisions of *the Measures on the Administration of Equity Incentives of Listed Companies*.

(3) Exercise Price

The exercise price of this incentive plan is determined on the basis of the transaction price in the most recent increase in capital of ACMSH by investors, and thus the exercise price shall be RMB 13 Yuan per share.

The price per share shall be RMB 0.66 Yuan on the basis of the audited net assets of ACMSH in the most recent one year, and the price per share shall be RMB 3.52 Yuan on the basis of the value as estimated in the most recent period. Accordingly, this

incentive plan is not less than the audited net assets or estimated value in the most recent year.

(4) Total Amount of Granted Stock Options

The first Extraordinary General Meeting of the Issuer in 2019 reviewed and passed the *2019 Option Incentive Plan* and the *2019 Appraisal Administration Measures* and agreed to grant 5,677,500 stock options, representing 1.46% of the total amount of capital shares of the Company as of such grant, to 88 qualified incentive objects after adjustment. The effective period shall not exceed 72 months from the date on which stock options are granted to the date on which all stock options granted to incentive objects are exercised or cancelled.

Accordingly, the percentage of shares in connection with all of the Issuer's option incentive plans which are within effective period to the total amount of capital shares of the Company immediately prior to the listing of the Company does not exceed 15%, and none of reserved interests is created.

(5) Waiting Period

The waiting period shall be 36 months as of the date on which stock options are granted. Within the waiting period, none of incentive objects shall exercise any of options which are granted in accordance with this plan.

(6) No Change in de facto controller will be Caused

According to the total amount of stock options granted under this incentive plan, the de facto controller of the Company will not be changed resulting from any exercise of options of the Issuer after the listing.

(7) Lock-up Commitments

According to Article 4 of Chapter IV of *the Incentive Plan*, if the time point of exercising stock options under this incentive plan is after the listing of the Company, then: (i) none of incentive objects shall decrease his/her stocks acquired resulting from his/her exercise of options after the Company is listed within 3 years; (ii) upon the expiration of the above lock-up period, each incentive object shall decrease his/her stocks by reference to relevant provisions of decreasing stocks by directors, supervisors and senior managers of the Company, and comply with then relevant laws, regulations, normative documents and rules of the stock exchange where the Company is listed.

3. Effects of the Equity Incentives on the Company

Through the formulation of this incentive plan, the Company is intended to motivate working enthusiasm of managers, key technicians, key employees of the Company, realize the unification of objectives of shareholders, the Company and employees and promote the operating efficiency of the Company.

After any grant is made under this incentive plan, the costs of share-based payment confirmed due to amortization of cost incurred by stock options will be increased, which will cause certain effect on the operational performance of the Company in the future.

Under the equity incentive plan of the Company, each incentive object who has received equity options will hold no more than 1% of stocks in the Company after his/her exercise, which will not cause any significant effect on the shareholding structure of the Company, and the equity incentives will not affect the controlling power over the Company.

4. Accounting Treatments of Equity Incentives

According to relevant provisions on the determination of fair value in *the Accounting Standards for Business Enterprises No.11-Share-based Payment* and *the Accounting Standards for Business Enterprises No.22-Determination and Measurement of Financial Tools* issued by the Ministry of Finance, it is necessary to select an appropriate valuation model to calculate the fair value of stock options. The cost of stock options granted under this incentive plan is estimated based on the Black-Scholes model.

The cost of stock options granted under this incentive plan shall be amortized before each instalment of options becomes exercisable, and the actual accounting cost shall be revalued based on such parameters as actual stock prices and volatility on the date of grant as determined by the board of directors. Therefore, the amortization of the cost of stock options will cause certain effect on the operational performance of the Company.

During the Reporting Period, the Company does not involve any share-based payment resulting from this incentive plan which will cause effect on the operational performance of the Company.

5. Verification Opinions of Intermediary Agencies

Upon verification, the Sponsor and the Reporting Accountant consider that:

(1) The formulation and implementation of the above option incentive plan have performed necessary decision-making procedures, and incentive objects comply with provisions of Article 10.4 of *the Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*;

(2) The Issuer has fully disclosed relevant information of the option incentive plan in the [***];

(3) The measurement methods and results of fair value with respect to equity instruments in connection with share-based payment of the Issuer is reasonable;

(4) Relevant accounting treatments with respect to share-based payment of the Issuer comply with relevant provisions of *the Accounting Standards for Business Enterprises*.

(III) Stock Options Acquired by Employees of the Issuer in the Controlling Shareholder of the Issuer

Since the establishment of ACMR, the controlling shareholder of the Company, has granted stock options of ACMR to certain employees in order to establish and perfect long-acting incentive mechanism, maintain stability of core team and fully motivate enthusiasm of core and key employees of the Company. As of December 31, 2019, HUI WANG, the de facto controller of the Company, held 1,053,335 stock options of ACMR, and other employees of the Company held 1,702,513 stock options of ACMR in total.

During the Reporting Period, the Company has confirmed costs of share-based payment for stock options of ACMR acquired by the above persons, the amount of which is RMB 1.7247 million Yuan, RMB 3.9978 million Yuan and RMB 7.3990 million Yuan respectively.

XIV. Employees of the Issuer and their Social Securities

(I) Employees

As at the end of each Reporting Period, the number of employees of the Company is 187, 270 and 358 respectively. As of December 31, 2019, the professional structure, educational level and age distribution of employees of the Company are as follows:

Professional Structure of Employees	Headcount	Percentage of Total Number of Employees
Management Personnel	29	8.10%
Marketing Sales Personnel	10	2.79%
After-sales Service Personnel	76	21.23%
Production Personnel	84	23.46%
Finance Personnel	9	2.51%
Technology Research and Development Personnel	150	41.90%
Total	358	100.00%

Educational Level of Employees	Headcount	Percentage of Total Number of Employees
Master degree and above	72	20.11%
Bachelor degree	140	39.11%
College degree and below	146	40.78%
Total	358	100.00%
Age Distribution of Employees	Headcount	Percentage of Total Number of Employees
50 and above	13	3.63%
40-49	28	7.82%
30-39	162	45.25%
30 and below	155	43.30%
Total	358	100.00%

(II) Implementation of Social Security System by the Issuer

The Company and its domestic subsidiaries implement the system of labor contract, they enter into a labor contract with each employee in accordance with *the Labor Law*. The Company and its domestic subsidiaries have bought social insurances, such as pension insurance, medical insurance, unemployment insurance, employment injury insurance and maternity insurance, and contributed housing provident funds for their employees in accordance with national and local laws and regulations in connection with social security.

Each foreign subsidiary of the Company has entered into a labor contract with each foreign employee and implemented the system of social security in accordance with laws and regulations of the place where the subsidiary is located.

During the Reporting Period, there is no dispute or litigation of the Issuer and its subsidiaries arising out of the issue of payment of social insurance, nor is there any administrative punishment arising out of the issue of payment of social insurance premiums. As of the execution date of this [***], all of the number of employees, base number, percentage, etc. of social insurance premiums paid by the Issuer for employees comply with provisions of laws, regulations and normative documents. The Issuer has contributed housing provident funds for Chinese employees of the Company in accordance with provisions of national and local governmental authorities.

According to the reply letter issued by Huangpu Sub-center of Shanghai Social Security Business Administration Center on May 20, 2020, ACMSH has no overdue premium of social securities during the period from January 1, 2017 to December 31, 2019.

According to the certificate issued by Xinwu District Human Resources and Social Security Bureau of Wuxi on April 24, 2020, it is not found that ACM Wuxi has any violation of laws, regulations or rules in connection with labor security or any adverse record that ACM Wuxi is subject to any administrative penalty or administrative process imposed by labor administration departments due to its violation of laws during the period from January 1, 2017 to April 13, 2020.

According to the certificate issued by Shanghai Housing Provident Fund Administration Center on March 10, 2020, ACMSH has established a housing provident fund account, and the housing provident fund account is in the status of normal contribution without any administrative punishment record imposed by the Housing Provident Fund Administration Center.

According to the certificate issued by Wuxi Housing Provident Fund Administration Center on April 13, 2020, during the period commencing from January 1, 2017 to the date of issuance of the certificate, ACM Wuxi has never been subject to any recovery for its failure of contribution, fine or any other form of administrative punishment imposed by Wuxi Housing Provident Fund Administration Center arising out of any of its violation of housing provident fund regulations.

Section VI Business and Technology

I. Main Business and Main Products of the Issuer

(I) Main business, main products and income component

1. Basic situation of main business

The company is mainly occupied in the research, development, production and sales of semiconductor special equipment. Its main products include semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet equipment. The company persists in the development strategy of differentiated competition and innovation. Through self-developed single-chip megasonic cleaning technology, single-chip slot-type combined cleaning technology, electroplating technology, stress-free polishing technology and vertical furnace tube technology, the company provides customized equipment and process solutions to global wafer manufacturing, advanced packaging and other customers, effectively improving the customer's production efficiency, product yield and reduce production costs.

Based on independent innovation, the company has successfully developed the world's first SAPS and TEBO megasonic cleaning technology and Tahoe single-chip slot-type combined cleaning technology through years of technological research and process accumulation. These technologies can be applied in the wafer cleaning field of 45nm and below technology nodes, which can effectively solve the cleaning problem of organic contamination and particle after etching, and significantly reduce the use of concentrated sulfuric acid and other chemical reagents. It helps customers reduce production costs while meeting the energy saving and emission reduction requirements.

With advanced technology and rich product lines, the company has developed into one of the few semiconductor special equipment providers with certain international competitiveness in Chinese Mainland. The company's products have been recognized by many mainstream semiconductor manufacturers at home and abroad, and have obtained good market reputation. The main customers of the company are as follows:





Number	Field of Customer	Name of Customer
1	Wafer manufacturing	Hynix, Huahong Group, Yangtze Memory, SMIC, Hefei Changxin
2	Advanced Packaging	JCET, TFME, SJsemi, Nepes
3	Manufacturing and recycling of semiconductor silicon wafer	ZING SEMI, Wafer Works, Wafer Works, PSI
4	Research institutes	Institute of Microelectronics of Chinese Academy of Sciences, Shanghai Integrated Circuit, NCAP







The company's technical level for the megasonic single-chip cleaning equipment, single-chip slot-type combined cleaning equipment and electroplating process equipment of copper interconnection, has reached international leading or international advanced level. As of December 31, 2019, the company and its holding subsidiaries has 232 main licensed patents, including 108 domestic patents and 124 overseas patents. Among them, there are 227 invention patents. The company also won the title of "Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits". It is the main subject unit of major scientific research projects in China such as "Research and development and application for 20-14nm copper plating equipment of copper interconnection" and "Research and development for 65-45nm stress-free polishing equipment of copper interconnection", and other ("02 Special Project") major scientific projects in China.






2. Main products


After years of continuous research and development investment and technology accumulation, the company has developed cleaning equipment for single-chip cleaning,

slot-type cleaning, and single-chip slot-type combined cleaning and others, copper interconnection electroplating equipment for the front end of chip manufacturing, advanced packaging electroplating equipment for the back end, as well as the wet etching equipment, gumming equipment, developing equipment, degumming equipment, stress-free polishing equipment, vertical furnace tube serial equipment and other equipment for advanced packaging. At present, the company's products are mostly used in the integrated circuit industry. The company's main products are as follows:

Main products	Technical characteristics	Application field
Semiconductor cleaning equipment		
 <p>Single-chip cleaning equipment</p>	The equipment can simultaneously clean the front and back of the wafer. Each equipment can be equipped with a variety of chemical liquids, which can be applied to single-chip wet cleaning and single-chip wet etching technology.	The equipment can be used for front and back cleaning of film deposition in chip manufacturing, cleaning after dry etching, cleaning after ion implantation ashing, cleaning after chemical mechanical grinding, cleaning after polishing and epitaxy, cleaning for chemical wet etching and other process.
 <p>SAPS single-chip cleaning equipment</p>	On the basis of the traditional single-chip cleaning equipment configuration, the equipment is equipped with the megasonic cleaning technology (SAPS) independently developed by the company. The equipment is mainly aimed at the cleaning process of flat	The equipment can be used for front and back cleaning of film deposition in chip manufacturing, cleaning after dry etching, cleaning after ion implantation ashing, cleaning after
	wafer surfaces and deep holes, focusing on the removal of small particles. In the process below 45nm, it effectively solves the cleaning problem of organic contamination and particles after etching, which greatly improves the cleaning efficiency.	chemical mechanical grinding, cleaning after polishing and epitaxy process and other process.
 <p>TEBO single-chip cleaning equipment</p>	On the basis of the configuration of the traditional single-chip cleaning equipment, the equipment is equipped with the megasonic cleaning technology of Timely Energized Bubble Oscillation (TEBO), which is independently developed by the company, to provide efficient cleaning of 3D structure wafers. In the case where the high aspect ratio of 3D chip is gradually improved, TEBO technology can stabilize the bubble's oscillation to achieve low damage or even zero damage.	The equipment can be used for front cleaning of film deposition in chip manufacturing, cleaning after dry etching, cleaning after ion implantation ashing and other process.
 <p>Single-chip slot-type combined cleaning equipment</p>	Its integrated single-cavity cleaning module and slot-type cleaning module integrate the slot-type degumming process with the single-chip cleaning process. Compared with the traditional single-chip cleaning equipment, it can greatly save the amount of sulfuric acid, and the cleaning ability is comparable to	The equipment can be used in photoresist stripping and cleaning of chip manufacturing, cleaning after dry etching, cleaning after ion implantation, cleaning after chemical mechanical grinding, metal

	the single-chip cleaning equipment.	film removal and other process.
 <p>Single-chip back cleaning equipment</p>	<p>The equipment uses non-contact clamping method of Bernoulli suspension, which can effectively protect the surface of wafer device and perform the cleaning or wet etching for the spray chemical liquid on the back of the wafer. It can be used for ultra-thin wafers with large warping degree or bonded wafers with carriers.</p>	<p>It can be used for the cleaning and wet etching process of the wafer backside in chip manufacturing.</p>
 <p>Scrubbing equipment for front end</p>	<p>The equipment adapts a single-chip cavity to clean the front and back of the wafer according to the working procedure. It can perform cleaning process including wafer backside scrubbing, wafer edge scrubbing, front and back cleaning for two-phase fluid, etc.; the equipment occupies a small area with high productivity and strong stability. There are various cleaning methods to be flexibly selected.</p>	<p>It can be used in the scrubbing process from the front end to the last end in chip manufacturing.</p>
 <p>Slot-type cleaning equipment</p>	<p>The equipment uses pure water, alkaline and acidic liquids as cleaning agents, and is combined with cleaning methods such as spray, hot dip, overflow and bubbling, and is equipped with advanced IPA drying method to clean the wafers in batches.</p>	<p>It can be used for cleaning, wet etching, film stripping, photoresist removal and other processes in the field of chip manufacturing.</p>
Semiconductor electroplating equipment		
 <p>Copper interconnection electroplating equipment for the front end</p>	<p>Aiming at Ultra ECP map of the copper interconnection electroplating technology for the front end, which is the 55nm, 40nm, 28nm and below 20-14 nm technology nodes, the equipment mainly acts on the wafer to deposit a layer of dense and uniformly distributed copper without holes, gaps and other defects.</p>	<p>It can be used in the dual damascene electro-coppering process in logical circuits and memory circuits.</p>
 <p>Advanced packaging electroplating equipment for the back end</p>	<p>The equipment is developed in a differentiated manner to meet the needs of advanced packaging electroplating and can be used for high-current and high-speed electroplating applications. It adopts a modular design, which is convenient for maintenance and control, can shorten the maintenance time of equipment and improve the utilization rate of equipment.</p>	<p>It can be used in the advanced packaging Pillar Bump, RDL, HD Fan-out and TSV, and the electroplating processes, such as copper, nickel, tin, silver, gold, etc.</p>
Advanced packaging wet equipment		
	<p>The equipment uses a single-chip cavity to perform wet etching on the wafer surface. It integrates all the chemical liquid, pure water and gas lines for drying in a complete process into a</p>	<p>It can be used for wet silicon etching of 12-inch and 8-inch wafers and UBM metal wet etching processes in advanced packaging, such</p>

Advanced packaging wet equipment	cavity. The equipment occupies a small area, consumes less chemicals and pure water with high flexibility in process adjustment.	as copper, titanium, nickel, tin, gold, etc.
 <p>Gumming equipment</p>	The equipment uses a single-chip cavity to perform the photoresist spin coating on the surface of the wafer, and completes the subsequent roasting and cooling working procedure in the hot and the cold plate. The equipment pioneers the self-cleaning function of the cavity, which replaces the traditional manual disassembly of the cavity for cleaning, avoiding the damage to the machine caused by frequent manual disassembly of the precision gumming machine. At the same time, the cleaning efficiency is greatly improved, the maintenance cost of the machine is reduced, and the service life of the machine is increased.	It can be used for the coating process of positive and negative glue and thin and thick glue for 12-inch and 8-inch wafers in advanced packaging.
 <p>Ultra C dv Developing equipment</p>	The equipment uses a single-chip cavity to spray the developing solution on the surface of the wafer, and cleans and dries the wafer after spraying the developing solution. The equipment combines the developing technology of Spray and puddle.	It can be used for the developing process of 12-inch and 8-inch wafers in advanced packaging.
 <p>Degumming machine</p>	The equipment integrates slot-type degumming with single-chip degumming, completes the soaking process in the slot, softens and removes most of the thick glue. The single-chip degumming can complete the subsequent removal of residual glue, contaminants and particles and make up for the shortcomings of insufficient capacity of single-chip equipment.	It can be used for the degumming process of 12-inch and 8-inch wafers in advanced packaging.
 <p>Advanced packaging scrubbing equipment</p>	The equipment uses a single-chip cavity to spray chemical liquid or deionized water on the front and back of the wafer to achieve the cleaning, and use the physical brush to clean the wafer.	It can be used for the scrubbing and cleaning process of 12-inch and 8-inch wafers in advanced packaging.
 <p>Stress-free polishing equipment</p>	Stress-free polishing machine (Ultra SFP) is based on the principle of electro-chemistry and integrates stress-free polishing, chemical mechanical polishing, and wet etching processes. In advanced packaging applications, it can greatly reduce the consumption of polishing solution and reduce chemical emissions.	It can be used for 3D TSV, 2.5D silicon interposer, RDL, HD Fan-out, and others in advanced packaging.
Other equipment		

 <p>Vertical furnace tube equipment</p>	<p>The equipment can handle wafers process in batches to complete the deposition process of different types of non-metal thin films on the surface of wafers. It is mainly used for polycrystalline silicon, silicon nitride, silicon oxide and other thin films.</p>	<p>It can be used for the film deposition of polycrystalline silicon, silicon nitride, and silicon oxide in front end process of logical circuits and memory circuits.</p>
--	---	--

3. Composition of main business income

During the reporting period, the company's main business income according to product composition is as follows:

Unit: RMB 10,000 Yuan

Project	2019		2018		2017	
	Amount	Proportion	Amount	Proportion	Amount	Proportion
Semiconductor cleaning equipment	62,522.30	84.10%	50,135.96	92.91%	21,492.48	86.27%
Among them: single-chip cleaning equipment	55,099.52	74.12%	50,135.96	92.91%	21,492.48	86.27%
Slot-type cleaning equipment	4,801.36	6.46%	-	-	-	-
Single-chip slot-type combined cleaning equipment	2,621.43	3.53%	-	-	-	-
Semiconductor electroplating equipment	7,857.39	10.57%	1,191.13	2.21%	-	-
Advanced packaging wet equipment	3,961.12	5.33%	2,634.07	4.88%	3,421.33	13.73%
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

During the reporting period, the income from the single-chip cleaning equipment has accounted for a relatively high proportion and grew rapidly. This is the company's main source of income. Besides, the company has successfully developed the first scrubbing equipment for front end, the first stress-free polishing equipment, and the first vertical furnace tube equipment, and they have entered the customer verification; during the reporting period, there is no sales revenue.

(II) Main operation model

1. Profit model

The company is mainly occupied in the research, development, production and sales of semiconductor special equipment. It achieves revenue and profits through selling customized semiconductor cleaning equipment, semiconductor electroplating equipment, stress-free polishing equipment, vertical furnace tube equipment and advanced packaging wet equipment to wafer manufacturing, advanced packaging, semiconductor silicon wafer manufacturing enterprises, research institutes and other customers, and providing services.

As a company specializing in semiconductor equipment that faces the forefront of international technology and adheres to independent innovation, the company follows global industry practices. It is mainly focused on technology and process research and development, product design and manufacturing, and provides customers with equipment and process solutions. The company hardly engages in the processing of parts and components. According to the product design, the company has organized outsourcing of parts and external assistance, and has established a complete supply

chain system in the United States, South Korea and Chinese Mainland, and has developed a close cooperative relationship with core suppliers to guarantee the supply of important parts. With the help of the technological advantages formed through long-term research and development accumulation, the company maintains a higher product gross profit, and thus maintains a higher proportion for research and development investment and market development, and has achieved a higher profit margin during the reporting period.

2. Research and Development model

The company mainly adopts the model of independent research and development. The research and development department of the company is guided by the international technical tendency of semiconductor special equipment and customer demands, adopts a strategy of differentiated competition, and relies on the international research and development teams with rich experience to develop new process and technologies, complete the verification of technical solutions, and has applied for patent protection in the major semiconductor production countries and regions in the world, and has quickly industrialized research and development results and achieved a series of technological innovations and breakthroughs. Besides, the company has established a professional research and development team in South Korea, relying on South Korea's advantages in the field of semiconductor machinery and electronics, to develop related technologies for the company's products and improve the company's product performance.

The "Management Measures for the Research and Development Project" formulated by the company stipulates the procedures for the establishment, approval, and execution of research and development projects. On the basis of functional categories, the company divides research and development personnel into four categories: process development, mechanical design, electrical design, and software programming. Among them, the process development and mechanical design department is responsible for the process development and mechanical design of the process module, and the electrical design and software programming department is responsible for the automatic control design and control software programming of the equipment. After completing the project initiation and approval process of the research and development project, the company will create the technical plan and complete the product design; complete the manufacturing of new product according to the design. After the product has passed the company's test, it will be sent to the customer for testing in the actual production environment. The company will continue to improve product performance based on customer feedback until the product is officially finalized. Among them, in respect of part of the testing work for the new product on the client, the company also needs to pay test development fee.

3. Procurement model

There are many kinds of raw material purchased by the company, and the main categories are gas circuit, materials conveying, machinery, the electrical, etc. The specific material includes robot arms, megasonic generators, filters, valves, sensors, etc.

In order to ensure the quality and performance of the product, the company has established a complete procurement system, requiring suppliers to fill out the "Supplier Survey Table", establishing supplier files to figure out the situation of the supplier, such as personnel situation, production capacity, design capacity, financial situation, suppliers of key components, production and testing equipment, etc. And conduct comprehensive evaluation of the supplier's product technology and quality, capacity of delivery just-in-time and after-sales service, etc., and finally determine the qualified supplier and put them into the list of qualified suppliers. At present, the company has established stable long-term cooperation with major suppliers.

The company has organized procurement teams for raw material in South Korea and the United States, and established ACM KR and ACM CA. They rely on the relatively developed and complete semiconductor industry chains in South Korea and the United States, and are responsible for the overseas procurement of some of the company's raw materials.

According to the customer demands, the performance and indicators of raw

materials required by the products, the research and development and design engineers of the company inquire with suppliers based on the design drawings, and sign the “Procurement Demand Sheet”, and send it together with the supplier’s offer and design drawings to the purchasing department. After comprehensively taking the company’s current production plans, sales orders, raw material inventory, and other factors into account, the purchasing department arranges procurement plans, conducts business negotiations with suppliers, and finally determines the purchase price and trade terms. After obtaining the approval of the research and development and design department, purchasing department and financial department, select the supplier from the list of qualified suppliers as required and conduct the procurement. After the purchased materials are delivered, the quality control department conducts the receiving inspection. After passing the inspection, the warehouse clerk will go through the storage procedures and complete the purchase.

4. Production model

The company’s products are all based on the customized design and manufacturing according to the customer’s differentiated demands, and the company mainly adopts the production model where the sales volume determines the production, and organizes production in line with customer orders.

On the basis of market forecasting and non-binding forecasting from the customers, the company’s manufacturing department prepares annual production plans, and formulates monthly production plans based on customer orders. The research and development and design engineers provide assembly drawings according to the customer orders and distribute them to warehouses and production workshops for warehouse picking, batching and assembly. After the pre-assembly and pre-examination, each module is handed over to the production line for assembly and functional testing. After passing the test, it will be off line and delivered.

The cavity frames of the company’s products mainly consist of a variety of plastic parts and is produced by outsourcing processing. According to the differentiated demands of customers, the company hands over to outsourcing manufacturers for processing after completing the design. After passing the acceptance, the products are put into storage for production and assembly. The outsourcing manufacturers of the company have independent and mature processing capabilities. Outsourcing processing adopts standardized technology, and is performed according to the product technical parameters listed in the agreement or order. The company will strictly control the quality of outsourcing processing, and has established a stable cooperative relationship with outsourcing manufacturers for many years to ensure that it meets the differentiated needs of customers.

5. Sales model

Since its establishment, the company has always adhered to the global development strategy. Customers are mainly located in Chinese Mainland, Taiwan, South Korea and other countries and regions.

The company’s market development strategy is: first of all, to develop the global leading semiconductor enterprises, and obtain their recognition for the company’s technology and products through long-term research and development and technology accumulation to establish the company’s market reputation. Then, with its achievements and reputation in the international industry, the company will continuously explore the emerging regional markets in the semiconductor industry, such as Chinese Mainland, etc. After years of hard work, the company has established a relatively stable cooperative relationship with Hynix, Yangtze Memory, Huahong Group, SMIC, JCET and other domestic and foreign leading enterprises in the semiconductor industry.

The company’s sales department will jointly discuss the product program with the mechanical design department, process department, electrical department, software department and after-sales department after receiving the customer’s order. The production department is responsible for organizing the production according to the design plan. After the product is qualified upon testing, it is shipped to the customer for installation, commissioning and acceptance. During the reporting period, the company has provided products to customers for testing before signing a formal sales

order in a few cases. After the product meets the technical specifications of the customers, both parties sign the official order.

The company sells products through the direct selling model, and there is no distribution and dealer model. During the reporting period, the company obtains orders through agent promotion, business negotiation with potential customers or bidding.

The sales cycle of semiconductor special equipment industry is long and there is a lot of uncertainty. In the early stage of the development, the company's business scale is too small to cover many potential customers. The company mainly develops the market through agents. With the continuous expansion of the company's business scale, the company also begins to expand its sales team. Under the agent promotion, the company signs a product sales agency agreement with the agent, and the agent is responsible for the marketing of related products in a specific region. The company directly signs sales contracts with relevant customers, and directly sends the products to customers, and pays the commission charges to the agent in accordance with the types of the sold products and the commission rate agreed in advance.

In 2017 and 2018, part of the company's export business was carried out by the import and export service provider, Charter Base International. The specific method was to sell the product to Charter Base International at first, which would go through customs procedure and then Charter Base International would sell the products to the final customers at the same price. At the same time, the company would pay Charter Base International for the agency fees of customs procedure. After June 2018, the company's export business was carried out through the wholly-owned subsidiary, Hong Kong CleanChip, and the company no longer had business with Charter Base International.

6. Reasons for adopting the current business model, key factors affecting the business model, changes and future trends of the business model and influencing factors during the reporting period

Combined with factors such as market supply and demand, upstream and downstream development status, industrial policies, the company's main business, main products, core technologies, and its own development stage, the company has formed its current business model. The business model is consistent with the practice in the same industry. The business model and its influencing factors of company have not faced major changes during the reporting period, nor will there be major changes of business model in the foreseeable future.

(III) Evolution situation of the company's main business, main products or services, main business model since its establishment

1. Evolution situation of the company's main business and products

Since its establishment, the company has always focused on the research and development, production and sales of semiconductor special equipment. The company's controlling shareholder, ACMR, was established in 1998. Since its establishment, ACMR has been engaged in the research and development of semiconductor special equipment. In 2005, ACMR invested and set up the company's predecessor, ACMSH, and put the right to use the technology related to semiconductor special equipment to ACMSH, which was formed from its previous research and development. On the basis of these technologies, the issuer carries out continuous technology development and innovation, and conducts technology research and development and technology accumulation of semiconductor special equipment.

Among the company's technology and product lines, semiconductor cleaning equipment has achieved market breakthrough at first. In 2008, the SAPS technology of the company was successfully developed. In 2009, the SAPS cleaning equipment entered the product verification of the world's top ten semiconductor companies and the global leading enterprise for memory, Hynix. In 2011, the company got the official order from Hynix for the first time owing to the SAPS cleaning equipment for 12-inch 45nm process, and received repetitive orders of Hynix in 2013. In the field of semiconductor cleaning equipment, the company has successfully entered the

production line of the world’s first-rate semiconductor manufacturing enterprises after more than ten years of research and development and technical accumulation.

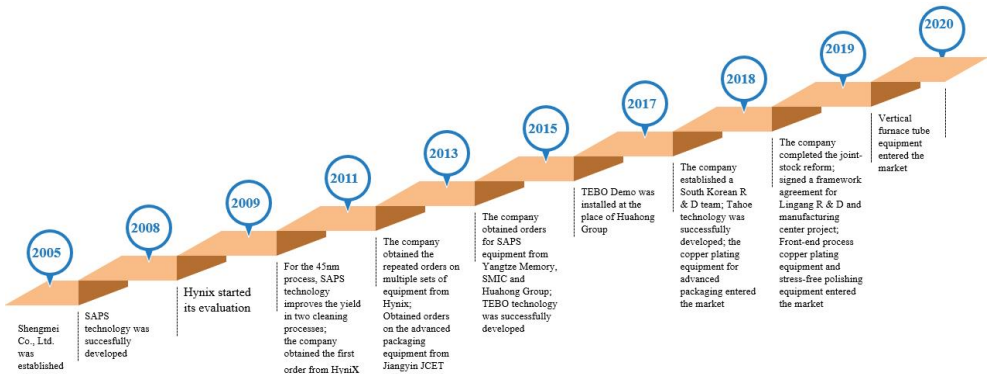
After 2015, the semiconductor industry in Chinese Mainland has entered a period of rapid development, and the demand for semiconductor special equipment has increased rapidly. Since the company’s production rate was firstly recognized by international advanced customers, the company has successfully obtained orders from leading customers in Chinese Mainland after 2015 with its achievements and reputation in the international industry, such as Yangtze Memory, SMIC, and Huahong Group. In 2015 and 2018, the TEBO technology and Tahoe technology of the company were successfully developed respectively, and the technology and product line in the field of semiconductor cleaning equipment were more colorful. During the reporting period, the company firmly grasped the opportunities for the rapid development of the semiconductor industry in Chinese Mainland. The business scale of semiconductor cleaning equipment grows rapidly.

In the field of advanced packaging wet equipment, after years of technology accumulation, the company obtained the order of JCET, which was the leading enterprise in the domestic packaging and testing field, in 2013.

Advanced packaging electroplating equipment for the back end and stress-free polishing equipment are one of the company’s early business directions. After years of research and development and marketing, the company respectively obtained the orders of JCET in 2018 and 2019. The company got the orders of Huahong Group in 2019 owing to the copper interconnection electroplating equipment for the front end.

In order to further expand the company’s market coverage of semiconductor special equipment, the company began the research and development of dry equipment based on the wet process in 2018, and launched vertical furnace tube equipment in 2020, which further enriches the company’s product line and expands the market areas covered by the company’s products.

Since its establishment, the company’s main business has not changed. The evolution situation of the company’s main products is as follows:

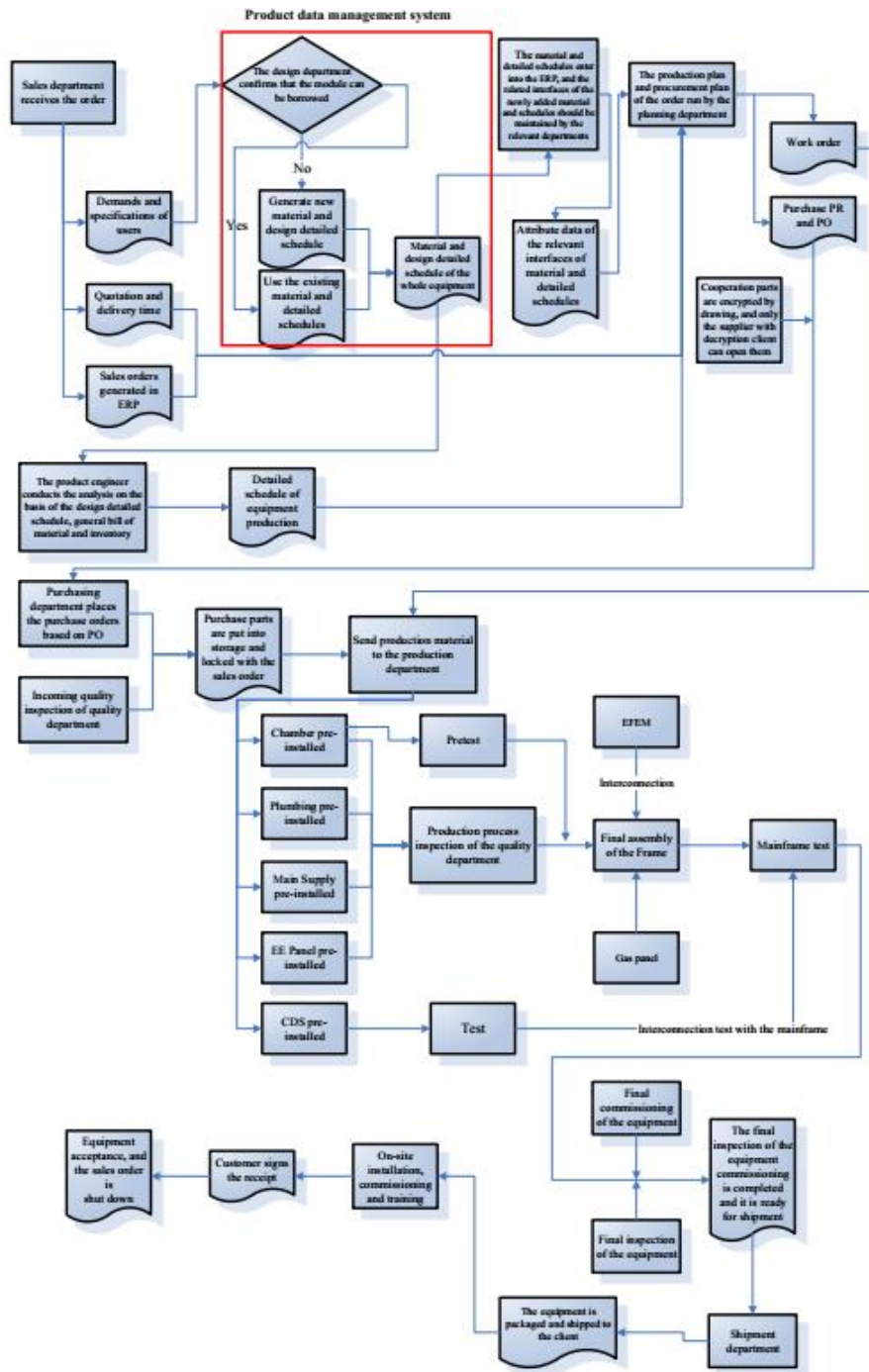


2. The evolution situation of the company’s main operation model

Since its establishment, the company’s operation model has not changed.

(IV) Process flow of main products

The industry of semiconductor special equipment is a technology-intensive industry, and the production technology involves the comprehensive application of multi-disciplinary and multi-domain knowledge such as microelectronics, electrical science, machinery, materials, chemical engineering, fluid mechanics, automation, image recognition, communication, and software systems. The production process flow of the company’s various products is similar in some places. The specific process flow is as follows:



(V) Main environmental pollutants, main treatment facilities and treatment capacity involved in production and operation

The company is mainly engaged in the research, development, production and

sales of semiconductor special equipment. The main production process is the assembly, detection and debugging of machinery equipment and modules, and there is no serious pollution.

At present, the main environmental protection measures taken by the company in the process of research and development and production are as follows:

1. During the research and development period, there is a small amount of pollutants. The waste water with fluorine, acid, alkali and other components will be collected and entrusted to a qualified third-party company for transportation and disposal.
2. The company's domestic sewage is directly discharged into the municipal sewage pipe network. After the collected water for cleaning equipment has passed through the recycling system and reached the standard, it will be directly discharged into the municipal sewage pipe network. Domestic waste is handled by the sanitation department. The solid wastes are collected in a unified manner, and then they are entrusted to professional units for disposal.
3. The company's workshop is equipped with a ventilating system for exhausting air. The equipment has basic vibration reduction, noise elimination and sound insulation devices to reduce noise emissions.

II. The basic situation and competition condition of the issuer's industry

(I) The company's industry and the basis for determining the industry

The company is mainly occupied in the research, development, production and sales of semiconductor special equipment. According to the "Guidelines for the Industry Classification of Listed Companies (2012 Revision)" issued by the China Securities Regulatory Commission, the company's industry is "Special Equipment Manufacturing" (C35); according to the "Classification of National Economy Industry" (GB/T4754-2017), the company's industry is "Special Equipment Manufacturing for semiconductor devices" under "Special Equipment Manufacturing" (C3562).

(II) The competent authority of the industry, the supervision mechanism of the industry, the main laws, regulations and policies of the industry and its influence on the operation and development of the issuer

1. The competent authority and supervision mechanism of the industry

The competent authority of the semiconductor special equipment industry where the company is located is the Ministry of Industry and Information Technology and the Ministry of Science and Technology. The industry's self-regulatory organizations are China Semiconductor Industry Association and China Electronic Production Equipment Industry Association.

The main responsibilities of the Ministry of Industry and Information Technology are as follows: put forward new industrialization development strategies and policies, coordinate and solve major problems in the process of new industrialization, formulate and organize the implementation of development plans for industry, communications industry and informatization, and promote strategic adjustment, optimization and upgrading of industrial structure; To formulate and organize the implementation of industry plans, plans and industrial policies for industry and communications; monitor and analyze the operation situation of the industry and communication industry, make statistics and release relevant information, and conduct forecast and warning and information guidance; formulate and organize the implementation of industry plans, programs and industrial policies for industry and communications; supervise and analyze the operation trend of industry and communication industry, carry on the statistics and release relevant information, and conduct prediction and early warning and information guidance; burden the responsibility for proposing opinions on the scale and direction of investment in fixed assets in industry, communications industry and informatization (including the utilization of foreign capital and overseas investment),

and the arrangement ideas on fiscal construction funds from the central government, and reviewing and approving the fixed assets investment projects within Chinese planning and the annual planned scale in accordance with the limits of authority prescribed by the State Council; formulate and organize the implementation of plans, policies and standards related to the information industry in the high-tech industry, and guide the technological innovation and technological progress in the industry, and upgrade traditional industries with advanced and applicable technologies; burden the responsibility for the organization and coordination of the revitalization of the equipment manufacturing industry, organize and formulate plans and policies for major technological equipment development and independent innovation, rely on the construction of key national projects to coordinate the implementation of major special projects, promote the localization of major technical equipment and guide and introduce the learning and innovation of major technical equipment.

The main responsibilities of the Ministry of Science and Technology are as follows: formulate Chinese innovation-driven development strategy, scientific and technological development, introduce and implement the foreign intellectual planning and policies; be responsible for establishing a unified management platform of Chinese science and technology and the coordination, evaluation and supervision mechanism of the fund for scientific research project; formulate and carry out Chinese basic research plans, policies and standards; compile the major science and technology projects in China and supervise the implementation; formulate relevant policies and measures for the conversion of scientific and technological achievements and the cooperation of industry, university and research, and supervise the implementation.

China Semiconductor Industry Association and China Electronic Production Equipment Industry Association are mainly responsible for implementing government industrial policies; performing industry and market research and providing consulting services to member units and government authorities; self-discipline management of the industry; propose industrial development suggestions and opinions to government departments on behalf of the member units.

The Ministry of Industry and Information Technology, the Ministry of Science and Technology and industry associations constitute the management system of the semiconductor equipment industry. Under the macro control of the competent authority and the constraints of self-disciplining norms of the industry associations, enterprises in various industries runs independently in the market and assume market risks by themselves.

2. The main laws, regulations and policies of the industry and its influence on the operation and development of the issuer

The semiconductor special equipment industry of the company is the key industry of which China focuses on encouraging development. In order to enhance the development, innovation capacity and international competitiveness of the semiconductor industry, promote the transformation of traditional industries and product upgrading and updating, and further propel the sustained, rapid and healthy development of the national economy, the central and local governments of China have launched a series of policies in recent years, such as “Development Guidelines for Information Industry” and “Several Measures for the Concentrated Development of Integrated Circuit Industry in Lingang New Area of China (Shanghai) Pilot Free Trade Zone”, to encourage and support the development of the semiconductor industry, which has created a good policy environment for the development of the semiconductor industry, and promoted the development of the semiconductor special equipment industry in Chinese Mainland.

(III) Development Situation of the Issuer’s Industry in Terms of New Technologies, New Industries, New Patterns, New Models, Etc. over the Past Three Years and the Future Development Trend

1. Industry Development

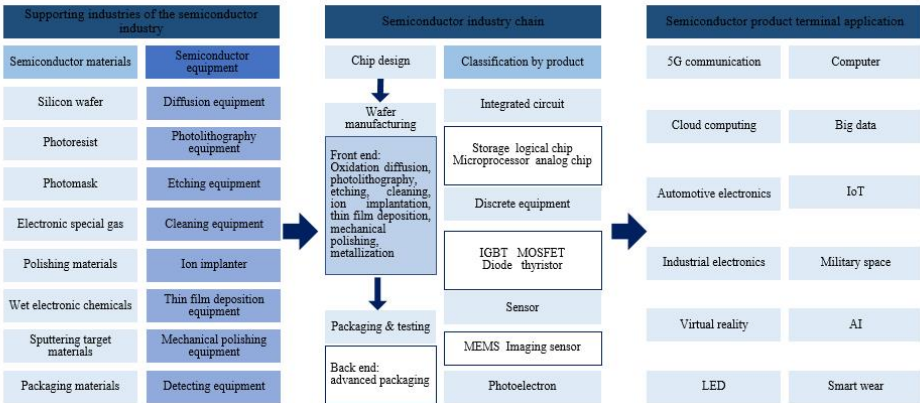
(1) Overview of the semiconductor industry

Semiconductors refer to materials with conductivity ranking between conductors and insulators at room temperature and are widely used in various electronic products.

Semiconductor products can be divided into four categories: integrated circuits (IC), discrete devices, optoelectronic devices and sensors. As the core of the semiconductor industry, integrated circuits account for more than 80% of the scale of the semiconductor industry, and the subdivisions include logic chips, storage, microprocessors, analog chips, etc. Integrated circuits are widely used in 5G communication, computer, consumer electronics, network communication, automobile electronics, Internet of Things (IoT) and other industries, and are the core component of most electronic equipment.

From the perspective of the industry chain, the semiconductor industry chain involves supporting industries such as materials and equipment, chip design, wafer manufacturing, packaging & testing industry and semiconductor product terminal application industry. Semiconductor products represented by integrated circuits are widely used, and the demand growth in downstream application industries is the core driving force for the rapid development of the semiconductor industry.

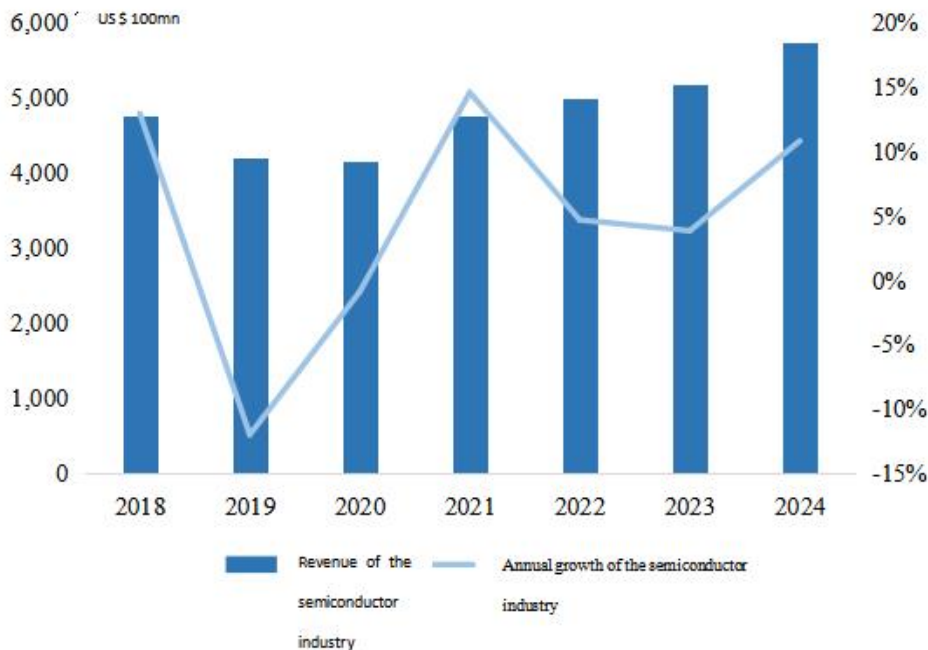
Semiconductor industry chain



① The market scale of the global semiconductor industry is large

With the rapid development of global informatization, networking and knowledge economy, especially driven by the strong demand of emerging application fields such as IoT, artificial intelligence (AI), automotive electronics, smartphones, smart wear, cloud computing, big data and security electronics, the revenue of the global semiconductor industry is enormous. In 2018, the revenue of the global semiconductor industry reached USD 476.151 billion dollars. In 2019, due to the impact of the global macro-economic doldrums, the prosperity of the semiconductor industry declined, and the revenue of the global semiconductor industry fell to USD 419.148 billion dollars, down 11.97% year on year. The semiconductor industry is expected to recover in 2021, and the revenue of the global semiconductor industry is expected to reach USD 572.788 billion dollars in 2024. According to Gartner's statistics and forecasts, the revenues of the global semiconductor industry and annual growth rate from 2018 to 2024 are as follows:

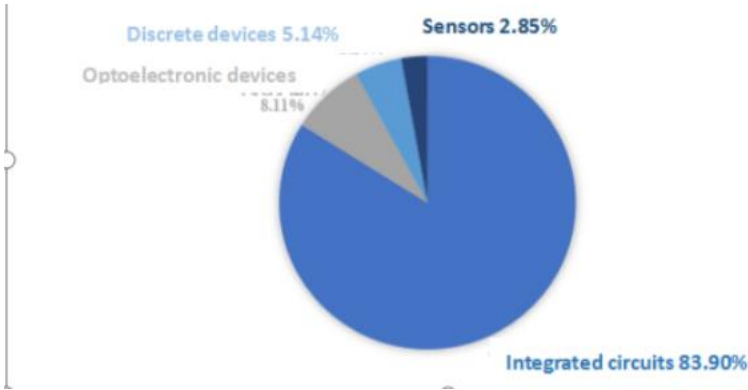
Revenues and annual growth rates of the global semiconductor industry for 2018-2024



② Integrated circuits are the most important component of the semiconductor industry.

The semiconductor industry can be divided into four product categories: integrated circuit, optoelectronic device, discrete device and sensor. In 2018, the global sales of integrated circuits, optoelectronic devices, discrete devices and sensors were USD 393.288 billion, 38.032 billion, 24.102 billion and 13.356 billion, respectively, up 14.60%, 9.25%, 11.32% and 6.24% from 2017, accounting for 83.90%, 8.11%, 5.14% and 2.85% in the global semiconductor industry. In terms of the product distribution of the semiconductor industry, the proportion of integrated circuits is the highest and the growth rate is the fastest. Integrated circuits are the most important component of the semiconductor industry.

Product distribution of the global semiconductor industry in 2018

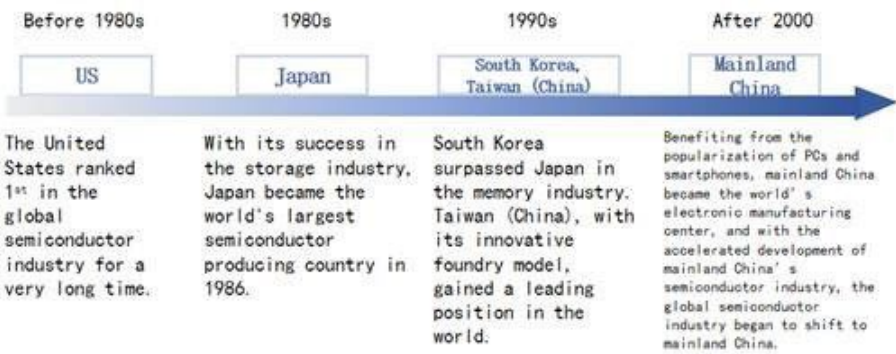


Data source: WSTS

③ The global semiconductor industry is expected to continue to shift towards mainland China in the future

In the development history of the global semiconductor industry, we’ve seen several rounds of industrial shift from the United States to Japan, South Korea, Taiwan (China), and mainland China. At present, mainland China is in the process of the rapid rise of the new generation of smartphones, IoT, AI, 5G communication and other industries, and has become one of the most important semiconductor application and consumer markets in the world. According to the statistical data from the Semiconductor Equipment and Materials International (SEMI), 62 new wafer factories will be put into operation in the world from 2017 to 2020, of which 26 will be located in mainland China, accounting for 42%. The period from establishment to production of new wafer plants is about 2 years, and the next few years will be the rapid development period of the semiconductor industry in mainland China.

History of Regional Shift of the Global Semiconductor Industry



Against the backdrop of regional migration of the global semiconductor industry, according to WSTS statistics, in 2018, the global shares of semiconductor markets in Asia-Pacific (excluding Japan), the United States, Europe and Japan were 60%, 22%, 9% and 9% respectively; in 2018, the U.S. semiconductor market grew by 19.6%, Europe by 13.3%, Japan by 9.6% and Asia-Pacific by 16.0%, of which the growth rate in mainland China was 20%. With the rapid growth of China’s semiconductor market, its global position is also rising rapidly. In 2019, while the growth rate of the global semiconductor market declined, the semiconductor market in mainland China still grew faster than the global market, thereby driving the Asia-Pacific region to become the fastest-growing semiconductor market in the world. In 2017-2019, the sales percentage

and growth rates of semiconductor markets in all countries or regions in the world were as follows:

Country/Region	2019 (E)		2018		2017	
	Sales Percentage	Growth	Sales Percentage	Growth	Sales Percentage	Growth
US	21.90%	1.44%	22.14%	19.58%	21.47%	35.03%
Europe	9.02%	1.95%	9.08%	13.25%	9.29%	17.13%
Japan	8.39%	2.52%	8.39%	9.58%	8.88%	13.33%
Asia-Pacific	60.69%	3.06%	60.39%	16.00%	60.36%	19.40%
Mainland China	32.37%	3.50%	32.08%	16.60%	31.90%	22.10%
Total	100.00%	2.55%	100.00%	15.94%	100.00%	21.62%

Data source: *Shanghai IC Industry Development Report 2019*, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association

④ China’s semiconductor industry continues to grow rapidly

Relying on the large market demand of terminal applications in China, the scale of the semiconductor industry in mainland China continues to grow, especially the development of the integrated circuit industry. According to data released by China Semiconductor Industry Association (CSIA), the sales scale of the integrated circuit industry in mainland China was RMB 250.85 billion Yuan in 2013, RMB 653.20 billion Yuan in 2018 (up by 20.71% year-on-year), and RMB 756.23 billion Yuan in 2019 (up by 15.77% year-on-year). From 2013 to 2019, the annual compound growth rate of the sales scale of the integrated circuit industry in mainland China was 20.19%, developing rapidly. ⁴

Sales and growth rates of China’s IC industry for 2013-2019



In the industry chain structure of the integrated circuit industry in mainland China in 2019, the sales revenue of the chip design industry was RMB 306.350 billion Yuan, up by 21.60% year-on-year; the sales revenue of the wafer manufacturing industry was RMB 214.910 billion Yuan, up by 18.20% year-on-year; the sales revenue of the packaging & testing industry was RMB 234.970 billion Yuan, up by 7.10% year-on-year. In each link of the above semiconductor industry chain, the rapid growth of wafer manufacturing sales revenue is mainly attributed to China’s a batch of 12-inch and 8-inch wafer manufacturing production lines put into production in recent years. Besides, with the development of the chip design industry at home and abroad, the wafer manufacturing industry in Chinese Mainland has been growing fairly fast.⁵

Sales and growth rates of China’s IC industry chain structure for 2014-2019

Unit: RMB 100mn Yuan

⁴ Data source: *Shanghai IC Industry Development Report 2019*, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association, and China Semiconductor Industry Association

⁵ Data source: *Shanghai IC Industry Development Report 2019*, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association, and China Semiconductor Industry Association

Year		2019	2018	2017	2016	2015	2014	2014-2019 Compound Growth
Chip design	Sales	3,063.50	2,519.3	2,073.5	1,644.3	1,325.0	1,047.4	23.94%
	Growth	21.60%	21.5%	26.1%	24.1%	26.5%	29.5%	
Wafer manufacturing	Sales	2,149.10	1,818.2	1,448.1	1,126.9	900.8	712.1	24.72%
	Growth	18.20%	25.6%	28.5%	25.1%	26.5%	18.5%	
Packaging & testing	Sales	2,349.70	2,193.9	1,889.7	1,564.3	1,384.0	1,255.9	13.35%
	Growth	7.10%	16.1%	20.8%	13.0%	10.2%	14.3%	
Total	Sales	7,562.30	6,531.4	5,411.3	4,335.5	3,609.8	3,015.4	20.19%
	Growth	15.78%	20.7%	24.8%	20.1%	19.7%	20.2%	

(2) Overview of the semiconductor special equipment industry

① Classification of semiconductor special equipment

Semiconductor special equipment generally refers to the production equipment required for the production of various semiconductor products. It is part of the supporting link of the semiconductor industry chain. Semiconductor special equipment is the technical leader of the semiconductor industry. Chip design, wafer manufacturing and packaging & testing need to be designed and manufactured within the scope allowed by equipment technologies. The technological progress of equipment in turn promotes the development of the semiconductor industry. Take the integrated circuit, which is of the greatest technological difficulty, the most added value, and the most complex technology in the semiconductor industry chain as an example, the production equipment used for integrated circuits can be divided into two categories, the front-end process equipment (wafer manufacturing) and the back-end process equipment (packaging & testing). Among them, there are seven process steps in the front-end wafer manufacturing, including thermal process, photo-lithography, etch, ion implantation, dielectric and metal deposition, cleaning & CMP, and metallization. The corresponding dedicated equipment mainly includes oxidation/diffusion equipment, photolithography equipment, etching equipment, cleaning equipment, ion implantation equipment, film deposition equipment, mechanical polisher, etc.

The main types of equipment used for integrated circuit manufacturing are as follows:

Semiconductor equipment classification						
Oxidation/diffusion	Photolithography	Etching	Cleaning equipment	Ion implantation	Thin film growing	Polishing
Diffusion furnace	Film lamination developing equipment	Medium etching equipment	Single-wafer cleaning equipment	Ion implanter	Metal deposition equipment	Mechanical polisher
Oxidation furnace	Photolithography equipment	Metal etching equipment	Tank cleaning equipment		Dielectric layer deposition equipment	
Annealing furnace	Alignment detector	Edge etching equipment	Combined cleaning equipment		Atomic layer deposition equipment	
Single-wafer oxidation equipment					Electroplating equipment	

② Characteristics of the semiconductor special equipment industry

A. Semiconductor special equipment plays an important role in the semiconductor industry chain

Semiconductor special equipment plays an important role in the semiconductor industry chain. The technology of semiconductor special equipment is complex, and customers have strict requirements on the technical parameters and operation stability of the equipment in order to ensure the production efficiency, quality and yield.

According to Moore's law, when the price remains unchanged, the number of components that can be accommodated on an integrated circuit will double every 18 to 24 months, and the performance will also double. Accordingly, the equipment supplier in the integrated circuits industry must also introduce more advanced manufacturing processes every 18 to 24 months; the technological progress of the integrated circuit manufacturing process in turn promotes the semiconductor special equipment enterprises to continuously pursue technological innovation. In the meantime, the technology update iteration of the integrated circuit industry also brings continuous demand for equipment investment, and the technological improvement of semiconductor special equipment also boosts the sustained and rapid development of the integrated circuit industry.

B. The technical barriers for semiconductor special equipment is high, and it is hard to pass customer verification

The industry of semiconductor special equipment is a technology-intensive industry, and its production technology involves the comprehensive application of knowledge in numerous disciplines and fields, such as microelectronics, electric, mechanical, material, and chemical engineering, fluid mechanics, automation, image recognition, communication, software system, etc. Global giants in the semiconductor special equipment industry have a rather high market share, especially in photolithography equipment, detection equipment, ion implanter, and other fields, where they enjoy monopoly. Moreover, they have taken intellectual property protection measures in most technical fields. Therefore, the technical barriers for semiconductor special equipment industry is very high. A small number of enterprises in Chinese mainland have made technological breakthroughs and innovations in some fields after more than ten years of technology R&D and process accumulation, and have successfully launched differentiated products on the premise of avoiding intellectual property disputes, which have been recognized by customers at home and abroad and have gradually entered the international market.

Semiconductor special equipment has high value and complex technology, which has a huge impact on the product quality and production efficiency of downstream customers. Customers in the semiconductor industry have strict requirements for the quality, technical parameters and stability of semiconductor special equipment, and they are also very cautious in selecting new equipment suppliers. Usually, they select suppliers with a certain level of market reputation and market share in the industry, and carry out a long-cycle equipment verification process. Generally, customers in the semiconductor industry require equipment suppliers to provide products for testing, and then they will be included in the list of qualified suppliers after passing their internal verification; some customers still need to send the semiconductor products produced by using such equipment to their downstream customers, and only after obtaining the approval of their customers can equipment suppliers be included in the list of qualified suppliers. Therefore, semiconductor special equipment enterprises face a long time cycle and great difficulty in customer verification and market exploration.

② Upstream and downstream industries of the semiconductor special equipment industry

The upstream industry of the semiconductor special equipment industry is the electronic component and machining industry. The raw materials purchased are mainly robot arms, megasonic generators, filters, valves, sensors, etc. Because of the characteristics of high precision and high reliability of semiconductor special equipment, the requirements for raw materials and parts are correspondingly high.

The downstream industries of the semiconductor special equipment industry are mainly wafer manufacturing, packaging & testing industries, etc. In particular, integrated circuit products have high technology content and complex processes, and technological updates and process upgrades rely on the development of special equipment; in turn, the continuous development of new products and processes in the downstream industries provides new demand and market space for the equipment industry. Taking wafer manufacturing as an example, manufacturing equipment applicable for 8-inch wafer cannot be used to process 12-inch wafer. Therefore, when the integrated circuit industry enters the 12-inch era, the manufacturing equipment

applicable for 8-inch wafer needs to be completely updated. Additionally, as the wafer manufacturing technology and process continuously develop towards high precision and high integration, more advanced technologies and processes also require improvement and upgrading of the equipment technolog, which in turn will brings incremental space for the equipment industry.

③ Situation of the semiconductor special equipment industry

A. Downstream market demand drives the continuous scale growth of the global semiconductor special equipment industry

The market of semiconductor special equipment is closely related to the prosperity of the semiconductor industry, among which the chip manufacturing equipment is the field with the most demand in the semiconductor special equipment industry. According to Gartner’s statistics, the total equipment expenditure of chip manufacturers in the world in 2018 reached USD 58.944 billion, and it is expected to decline slightly to USD 55.480 billion in 2019 as a result of the global macroeconomic downturn. The semiconductor industry is expected to recover in 2021, and will grow to USD 60.214 billion in 2024. From 2020 to 2024, the compound annual growth rate is expected to be 6.27%.

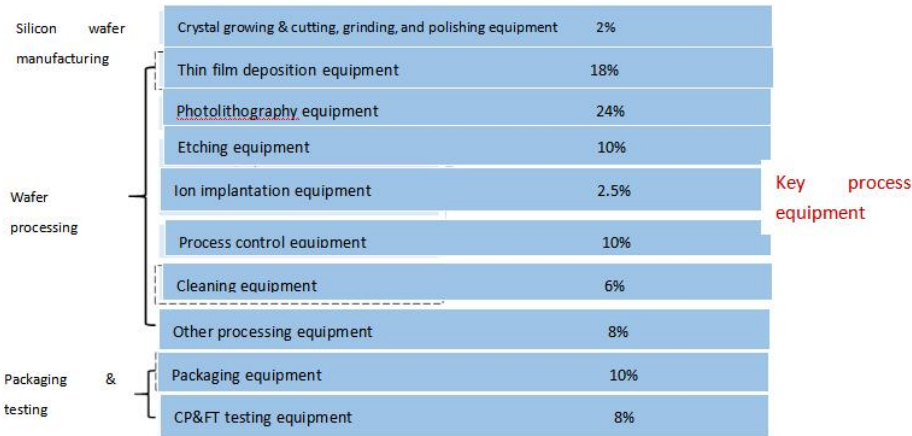


Data source: Gartner

In the future, with the steady growth of downstream industries such as 5G communication, computers, consumer electronics, network communications, etc., as well as the rapid development of emerging industries such as IoT, AI, automotive electronics, smart phones, smart wearables, cloud computing, big data and security electronics and other emerging fields, the integrated circuit industry will face the demand for capacity expansion of new chips or advanced processes, which will bring broad market space for the semiconductor special equipment industry.

In integrated circuit equipment, chip manufacturing equipment is the core equipment with the highest technical requirements, the most difficult manufacturing and the highest value. The technical difficulty, value and market share of semiconductor special equipment are in direct proportion. According to statistics from SEMI, from previous sales, the front-end manufacturing equipment accounts for about 80% of the market of semiconductor special equipment, and the back-end packaging & testing equipment accounts for about 20%. Photolithography, etching and cleaning, film deposition, ion implantation, process control and detection devices are the key process equipment. The value of these process devices accounts for a relatively high proportion of the cost of a single production line in the wafer factory.

Investment proportions for main IC devices



Data source: SEMI, *Issue 4 of the Semiconductor Equipment Topic: The Year of Deployment –Looking for Invisible Leaders*, GF Securities, April 2018

B. Foreign manufacturers dominate the global semiconductor special equipment market, and the degree of industrial concentration is high

The semiconductor special equipment industry has high technical barriers, market barriers and customer recognition barriers. After years of development, well-known global enterprises such as Applied Material (US), ASML (the Netherlands), LAM (US), TEL and DNS (Japan), and KLA (US) have occupied the main share of the global semiconductor special equipment market by virtue of their advantages in capital, technology, customer resources, brand, etc. According to statistics from VLSI Research, the total sales volume of the top 5 semiconductor special equipment manufacturers in the world in 2018 was USD 52.784 billion, with a year-on-year growth of 17.73%.⁶

In 2018, the market share of the top 10 semiconductor special equipment companies in the world reached 81%, and the market share of the top five semiconductor special equipment companies reached 71%, showing a high degree of market concentration.⁷

Rankings of Top 5 Semiconductor Equipment Manufacturers in the World for 2018

Unit: USD 100mn

Ranking	Manufacturer	Main Product Fields	Sales
1	Applied Material	Deposition, etching, ion implantation, grinding, etc.	140.16
2	ASML	Photolithography equipment	127.72
3	TEL	Deposition, etching, developing, cleaning, etc.	109.15
4	LAM	Etching, deposition, cleaning, etc.	108.71
5	KLA	Detecting and measurement equipment	42.10
Total			527.84

Globally, Applied Materials, a US company, as the largest supplier of semiconductor special equipment, leads the world in heat treatment, coating equipment, ion implantation equipment and other key links of wafer manufacturing equipment; Japanese semiconductor companies do a better job at manufacturing etching equipment, cleaning equipment, coating equipment, developers, testing equipment and other products; ASML, a Dutch company, is in the leading position in the field of high-end photolithography equipment; LAM, a US company, has advantages in the field of etching, cleaning and electroplating equipment; as for semiconductor special equipment enterprises in mainland China, after years of rapid development, they are now capable of competing against global leading enterprises in the fields of etching equipment, cleaning equipment, packaging & testing equipment, etc.

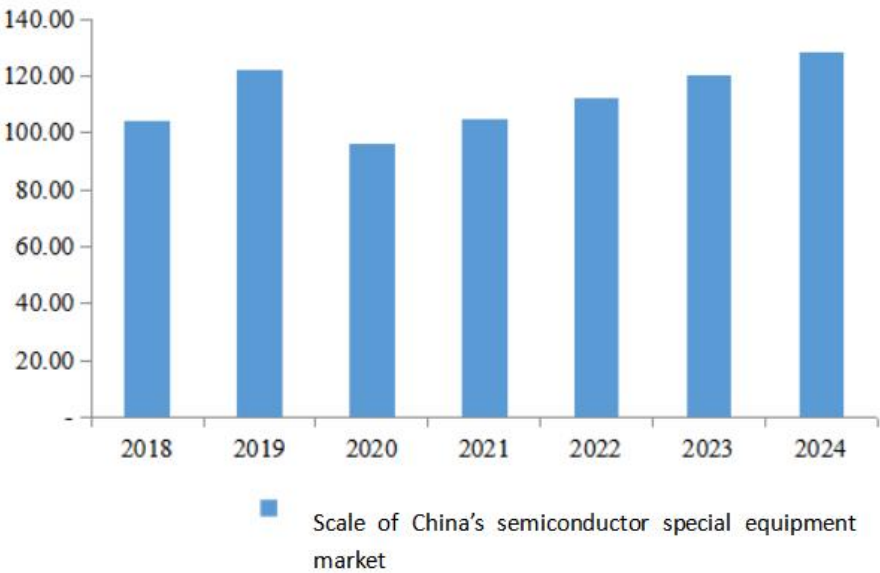
C. The scale of the semiconductor special equipment market in mainland China is growing rapidly

With the shift of global semiconductor industrial chain to mainland China, the Chinese integrated circuit industry has been growing rapidly. According to Gartner's statistics, in 2018, China's chip manufacturers' equipment expenditure reached USD 10.434 billion, and in 2019 it was USD 12.244 billion. It is expected that in 2020, affected by the global semiconductor industry's recession transmission, it will decline to USD 9.628 billion, with the global semiconductor industry gradually recovering in 2021. In 2024, it will increase to USD 12.842 billion. From 2020 to 2024, the compound annual growth rate is expected to be 7.47%.

⁶ Data source: *Shanghai IC Industry Development Report 2019*, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association

⁷ Data source: *Strategies for the Semiconductor Equipment Industry for 2020*, BOCI Securities, Dec. 2019

Scale of China’s semiconductor special equipment market for 2018-2024



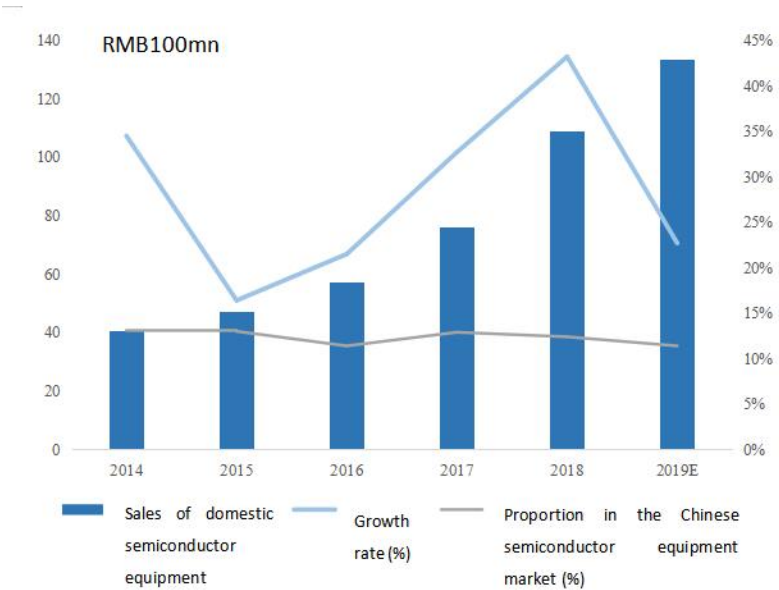
Data source: Gartner

D. The development of semiconductor special equipment made in China is increasing

The chip manufacturing industry, especially the wafer manufacturing industry, often has a large scale of equipment investment. At present, the investment of 12-inch wafer manufacturing projects is billions or ten billions of US dollars. The technology of wafer manufacturing is complex, involving many process steps, and there are many kinds of equipment needed for production. The efficiency and reliability of a single piece of equipment will directly affect the work efficiency of the whole production line and the yield of chip products. Therefore, wafer manufacturing enterprises are very cautious about the selection of new equipment, requiring a long verification cycle. First, they want to ensure that the equipment is technically advanced and reliable, and then they will consider commercial conditions such as economy and decide whether to purchase the equipment or whether to apply the equipment in production.

In recent years, as China attaches great importance to the semiconductor industry, some Chinese semiconductor special equipment enterprises have made breakthroughs in some technical fields after more than ten years of technology research and development and accumulation, and have successfully passed the verification of some integrated circuit manufacturing enterprises, becoming equipment suppliers of manufacturing enterprises.

Sales and growth rates of China’s domestic semiconductor special equipment for 2014-2019



Data source: 2019 Shanghai Integrated Circuit Industry Development Research Report, Shanghai Economic and Information Technology Commission, Shanghai Integrated Circuit Industry Association.

Although the sales volume of Chinese semiconductor special equipment enterprises keeps growing, the overall domestic production rate is still relatively low. At present, China’s semiconductor special equipment mainly relies on imports. According

to statistics from China Electronic Production Equipment Industry Association (CEPEA), the sales volume of domestic semiconductor special equipment in 2018 was RMB 10.9 billion Yuan, with a self-sufficiency rate of about 13%. The self-sufficiency rate in the field of integrated circuit manufacturing equipment is even lower, so the development potential of Chinese semiconductor special equipment companies is significant.

According to the statistics of equipment purchase of mainland China's major wafer factories, the localization of mainland China's major wafer factories is as follows:

SN	Equipment	Localization Rate	Major Domestic Manufacturers
1	Film stripping equipment	Above 90%	Beijing E-Town Semiconductor Technology Co., Ltd.
2	Cleaning equipment	About 20%	ACMSH, NAURA
3	Etching equipment	About 20%	AMEC, NAURA, Beijing E-Town Semiconductor Technology Co., Ltd.
4	Heat processing equipment	About 20%	NAURA, Beijing E-Town Semiconductor Technology Co., Ltd.
5	PVD equipment	About 10%	NAURA
6	CMP equipment	About 10%	Tianjin Hwatsing Electromechanical Technology Co., Ltd.
7	Film lamination and developing equipment	Breakthrough of zero	KINGSEMI
8	Photolithography equipment	Breakthrough of zero expected	Shanghai Micro Electronics Equipment (Group) Co., Ltd. ("SMEE")

Data source: *Strategies for the Semiconductor Equipment Industry for 2020*, BOCI Securities, Dec. 2019

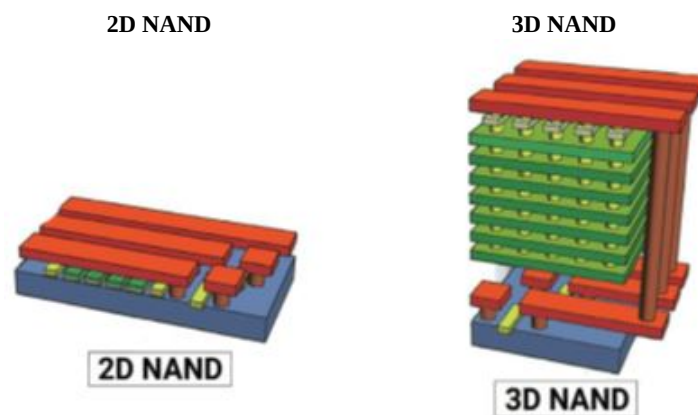
To sum up, with the technological breakthroughs of some enterprises in China's semiconductor special equipment industry, the development of this industry is expected to accelerate.

④ Future development trend of the semiconductor special equipment industry

A. Semiconductor special equipment will develop towards high precision and high integration

With the continuous advance of semiconductor technology, the integration degree of semiconductor devices is increasing. On one hand, the chip process nodes are shrinking, from 12 μm -0.35 μm (1965-1995) to 65 nm-22 nm (2005-2015), and they are still developing towards more advanced dimensions; on the other hand, the size of semiconductor wafer is expanding; the mainstream wafer size has developed from 4 inches and 6 inches to 8 inches and 12 inches at the current stage. In addition, the structure of semiconductor devices tends to be complex. A case in point is the NAND flash memory in the field of memory. According to the international semiconductor technology roadmap, when the process size reaches 14nm, the current flash memory technology will reach the limit of size reduction, and the memory technology will change from two-dimensional to three-dimensional architecture and enter the 3D era. In the manufacturing process of 3D NAND, the main task is to change the two-dimensional horizontal series storage units in 2D NAND into vertical ones. By increasing the number of 3D layers, we can solve the process problem of difficulty in 2D scale-down. The number of stacking layers is also developed from 32 and 64 layers to 128 layers. These requirements for the precision and stability of semiconductor special equipment are becoming higher and higher. In the future, semiconductor special equipment will develop towards high precision and high integration.

2D NAND and 3D NAND structure diagram



B. Coexistence and joint development of equipment of different technical grades

Given that the application of semiconductor chips is extremely wide, and the performance requirements and technical parameters vary widely, for example, SoC logic chips used in mobile phones often require 12-inch wafers and 7nm advanced processes. For industrial, automotive, and power electronics chips, 6-inch and 8-inch wafers and μm -level processes are still used in large numbers. The demand for chips of different technical levels coexist in large numbers, which also determines that there are market demands for semiconductor special equipment of different technical levels. With the continuous development of the semiconductor industry technology in the future, the demand for the semiconductor special equipment suitable for 12-inch wafers and with more advanced technology will grow at a faster speed, but the equipment of high, medium and low technological levels have their corresponding market space and will continue to coexist in the near future.

(3) Introduction to the market segment of the issuer's main products

① Cleaning equipment

A. Importance of semiconductor cleaning in the chip manufacturing process

Cleaning is an important process link throughout the semiconductor industry chain. It is used to clean the impurities that may exist in each step of semiconductor silicon wafer manufacturing, wafer manufacturing, and packaging & testing in order to prevent impurities from affecting the high-yield rate of chips and the performance of chips. At present, with the chip manufacturing process becoming more and more advanced, the requirements for the control of wafer surface pollutants are getting higher, and after each repetitive process such as photolithography, etching, and deposition, a cleaning process is required.

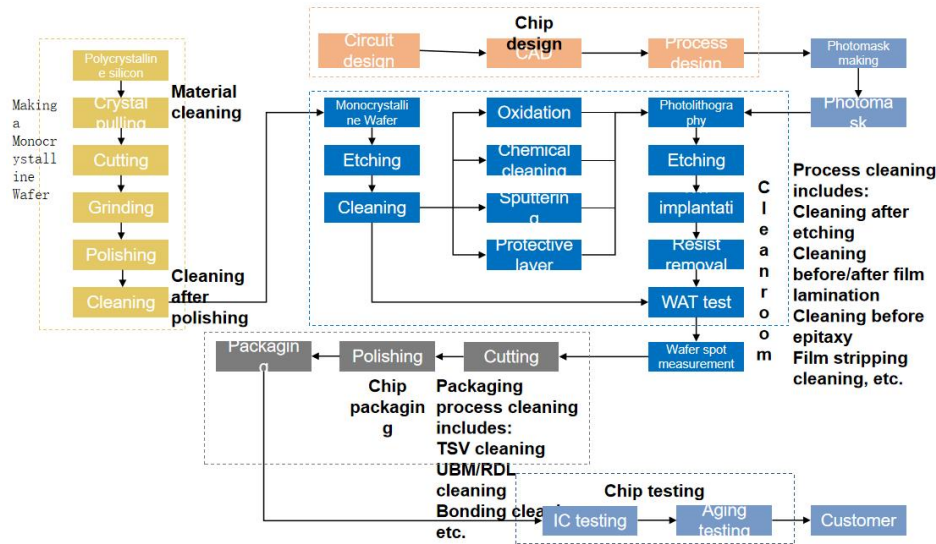
Semiconductor cleaning refers to the non-destructive cleaning of the wafer surface to remove particles, natural oxide layers, metal pollution, organic matters, sacrificial layers, polishing residues and other impurities in the semiconductor manufacturing process. The categories, sources and main harm of pollutants in semiconductor cleaning are as follows:

Pollutant	Source	Main Harm
Particles	Environment and other engineering processes	Affect the subsequent photolithography and dry etching processes, causing device short circuit.
Natural oxidation layer	Environment	Affect the subsequent oxidation and deposition processes, causing the electrical property to fail.
Metal pollution	Environment and other engineering processes	Affect the subsequent oxidation process, causing the electrical property to fail.
Organic matters	Dry etching byproducts and environment	Affect the subsequent deposition process, causing the electrical property to fail.
Sacrificial layer	Oxidation/deposition process	Affect specific subsequent processes, causing the electrical property to fail.
Polishing residues	Grinding fluid	Affect specific subsequent processes, causing the electrical property to fail.

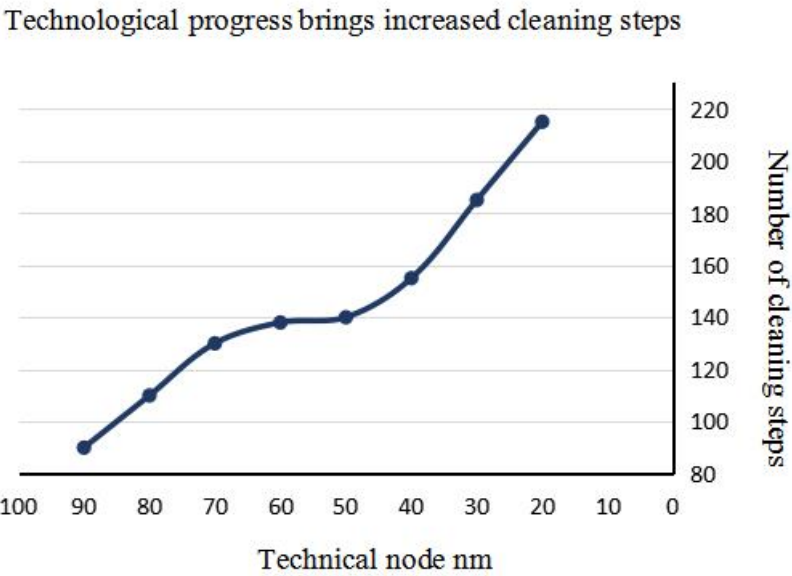
In order to ensure the yield and performance of the chip, the above-mentioned various contaminants on the surface of the wafer need to be controlled within the range of process requirements during the wafer manufacturing process. All wafer

manufacturing processes must be carried out in a strictly controlled purification environment. At the same time, it is necessary to evaluate whether the surface characteristics of the wafer meet the requirements of the process before each step. Currently, chip technology nodes are constantly improving, from 55nm, 40nm, 28nm to 14nm, 7nm and below, the requirements for the control of contaminants on the wafer surface are becoming higher and higher, and a cleaning process is required before and after repetitive processes such as photolithography, etching, and deposition Process.

In the semiconductor silicon wafer manufacturing process, the polished silicon wafer needs to be cleaned to ensure its surface smoothness and performance, thereby improving the yield in the follow-up process; in the wafer manufacturing process, it needs to be cleaned before and after photolithography, etching, deposition and other key processes to remove polluting chemical impurities on the wafer and reduce the defect rate; in the packaging stage, it needs to go through TSV cleaning, UBM/RDL cleaning, etc. based on the packaging process. The technical requirements of the aforementioned cleaning process are one of the most important factors affecting the chip yield, quality and reliability.



As wafer manufacturing process continues to develop towards higher precision, the complexity of the chip structure is increasing, and the sensitivity of chips to impurity content is also increasing accordingly. Small impurities will directly affect the yield of chip products. In the hundreds of chip manufacturing processes, a large number of small pollutants will inevitably be generated or contacted. In order to minimize the impact of impurities on chip yield, the current chip manufacturing process has set up a cleaning process after repeated processes such as photolithography, etching, deposition, etc. The number of cleaning steps accounts for over 30% of all chip manufacturing process steps, the highest proportion among all chip manufacturing process steps. And as the technology node continues to progress, the number and importance of cleaning processes will continue to increase, and the demand for cleaning equipment will increase accordingly when the same chip manufacturing capacity is achieved.



Data source: *Rising Star in the International Semiconductor Cleaning Equipment Industry – the Success of ACMSH*, BOCI Securities

B. Semiconductor cleaning technology and equipment classification

According to the differences of cleaning media, the current semiconductor cleaning technology is mainly divided into wet cleaning and dry cleaning. Wet cleaning is to clean the wafer surface without damage by using specific chemical solutions and deionized water according to different process requirements, so as to remove particles, natural oxide layers, organic matters, metal pollution, sacrificial layers, polishing residues and other substances in the wafer manufacturing process. At the same time, ultrasonic, heating, vacuum and other auxiliary technical methods can be used. Dry cleaning refers to cleaning technologies that do not use chemical solvents. Such technologies include plasma cleaning, supercritical gas cleaning, beam cleaning and so on. At present, wet cleaning is the mainstream cleaning technology, accounting for more than 90% of the chip manufacturing cleaning steps.⁸

Category	Cleaning Method	Cleaning Medium	Process Introduction	Application Characteristics
Wet cleaning	Solution immersion	Chemical solution	It is mainly used for tank cleaning equipment. The wafer to be cleaned is put into the solution to be soaked. Through the chemical reaction between the solution and the surface of the wafer and impurities, the pollutant can be removed.	This method is widely used. Different chemical solutions can be selected for different impurities; its productivity is high, and multiple wafers can be immersed at the same time; the cost is low, and the chemical consumption allocated to each wafer is small; it can easily cause cross-contamination between wafers, though.
	Mechanical scrubbing	Deionized water	The main configuration includes a special brush. With deionized water, this	Its advantages are low cost, simple process and good removal effect for micron

⁸ Data source: *Semiconductor Equipment Series Report III – Cleaning*, China Merchants Securities, March 2020

			method utilizes the friction between the brush head and the wafer surface to achieve the effect of cleaning and particle removal.	sized particles. The cleaning medium is generally water, so its application is limited. It can easily damage the wafer, though. It's generally used for the removal of large particles and back particles after mechanical polishing.
	Double-fluid cleaning	SC-1 solution, deionized water, etc.	A refined water-gas double-fluid atomizing nozzle is used. On both ends of the nozzle, liquid medium and high-purity nitrogen are respectively injected; the high-purity nitrogen is used as the power to assist micro-atomization of the liquid into extremely fine liquid particles which are sprayed to the surface of the wafer, so as to achieve the effect of particle removal.	This highly efficient method is widely used to assist particle-removal cleaning. There are risks of damage to the exquisite graphic structure of wafers, and the effect of removing small-sized particles may not be sufficient.
	Ultrasonic cleaning	Chemical solution + ultrasonic assistance	During cleaning under 20-40kHz ultrasonic waves, cavity bubbles are formed inside, and when the bubbles disappear, the impurities on the surface will be desorbed.	It can remove the big pollutants and particles on the surface of the wafer, but it is easy to damage the graphic structure of the wafer.
	Megasonic cleaning	Chemical solution + megasonic assistance	This method is similar to ultrasonic cleaning, but it uses megasonic wave with 1-3MHz process frequency.	The removal effect of small particles is great, and it has obvious advantages in high-aspect-ratio structure cleaning. After the cavity bubbles are accurately controlled, the megasonic wave can also be applied to the cleaning of exquisite graphic structures of wafers; the cost is high, though.
	Batch rotary spray cleaning	High-pressure spray deionized water or cleaning solution	The cleaning chamber is equipped with a rotary table, which can load at least two wafer boxes at a time. During the rotation process, the liquid spray spout continuously sprays liquid to the surface of the wafer to remove the impurities on the surface of the wafer.	Compared with the traditional tank cleaning, this method uses less chemical solution; the area occupied by the machine is small; however, there is the risk of cross-contamination between chemical solutions, if a single wafer generates debris, all wafers in the entire cleaning chamber are at risk of being scrapped.
Dry cleaning	Plasma cleaning	Oxygen plasma	Under the action of strong electric fields, oxygen generates plasma, which makes photoresist vaporize rapidly and become volatile	The process is simple, the operation is convenient and environment-friendly, and the surface will be clean without scratches. It is difficult to

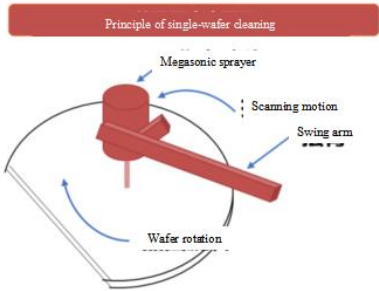
			gas substance to be extracted.	control such process and the cost is high.
	Gas phase cleaning	Gas equivalents of chemical reagents	The vapor equivalent of the corresponding substance in the liquid process is used to interact with the contaminating substance on the surface of the wafer.	Its chemical consumption is small, and its cleaning efficiency is high. But it cannot effectively remove metal contaminants. It is difficult to control such process and the cost is high.
	Beam cleaning	High-energy beam-like material	The impurities on the wafer surface can be removed through their interaction with the high-energy beam-like material flow.	This technology is relatively novel, and it consumes less cleaning solution. It can also prevent secondary pollution. It is difficult to control such process and the cost is high.

In the process of wet cleaning, the mainstream cleaning equipment includes single-wafer cleaning equipment, wet bench cleaning equipment, combined cleaning equipment and batch rotary spray cleaning equipment, among which single-wafer cleaning equipment accounts for the largest market share. The details of various cleaning equipment are as follows:

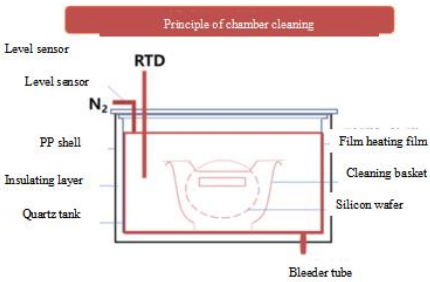
Equipment Type	Cleaning Mode	Application Characteristics
Single-wafer cleaning equipment	Rotary spray, megasonic cleaning, double-fluid cleaning, mechanical scrubbing, etc.	It has extremely high process environment control ability and particle removal ability and can effectively solve the problem of cross-contamination between wafers; each cleaning chamber can only clean a single wafer at a time, and the equipment capacity is low.
Wet bench cleaning equipment	Solution immersion, megasonic cleaning, etc.	The cleaning capacity is high, so the equipment is suitable for batch production, but the control of particles and wet etching speed is poor, and the risk of cross-contamination is high.
Combined cleaning equipment	Solution immersion+rotary spray combined cleaning	Its capacity is relatively high; so is the cleaning precision. It can greatly reduce the consumption of concentrated sulfuric acid. The product price is relatively high, though.
Batch rotary spray cleaning equipment	Rotary spray	Compared with the traditional wet bench cleaning equipment, the batch rotary equipment can achieve the process requirements of sulfuric acid with a temperature of 120°C or even 200°C; the control of various process parameters is difficult, and all the wafers in the whole cleaning chamber are at risk of being scrapped after wafer fragmentation.

The cleaning principles of the above cleaning equipment are as follows:

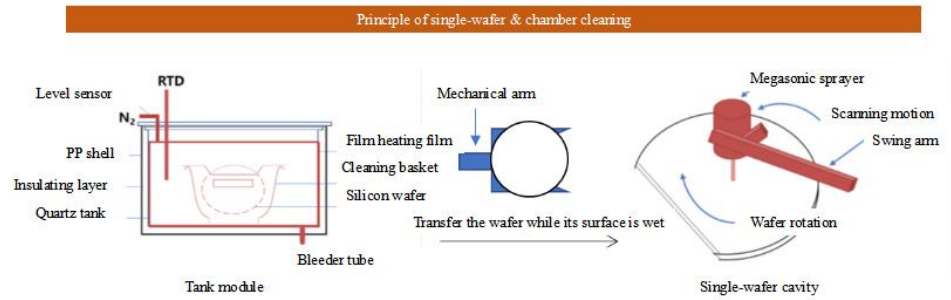
Principle of single-wafer cleaning:



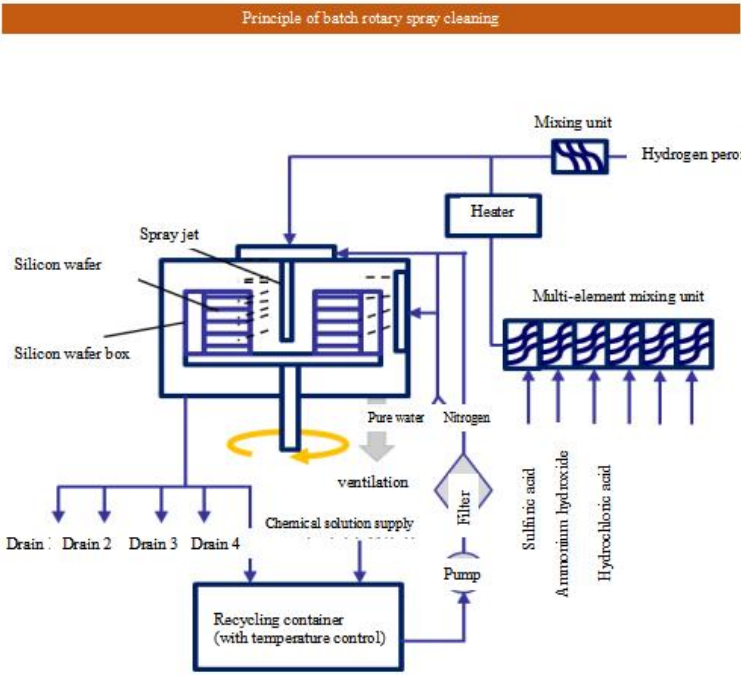
Principle of wet bench cleaning:



Principle of single-wafer & chamber combined cleaning:



Principle of batch rotary spray cleaning:



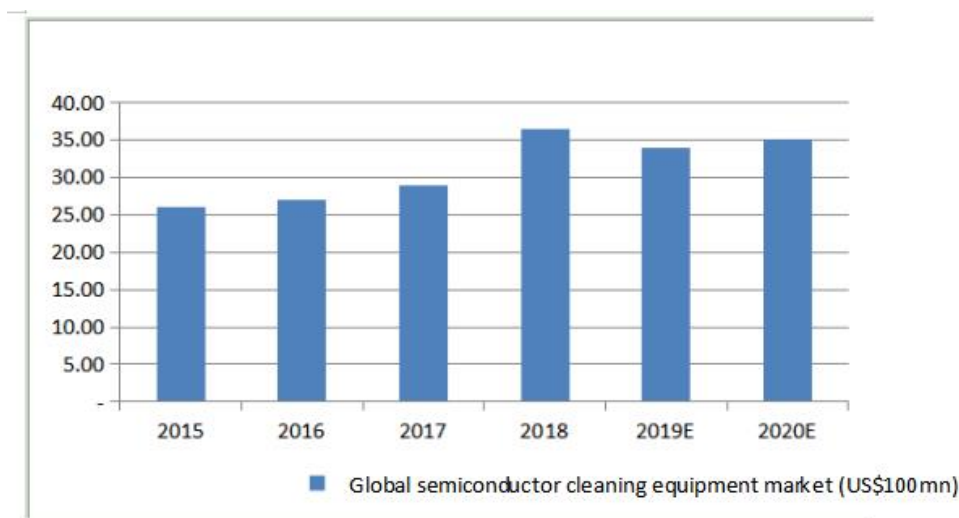
In the advanced process of integrated circuit manufacturing, single-wafer cleaning has gradually replaced wet bench cleaning as the mainstream choice. Firstly, single-wafer cleaning can provide better process control in the whole manufacturing cycle, improve the uniformity between a single wafer and different wafers, and improve the yield of products; secondly, larger wafers and more advanced process design are more sensitive to impurities, and the cross-contamination effect of wet bench cleaning will be greater, thus endangering the yield of the whole batch of wafers and incurring high expenses on core rework. In addition, the introduction of single-wafer & tank combined cleaning technology can integrate the advantages of single-wafer cleaning and wet bench cleaning, improve cleaning capacity and efficiency, reduce the use of sulfuric acid, help customers reduce costs, and meet the national policy requirements of energy conservation and emission reduction.

C. Situation of the semiconductor cleaning equipment industry

In recent years, the development of chip manufacturing technology has been the driving force of the development of semiconductor cleaning equipment. With the continuous development of chip process, the frequency of cleaning process needs to be greatly increased, and the number of cleaning equipment required will continue to grow, which brings huge new market demand for cleaning equipment. In addition, in order to further improve the performance of integrated circuits, the chip structure begins to transform towards 3D. At this time, on the basis of cleaning the wafer surface, the cleaning equipment also needs to clean internal pollutants without damage. This brings higher technical requirements for cleaning equipment. Advances in chip technology and the complexity of chip structures have led to the continuous increase in the value of cleaning equipment.

According to Gartner’s statistics, the global semiconductor cleaning equipment market size was USD 3.417 billion in 2018. In 2019 and 2020, as affected by the downturn in the global semiconductor industry, it was reduced by USD 3.049 billion and USD 2.539 billion, respectively. As the global semiconductor industry recovers in 2021, the global semiconductor cleaning equipment market will grow year by year, and the global semiconductor cleaning equipment industry is expected to reach USD 3.193 billion in 2024. According to Gartner’s statistics and forecasts, the global semiconductor cleaning equipment industry from 2018 to 2024 is as follows:

2018-2024 global semiconductor cleaning equipment market (USD 100mn)



Data source: Gartner

D. The global semiconductor cleaning equipment market is highly concentrated

In the global cleaning equipment market, Japanese companies are dominant, with DNS occupying a market share of over 40%; TEL, LAM, etc. also have large market shares, so the degree of market concentration is high.

E. Despite the rapid growth of semiconductor cleaning equipment enterprises in mainland China, the localization rate is still not high

At present, Chinese mainland's leading cleaning equipment manufacturers are ACMSH, NAURA, KINGSEMI, and PNC, with different focus areas. Among them, the main products of ACMSH are single-wafer cleaning equipment in the field of integrated circuits, including single-wafer SAPS megasonic cleaning equipment, single-wafer TEBO megasonic cleaning equipment, single-wafer back cleaning equipment, single-wafer front scrubbing equipment, wet bench cleaning equipment and single-wafer & chamber combined cleaning equipment, etc., with a very rich product line. As for NAURA, after it acquired US semiconductor equipment manufacturer Aktron Systems LLC, its main products are single-wafer and wet bench cleaning equipment. KINGSEMI's products are currently mainly used in the single-wafer cleaning in the integrated circuit manufacturing field. PNC has the relevant technology

to produce 8-12 inch high-end single-wafer wet cleaning equipment and trough wet cleaning equipment, which can cover the market demand for many downstream industries including wafer manufacturing, advanced packaging, and solar energy. Amid the wave of semiconductor factory construction in mainland China, investment in the Chinese semiconductor industry has been soaring. Chinese mainland semiconductor equipment manufacturers have made technological breakthroughs, and have entered the mainstream production lines of wafer manufacturers at home and abroad in the field of cleaning equipment. According to the *Strategies for the Semiconductor Equipment Industry for 2020* issued by BOCI Securities in December 2019, domestic cleaning equipment has occupied over 20% of the Chinese mainland market, and the market share of China's semiconductor cleaning.

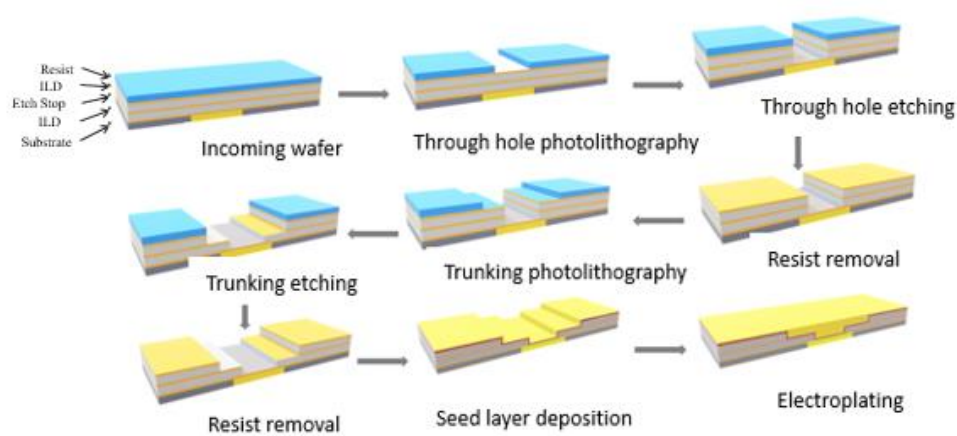
② Semiconductor electroplating equipment

A. Semiconductor electroplating and electroplating equipment

Semiconductor electroplating refers to the electroplating of metal ions in the plating solution onto the wafer surface to form metal interconnection during the chip manufacturing process. With the chip manufacturing technology becoming more and more advanced, the interconnection wires in the chip begin to change from the traditional aluminum materials to copper materials, and semiconductor copper plating equipment is widely used. At present, the semiconductor electroplating is not limited to the deposition of copper wires; there are tin, tin silver alloy, nickel and other metals, but the deposition of copper is still dominant. Copper conductor can reduce the interconnection impedance, reduce the power consumption and cost of the device, and improve the speed, integration, device density, etc. of the chip.

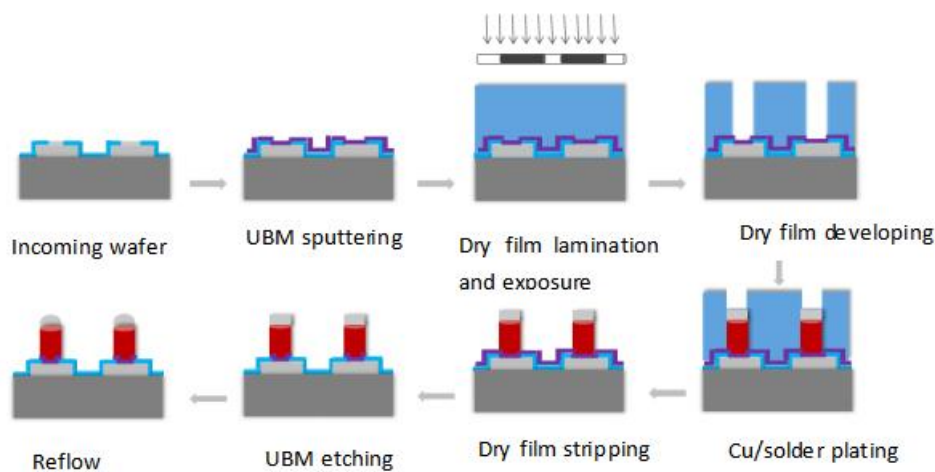
The semiconductor electroplating equipment deposits a layer of copper on the silicon wafer, which is dense, free of holes, gaps and other defects, and evenly distributed. Then, it is coupled with vapor deposition equipment, etching equipment, cleaning equipment, etc. to complete the copper interconnection process.

Diagram on the front-end copper interconnect electroplating process in the chip manufacturing



In semiconductor electroplating, with the development of wafer-level packaging technology, the deposition process of metallized film is needed in three-dimensional silicon through-holes, rewiring and bumping process. The electroplating process is used to deposit copper, nickel, tin, silver, gold and other metals.

Diagram for the ee back-end advanced packaging electroplating process in chip manufacturing



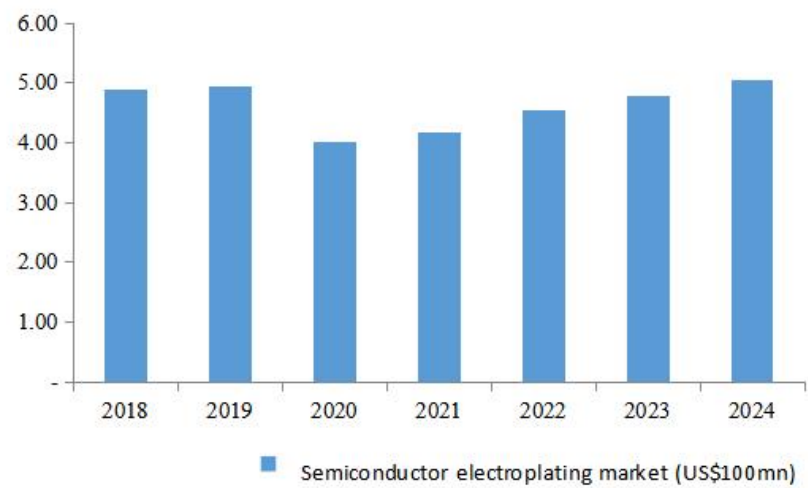
B. Situation of the semiconductor electroplating equipment market

The field of electroplating equipment for front-end wafer manufacturing is currently dominated by LAM worldwide. Besides LAM, ACMSH is one of the few companies around the world that have mastered the core patent of copper plating technology for chip interconnection. It has independently developed the Ultra ECP map technology, a copper interconnection plating technology for front-end chip manufacturing for 20-14nm and more advanced technology nodes, and a new current control method of multi-anode local plating technology is used to realize fast switching (millisecond-level) between different anodes, and the hole-free filling is completed on the ultra-thin seed crystal layer; at the same time, by adjusting the current of different anodes, it ensures that the evenness of deposited copper film thickness is better after the hole-free filling. At present, ACMSH has received semiconductor electroplating equipment orders from customers on a continuous basis.

In the field of back-end advanced packaging and electroplating equipment, major equipment manufacturers in the world include Applied Materials and LAM (US), EBARA Corporation (Japan), ASM Pacific Technology Limited (Singapore), etc.; in domestic enterprises, ACMSH carried out differentiated development for advanced packaging process, and solved the problem of achieving stable electroplating under a larger flow of electroplating solution. Through its unique second-anode control technology, the film thickness uniformity control of the wafer flat edge or notch area can be better achieved at the process recipe level, and the yield of the packaging process is improved.

According to Gartner’s statistics, the global semiconductor electroplating market in 2018-2024 is as follows:

2018-2024 global semiconductor electroplating market (USD 100mn)



Data source: Gartner

③ Advanced packaging equipment

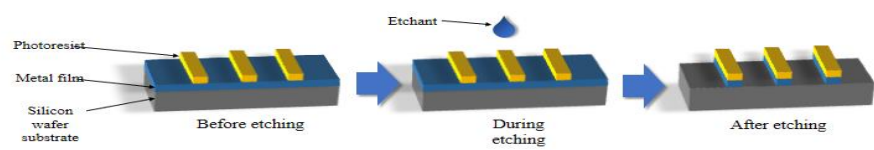
A. Introduction to advanced packaging and equipment

Semiconductor packaging is to connect the circuit pins on the wafer with wires to the external connector to facilitate connection with other devices. It plays a role in fixing, sealing, and protecting the chip and enhancing the electric heating performance, as well as in the connection between the internal chip and the external circuit.

Advanced packaging refers to the more advanced packaging form and technology at that time. At present, packages with flip chip (FC) structure, wafer level packages (WLP), 2.5D packages, 3D packages, fan-out packages, etc. are considered as advanced packages. The functions of advanced packaging include chip support and mechanical protection, electrical signal interconnection and extraction, power distribution and thermal management. According to the process of semiconductor packaging, semiconductor packaging equipment mainly includes wet etching equipment, wafer scrubbing equipment, film lamination equipment, developing equipment, film stripping equipment, thinning equipment, cutting equipment, electroplating equipment, cutting forming equipment, etc.

a. Wet etching equipment

Wet etching is a very important step in the semiconductor advanced packaging manufacturing process, and it is a main process of graphic processing associated with photolithography. Wet etching mainly uses the chemical reaction between the solution and the pre-etching materials to remove the part unshielded by the shielding film material. The wet etching equipment is the main equipment used in the wet etching process. Its working principle is as follows:

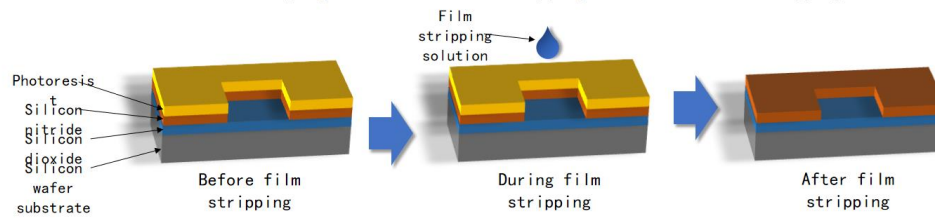


b. Film lamination/developing equipment

In the advanced semiconductor packaging process, the input (photoresist coating before exposure) and output (graphics development after exposure) of the photolithography equipment and the film lamination/developing equipment are mainly through transfers and processes of the wafer among various systems with a robot arm, thus completing the process of photoresist coating, curing, developing, film firming and other processes of the wafer, affecting the formation of fine exposure patterns in the photolithography process.

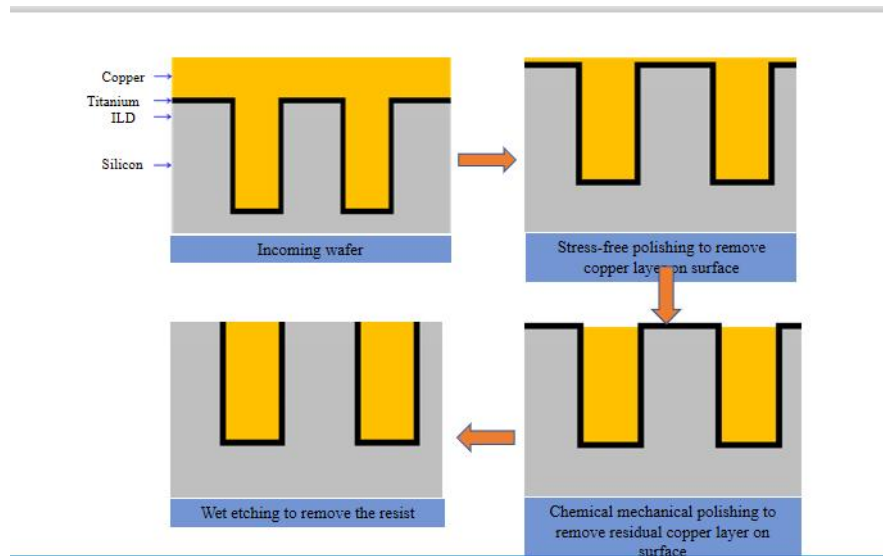
c. Film stripping equipment

In the advanced semiconductor packaging process, the film stripping equipment is used to remove the photoresist on the wafer surface as a barrier layer after the wafer is etched to avoid the residual photoresist from affecting the quality of subsequent processes. Its working principle is as follows:



d. Stress-free polishing equipment

In the advanced semiconductor packaging process, the stress-free polishing process is an innovative solution, which integrates stress-free polishing, chemical mechanical grinding and wet etching processes. Before the chemical mechanical grinding and wet etching processes, the electrochemical method is used to remove the copper layer on the wafer surface without stress and release the stress of the wafer. It can significantly reduce the use of chemicals and consumables, protect the environment while reducing equipment costs. The equipment is mainly applied to 3DTSV, 2.5D silicon intermediate layer, RDL, HD fan-out packaging, etc. Its working principle is as follows:

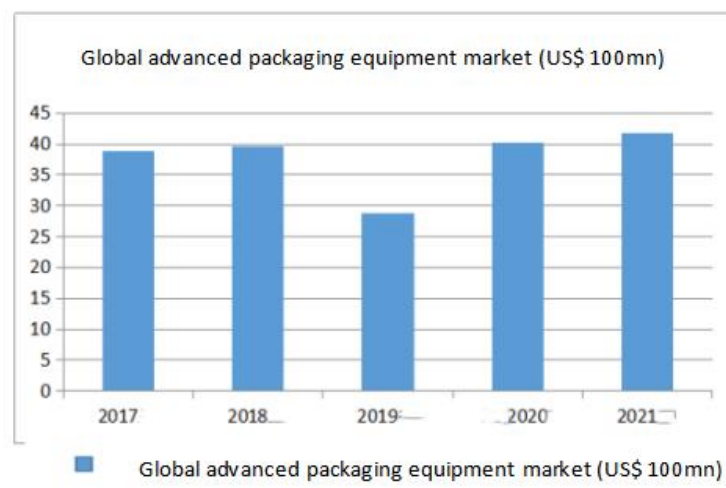


B. Situation of the advanced packaging market

Semiconductor advanced packaging is a back-end link in the chip manufacturing process. Its market demand is closely related to the demand for downstream chip applications. In the background of the continuous growth of consumer electronics, IoT, 5G, and other product demand, the market demand of semiconductor advanced packaging is expected to continue its sustained rapid growth.

The global packaging & testing technology is undergoing transformation from traditional packaging to advanced packaging (FC, WLC, fan-out, etc.). According to Yole's statistics, in 2017, the global advanced packaging output value exceeded USD 20 billion, accounting for about 38% of the global total output value. It is estimated that by 2020, it will exceed USD 30 billion, accounting for 44%. From the perspective of the growth rate of advanced packaging, from 2017 to 2023, the revenue of the entire semiconductor packaging market will grow at a compound growth rate of 5.2%, in which the growth rate of the advanced packaging market will be 7%, while that of the traditional packaging market will be 3.3%.⁹

According to Gartner's statistics, the global advanced packaging equipment market demands and predictions are as follows:



Data source: Gartner

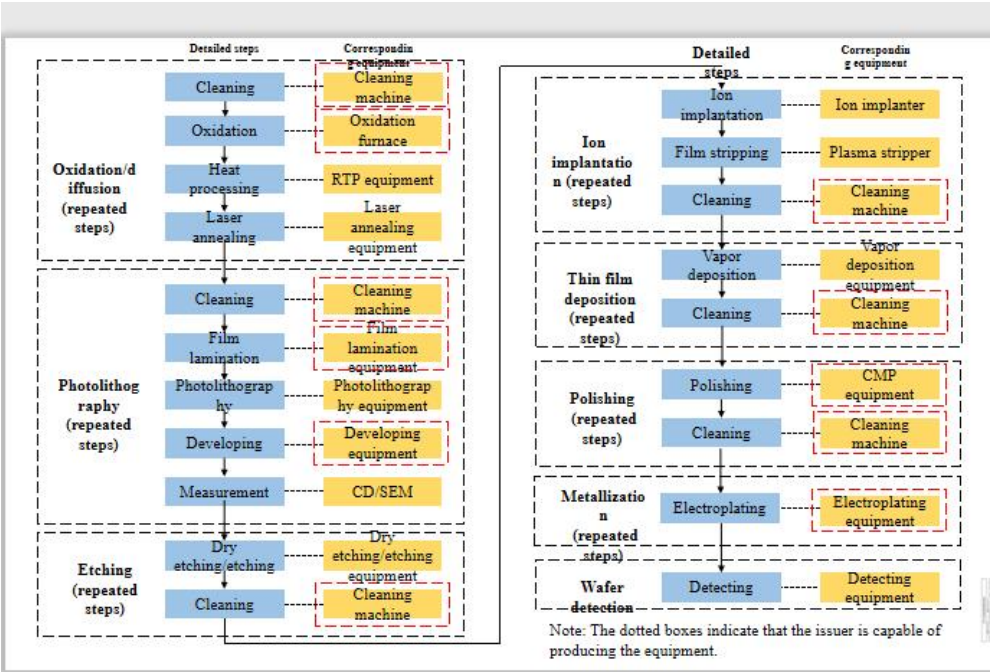
⁹ Data source: 2019 Research Report on Shanghai's Integrated Circuit Industry Development, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association

(IV) Issuer’s Technological Level, Characteristics, Sci-Tech Achievements, and Deep Integration with the Industry

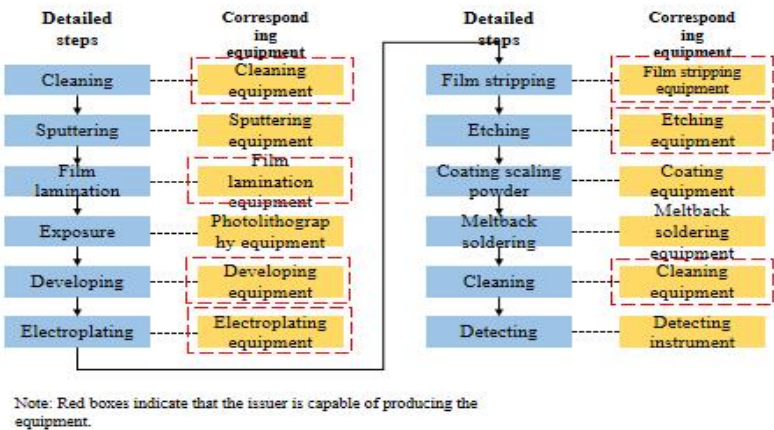
Through continuous R&D investment and long-term technology and process accumulation, the Company has accomplished a series of scientific and technological achievements in new product development and production process improvement, which plays a key role in continuously improving product quality and enriching product layout. The scientific and technological achievements of the Company are an important part of the Company’s competitiveness, and also the basis for the sustainable growth of the Company’s product sales scale.

In 2017, 2018 and 2019, the Company’s sales revenue was RMB 253.5873 million Yuan, RMB 550.2691 million Yuan, and RMB 756.733 million Yuan, respectively, showing a continuous growth trend. The large-scale sale of the Company’s products is a concrete indication of the deep integration of the Company’s scientific and technological achievements with the industry. The Company’s main products are semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet equipment, covering wafer manufacturing, advanced packaging and other fields.

Application of the Company’s products in front-end wafer manufacturing processes of IC manufacturing



Application of the Company’s products in back-end advanced packaging processes of IC manufacturing



1. Semiconductor cleaning equipment

Semiconductor cleaning equipment is the core product of the Company, accounting for 86.27%, 92.91%, and 84.10%, respectively, of the Company’s main business revenue in the report period.

(1) Single-wafer cleaning equipment

The Company has independently developed the SAPS and TEBO megasonic cleaning technology with global intellectual property rights protection, which solves the global problem of the uniform distribution of megasonic energy on the wafer and realizes the damage-free megasonic cleaning of graphic structures when the megasonic technology is applied to the integrated circuit monolithic cleaning equipment. In order to maximize productivity, the Company's single-wafer cleaning equipment can be configured with multiple process chambers according to the customer's needs, up to 18 chambers can be configured in a single unit, which can effectively improve the production efficiency of customers.

- ① SAPS megasonic cleaning equipment is mainly used to clean flat wafer surfaces and high-aspect-ratio throughhole internal structures

The distance between the wafer surface megasonic energy and the wafer and the megasonic generator changes periodically. In traditional megasonic cleaning process, the distance from different points on the wafer to the megasonic generator is different because of the warpage of the wafer caused by the stress following different processes. Therefore, the megasonic energy at different positions on the wafer is also different. It is impossible to achieve the even distribution of the megasonic energy on the wafer surface. Moreover, because of the error of hardware position control, the distribution of megasonic energy on the wafer surface is not uniform.

The SAPS megasonic technology independently developed by the Company adopts a sector megasonic generator. By accurately matching the wafer rotation speed, liquid film thickness, the location of the megasonic generator, alternative displacement and energy and other key process parameters, this technology controls the relative motion of the half wavelength range between the megasonic generator and the wafer in the process, so that the megasonic energy received at each point on the wafer within the process time is the same. In this way, the uniform distribution of the megasonic energy on the wafer surface is under good control.

In order to meet the increasingly stringent requirements of the semiconductor industry, based on the megasonic cleaning technology, the Company brought in the hydrogen function water process, in which it mixes extremely diluted cleaning agents of hydrogen, ppm orders of magnitude of nitrogen and other special gas in deionized water. The process is supplemented by megasonic, and it performs well in the removal of small particles. This minimizes environmental pollution and material loss.

SAPS megasonic cleaning equipment not only provides good effects on removing small particles, but also has a certain technical advantage on deep-hole cleaning with a high aspect ratio. When the deep hole of a wafer surface has a high aspect ratio, especially in the cleaning of TSV structure, the material exchange of cleaning chemical compositions in the groove can only be determined by diffusion. When the depth of the deep hole is large, the diffusion path becomes very long and the cleaning efficiency becomes lower and lower. In the traditional cleaning process, the thickness of the cleaning fluid boundary layer on the wafer surface is relatively large, and the liquid movement on the surface cannot affect the interior of the deep hole, thus forming convection. Under the megasonic action, the thickness of the boundary layer on the wafer surface becomes very thin. The liquid can enter into the deep hole by convection and cavitation vibration, creating the effect of agitation, which then accelerates the exchange of cleaning chemical compositions and improves cleaning efficiency.

The SAPS technology can improve the cleaning effect and better eliminate residuals and other random defects in the interconnection structure during chip manufacturing:

After contact/through-hole etching: the wet etching process is usually used to create patterns with high contact and through-hole density. After the etching process, the SAPS technology can be used to eliminate the random defects that may cause electric short circuit.

Before the deposition of barrier layer metal: for copper wiring, a metal diffusion barrier layer should be set at the top of the through-hole to prevent electricity leakage; before the deposition of barrier layer metal, the SAPS technology can be used to

eliminate the residual copper oxide to prevent poor adhesion between the residual copper oxide and the barrier layer, which could damage the performance.

- ② TEBO megasonic equipment is mainly applied to the cleaning of graphic wafers, including advanced 3D wafer structures

With the further reduction of the chip technology node and the further increase of the aspect ratio, the difficulty in cleaning graphic wafers has increased. After the chip technology node is further extended to below 50nm, and the graphics structure is developed to multi-layer 3D, the traditional megasonic cleaning technology can hardly control the steady-state cavitation effect of bubbles, resulting in bubble breakage, which then causes high-energy microjet damage to the graphics structure on the wafer surface.

The TEBO cleaning equipment independently developed by the Company is applicable to the cleaning of graphic wafers of 28nm and below. Through a series of rapid (frequency up to one million times per second) pressure changes, the bubble maintains its size and shape oscillation under the controlled temperature. In this way, the bubble is controlled in a stable shaking state without implosion, thus preventing the wafer microstructure from being damaged while enabling cleaning of the graphic structure of the wafer surface without damage. During the technical transition of device structures from 2D to 3D, the TEBO cleaning equipment of the Company can be applied to FinFET, DRAM, emerging 3D NAND and other more sophisticated products with 3D structures, as well as new nano devices and quantum devices in the future. It plays an increasingly important role in improving the product yield of customers.

The TEBO technology can be used in multiple steps to achieve effective, non-destructive cleaning:

A. Memory chip: in the process of manufacturing DRAM chips, the TEBO technology can be applied to up to 50 steps.

B. Logic chip: in the manufacturing process of a logic chip with the FinFET structure, the TEBO technology can be applied to 15 or more cleaning steps.

(2) Single-wafer & tank combined cleaning equipment

With the continuous improvement of the advanced degree of the chip manufacturing process, tank cleaning equipment can no longer meet the technical requirements of 28nm and below, and the cleaning technology gradually changes from tank cleaning to single-wafer cleaning. This change greatly increases the consumption of sulfuric acid, which causes a series of safety problems and environmental issues.

The Tahoe cleaning equipment independently developed by the Company with global intellectual property protection integrates two modules in a single wet cleaning device: tank module and single-wafer module. In the tank module, it is equipped with sulfuric acid hydrogen peroxide mixture (SPM) cleaning and quick dump rinsing (QDR), and the SPM process solution is recycled in the independent tank module; after the tank cleaning, the wafer will be transferred to the single-wafer module in the wet state for further single-wafer cleaning processes; the single-wafer cleaning chamber can be flexibly configured according to the customer's needs, such as the standard cleaning solution (SC-1), hydrofluoric acid (HF), ozone water (DI-O3), and other process solutions. The single-wafer cleaning chamber can be equipped with up to 4 swing arms, each of which can provide up to 3 process pharmaceutical solutions, and the system can also provide the IPA drying function required for graphic wafers. The Tahoe cleaning equipment can be used in dozens of key cleaning processes, such as photoresist removal, cleaning after etching, cleaning after ion implantation, cleaning after mechanical polishing, etc.

The cleaning effect and process applicability of Tahoe cleaning equipment can be comparable to that of single-wafer cleaning equipment. In addition, compared with single-wafer cleaning equipment, Tahoe cleaning equipment can significantly reduce the consumption of sulfuric acid, and help customers reduce the production cost and better comply with the Chinese government's policy of energy conservation and environmental protection.

(3) Single-wafer back cleaning equipment

The back cleaning equipment is usually used for back film removal, polycrystalline silicon wet etching on the back of a wafer, wafer back thinning, and back metal pollution removal. With the decrease of chip thickness, the requirement of wafer back thinning becomes higher and higher. When the wafer thickness is less than 300 μ m, the traditional mechanical clamping method can easily cause wafer warping, deformation and even fracture. Besides, some processes require to protect the wafer front with nitrogen atmosphere during the wafer back process, in order to prevent the solution, steam, chemical contact, and mechanical scratches from damaging the wafer front.

The single-wafer back cleaning equipment developed by the Company adopts the Bernoulli chuck and applies the principle of aerodynamics suspension. After the wafer is fed into the cavity by the manipulator, the back of the wafer is facing up and the front of the wafer is facing down. In the process, high-purity nitrogen with precise flow control is continuously input into the gap between the wafer and the chuck through the gas pipeline beneath the chuck and the ring hole on the chuck surface. The equipment can be used for back metal pollution cleaning, back etching, and other core processes.

(4) Front-end scrubbing equipment

The single-wafer cavity is used to clean the front and back of the wafer according to specific processes. This equipment can perform processes such as wafer back cleaning, wafer edge cleaning, front-back double-fluid cleaning, etc.; the equipment covers a small area, has high production capacity and strong stability, and provides a variety of cleaning methods for flexible choices. It can be used in each cleaning process from the front-end stage to the back-end stage of the IC manufacturing process.

(5) Fully automatic tank cleaning equipment

The fully automatic tank cleaning equipment developed by the Company is widely applied in cleaning, etching, photoresist removal and other processes in the field of integrated circuit and advanced packaging. It uses pure water, alkaline solutions and acid solutions as cleaning agents, combined with spray, hot dip, overflow, bubbling, and other cleaning methods. It's also paired with advanced IPA drying method, capable of cleaning 50 wafers at the same time. The equipment features a high degree of automation, good stability, high cleaning efficiency and low cross-contamination of metals, materials and particles. This equipment is mainly used in the cleaning process of 40 nm and above technical nodes.

2. Semiconductor electroplating equipment

The electroplating equipment independently developed by the Company with international intellectual property protection has been verified by downstream customers and its electroplating equipment for back-end advanced packaging has entered the market and obtained repeated orders.

(1) Front-end copper interconnection copper electroplating equipment

The Company is currently one of the few companies in the world that have mastered the core patent of chip copper interconnection copper electroplating technology. The company has independently developed Ultra ECP map for IC front-end copper interconnection copper plating technology node for 28-14nm and below. The Company also provides the multi-anode local plating technology, which adopts a new current control method to realize the fast switching (millisecond-level) between different anodes, and the hole-free filling is completed on the ultra-thin seed crystal layer. At the same time, by adjusting the current of different anodes, it can achieve better uniformity of deposited copper film thickness after the hole-free filling.

(2) Back-end advanced packaging electroplating equipment

The Company has carried out differentiated development in the field of semiconductor advanced packaging, solved the problem of realizing stable electroplating under a larger flow of electroplating solution, and adopted its unique second-anode control technology to better control the high uniformity near wafer flat edges or notch areas, thus achieving better uniformity within the wafer and realizing electroplating under the condition of high current density; all metrics of bumping

products meet customers' requirements. In the field of electroplating for high-density packaging, it can realize the electroplating of 2um ultra-fine RDL lines and various metal layers including copper, nickel, tin, silver and gold. The patented sealing technology of rubber ring sealing independently developed by the Company can achieve better sealing effects and prevent leakage of plating solution and overplating.

3. Semiconductor copper polishing equipment

(1) Front-end copper interconnection copper polishing equipment

With the continuous improvement of the advanced degree of chip manufacturing process, the size of the metal Cu wiring inside the chip, as a conductive connecting device, is becoming smaller and smaller. At present, the Damascene process is mainly used for inter-layer wiring inside the chip. Chemical Mechanical Polishing (CMP) technology is used to grind and remove the Cu layer on the surface of each layer after wiring, leaving the copper in the dielectric layer as the wire. CMP technology is widely used because of its high flatness and global flattening effect. However, in the CMP process, a certain amount of pressure is needed to act on the wafer, which can easily cause scratches on the wafer surface, or even the loss of copper wire at the graphic edges.

In order to resolve the defects brought by CMP technology, the company has put forward the concept of Stress Free Polish (SFP) technology for the first time in the world. By using the principle of electrochemical reaction, in the process of polishing the metal film on the wafer surface, the mechanical pressure in the polishing process is completely abandoned, thus eliminating the damage of the mechanical pressure on the metal wiring. The advantage of SFP stress-free electrochemical polishing is that it will not cause mechanical damage to the wafer surface, thus ensuring the quality of the final copper interconnections.

With the development of key dimensions of integrated circuits towards the technical nodes of 7nm and below, ruthenium is gradually replacing Ta/TaN as the barrier layer of copper wiring because of its good conductivity, low leakage rate, immiscibility with copper and good combination with copper. However, as ruthenium has very stable chemical properties, is not easy to oxidize, and has high hardness, the CMP process has a relatively low removal rate of ruthenium, and the stress generated in the mechanical polishing process will cause the micro copper wires to break and damage the surrounding dielectric materials. After research, the company found that the SFP process can be used for electrolytic oxidation of the ruthenium surface, and then DHF etching can be used to achieve a good removal effect of ruthenium metal layers without mechanical stress. This solves the problem of damage of micro copper wires and surrounding dielectric materials. This technology can be used in copper interconnection process for technical nodes under 5nm and 3nm. Meanwhile, because there is no mechanical stress, it is easier to integrate ultra-low k dielectric ($k < 2$) with copper wires, so as to improve the operation speed of the chip.

(2) Back-end advanced packaging stress-free copper polishing equipment

With regard to the flattening application of 3D TSV, 2.5D silicon intermediate layer, RDL, HD fan-out and other metal layers in advanced packaging, the Company has independently developed the stress-free polishing equipment with global intellectual property protection, which features stress-free process, recyclable chemicals, lower costs of consumables, environmental protection and emission reduction, etc..

4. Advanced packaging wet cleaning equipment

The Company adheres to the strategy of differentiated competition, and based on the advanced technology of integrated circuit front-end wet cleaning equipment, it expands product application to the advanced packaging application field. Taking the typical process of bumping packaging as an example, the single-wafer wet process equipment involved in the whole process includes cleaning equipment, film lamination equipment, developing equipment, film stripping equipment, wet etching equipment, stress-free polishing equipment, etc.

At present, the Company's products for the advanced packaging industry cover the entire range of single-wafer wet process equipment and have entered the production

lines of enterprises and scientific research institutes, such as JCET, Fujitsu, SMIC Long Power, Nepes, NCAP China, the Institute of Microelectronics (IME) of the Chinese Academy of Sciences (CAS), etc.

① Advanced packaging cleaning equipment

It is used in the process of 12-inch and 8-inch wafer incoming material cleaning, cleaning before plasma pretreatment, cleaning after UBM layer titanium wet etching, scaling powder cleaning after reflow, etc. In addition to the conventional rotary spray method, according to different customer needs, the Company has developed SAPS megasonic, double-fluid nano spray, brush scrubbing, high-pressure liquid spray, and other auxiliary cleaning methods.

② Single-wafer film lamination equipment

It can be applied to the film lamination process of positive and negative glue and thin thick glue of 12-inch and 8-inch wafers. The chamber self-cleaning function, invented by the Company with global intellectual property protection, replaces the traditional manual chamber removal and cleaning method, thus preventing damage to the equipment caused by the frequent manual removal of the sophisticated film lamination equipment, and the harm to the human body when cleaning the glue chamber. In the mean time, it also greatly improves the cleaning efficiency, reduces the maintenance cost, and improves the service life of the equipment.

③ Single-wafer developing equipment

The Company's single-wafer developing equipment adopts a development mode that combines spray and puddle and is compatible with the development process of 12-inch and 8-inch wafers.

④ Single-wafer & tank combined film stripping equipment

The single-wafer & tank combined film stripping equipment, independently developed by the Company with intellectual property protection, is applied to the wet etching process of 12-inch and 8-inch wafers. The equipment combines tank film stripping with single-wafer film stripping, and the immersion process is completed in the tank to soften and remove most of the thick glue. The subsequent removal of residual glue, pollutants and particles is completed by single-wafer film stripping, which can make up for the shortage of capacity of single-wafer film stripping equipment.

⑤ Single-wafer wet etching equipment

It is used in wet etching of 12-inch and 8-inch wafers and UBM of copper, titanium, nickel, tin, gold and other metals. The single-wafer wet etching equipment integrates all the pharmaceutical solution, pure water and the gas pipeline used for drying in a complete process into a cavity, featuring small equipment area occupation, low consumption of chemicals and pure water, and high flexibility of process adjustment.

5. Vertical furnace tube equipment

The vertical furnace is one of the key process equipment in the manufacturing process of integrated circuits. It can process wafers in batches. According to process pressure and application, it can be divided into two types: atmospheric pressure furnace and low pressure furnace. The atmospheric pressure furnace mainly completes thermal diffusion doping, thin film oxidation, and high temperature annealing; while the low pressure furnace mainly realizes the deposition process of different types of thin films on the wafer surface, mostly polysilicon, silicon nitride, silicon oxide and other thin films.

The vertical furnace tube equipment developed by the company is mainly composed of wafer transfer module, process cavity module, gas distribution module, temperature control module, exhaust gas processing module and software control module. It is designed and manufactured for different applications and process requirements. It first concentrated on LPCVD equipment, and then developed to oxidation furnace and diffusion furnace, and finally entered the application of ALD equipment.

(V) Market Positions of the Issuer's Products or Services and Major Enterprises in the Industry

1. Market positions of the issuer's products or services

The global market of semiconductor cleaning equipment is highly concentrated, especially in the field of single-wafer cleaning equipment. The total market share of DNS, TEL, LAM and SEMES is over 90%, of which the DNS's market share is the highest (> 40%).

At present, in mainland China, only a few enterprises can provide semiconductor cleaning equipment. They mainly include: ACMSH, NAURA, Kingsemi, and PNC. Among them, ACMSH is the leading enterprise in China's semiconductor cleaning equipment industry. Its main products are monolithic cleaning equipment in the field of integrated circuits, including single-wafer SAPS megasonic cleaning equipment, single-wafer TEBO megasonic cleaning equipment, single-wafer back cleaning equipment, single-wafer scrubbing equipment, tank cleaning equipment, single-wafer & tank combined cleaning equipment, etc.. Its product line is relatively diverse. Main cleaning equipment products of NAURA are single-wafer and tank cleaning equipment, which can be applied to the chip manufacturing with 65nm and 28nm technology nodes; PNC has the relevant technology to produce 8-12 inch high-end single-wafer wet cleaning equipment and trough wet cleaning equipment, which can cover the market demand for many downstream industries including wafer manufacturing, advanced packaging, and solar energy. Kingsemi's current products are used in the field of single-wafer cleaning in the integrated circuit manufacturing field.

In the 2018 rankings of the top 5 dedicated semiconductor equipment manufacturers in mainland China, ACMSH ranked 4th. The details are as follows:

Ranking	Enterprise
1	AMEC
2	NAURA
3	CETC Electronics Equipment Group Co., Ltd.
4	ACMSH
5	Kingsemi

Data source: *2019 Research Report on Shanghai's Integrated Circuit Industry Development*, Economic and Information Technology Commission of Shanghai, Shanghai Integrated Circuit Industry Association.

In addition, according to the equipment bidding results of Huahong Group Wuxi project, ACMSH won the bid for 5 pieces of cleaning equipment, accounting for 27% of the total, ranking first in the field of cleaning equipment, higher than international competitors.

According to the bidding results of Yangtze Memory 3D NAND production line (20,000 pieces/month), ACMSH won 15 pieces of cleaning equipment (all single-wafer cleaning equipment), ranking second only to DNS, which won 18 pieces, including 12 pieces of single-wafer cleaning equipment and 6 pieces of tank cleaning equipment; For single-wafer cleaning equipment, ACMSH won the most orders, accounting for 32.61%.¹⁰

According to the results of winning bids for equipment from Yangtze Memory and Huahong Group (Wuxi Project and Huali Phase II Project), among the more than 200 cleaning tools purchased in total, the suppliers are ranked in order of the number of successful bids: DNS, ACMSH, LAM, TEL, NAURA, Kingsemi, etc., the proportions are 48%, 20.5%, 20%, 6%, 1%, 0.5% in order. ACMSH ranks second in market share, slightly higher than LAM.¹¹

¹⁰ Data source: *3D NAND Industry Picture & Yangtze Memory's Flexible Estimate of Domestic Equipment*, Industrial Securities, Nov. 2019

¹¹ Data source: *Semiconductor Equipment Localization Topic Nine – Cleaning Equipment*, BOC Securities, May 2020

2. Major enterprises in the industry

At present, the major enterprises in the global dedicated semiconductor equipment industry are as follows:

(1) Overseas enterprises in the industry

① Applied Materials (Applied Materials, Inc.)

Founded in 1967, the company is a world-leading manufacturer of dedicated semiconductor equipment. Headquartered in the United States, the company provides manufacturing equipment, services and software to semiconductor, display and related industries. Its main products in the semiconductor field are various manufacturing equipment for chip manufacturing, including epitaxy, ion implantation, oxidation and nitridation, rapid heat treatment, physical vapor deposition, chemical vapor deposition, chemical mechanical flattening, electrochemical deposition, atomic layer deposition, etching, measuring and inspection tools. Its business presence is mainly in the US, mainland China, South Korea, Taiwan (China), Japan, Southeast Asia and Europe.

② ASML (ASML Holding N.V.)

Founded in 1984 and headquartered in the Netherlands, the company is one of the world's leading manufacturers of photolithography equipment in the semiconductor industry. Its EUV photolithography equipment is in a global monopoly position.

③ KLA (KLA CORPORATION)

Founded in 1976 and headquartered in the United States, the company is a leading equipment supplier in the world, providing process control and yield management solutions for semiconductor, data storage, LED and other related nano electronic industries. Its main products are detection, testing and data analysis equipment used in wafer manufacturing, packaging, and testing fields.

④ DNS (SCREEN Holdings Co., Ltd.)

Founded in 1943, the company is a Japanese dedicated semiconductor equipment and LCD production equipment company with customers in Japan, South Korea and Taiwan (China). The main products of DNS are cleaning equipment, etching equipment, film lamination/developing equipment, etc., among which its cleaning equipment has a high market share in the semiconductor industry, accounting for more than 40% of the global semiconductor cleaning equipment market.

⑤ TEL (TOKYO ELECTRON LTD.)

Founded in 1963, the company is one of the world's leading manufacturers of semiconductor manufacturing equipment and LCD manufacturing equipment. The company's main products mainly include vapor deposition equipment, film lamination/developing equipment, heat treatment and film forming equipment, dry etching equipment, CVD, wet cleaning equipment, testing equipment and flat LCD display equipment.

⑥ LAM (LAM RESEARCH CORPORATION)

Founded in 1980 and headquartered in Fremont, California, the company is one of the major suppliers of wafer manufacturing equipment and services to the global semiconductor industry. The company's main products include etching equipment, vapor deposition equipment, electroplating equipment, cleaning equipment and other semiconductor processing equipment for manufacturing integrated circuits.

(2) Domestic enterprises in the industry

① AMEC (Advanced Micro-Fabrication Equipment Inc. China)

Founded in 2004, the company is a high-end semiconductor micro-processing equipment company based in China and oriented towards the whole world. It is a leading enterprise in China's integrated circuit equipment industry. AMEC focuses on the R&D, production and sale of plasma etching equipment, deep silicon etching equipment, MOCVD equipment and other key equipment used in micro device fields such as integrated circuits, LED chips, etc. It got listed on the STAR Market of

Shanghai Stock Exchange in July 2019, and its operating income was RMB 1.947 billion Yuan in 2019.

② NAURA (NAURA Technology Group Co.,Ltd.)

Founded in 2001, the company was formed through strategic restructuring between Beijing Sevenstar Electronics Co.,Ltd. and Beijing North Microelectronics Co., Ltd. in 2016. Headquartered in Beijing, the company is engaged in the R&D, production, sale and technical services of basic electronic products. Its main products are dedicated semiconductor equipment, such as etching equipment, PVD equipment, vertical tempering furnace equipment and cleaning equipment, vacuum equipment, new-energy lithium battery equipment and precision components, as well as solutions for semiconductors, new energies, new materials and other fields. It got listed in Shenzhen Stock Exchange in March 2010, and its operating income was RMB 4.058 billion Yuan in 2019.

③ Kingsemi (Shenyang XinYuan Microelectronic Equipment Co., Ltd.)

Founded in 2002, the company is mainly engaged in the R&D, production and sale of dedicated semiconductor equipment. Its products include photoresist film lamination development equipment (film lamination/developing equipment and glue spraying equipment) and single-wafer wet process equipment (cleaning equipment, film stripping equipment, and wet etching equipment), which can be used for single-wafer processing of 6-inch wafers and below (for example, during LED wafer manufacturing) and 8/12-inch wafers (for example, for wafer manufacturing and advanced packaging). It got listed on the STAR Market of Shanghai Stock Exchange in December 2019, and its operating income was RMB 213 million Yuan in 2019.

④ Changchuan Technology (Hangzhou Changchuan Technology Co., Ltd)

Founded in 2008, the company is a high-tech enterprise committed to improving the technical level of China's dedicated IC equipment and actively promoting the upgrade of the IC equipment industry. Since its establishment, Changchuan Technology has been focused on independent R&D and innovation of integrated circuit testing equipment. Its main products include testing equipment and sorting equipment. It got listed on the GEM of Shenzhen Stock Exchange in April 2017, and its operating income was RMB 399 million Yuan in 2019.

⑤ PNC (Shanghai PNC Process Systems Co., Ltd.)

Founded in 2000 and headquartered in Shanghai, the company mainly provides high-end advanced manufacturing enterprises with high-purity process system solutions. Its main products include various system integration solutions, high-purity gas supply equipment, high-purity chemical transportation and distribution equipment, wet process equipment, ultra clean electronic materials, high-purity media special testing services, biopharmaceutical systems and equipment, etc. It got listed on the Shanghai Stock Exchange in January 2017.

(VI) Issuer's Competitive Advantages and Disadvantages

1. Competitive advantages

(1) Technological advantage

Since its founding, the Company has adhered to the development strategy of differentiated competition and innovation, established a relatively sound intellectual property system through independent R&D, and formed a product line at the internationally leading or advanced level in semiconductor cleaning equipment, semiconductor electroplating equipment, advanced packaging wet-process equipment, stress-free polishing equipment, vertical furnace tube equipment and other product lines by virtue of rich technology and process accumulation. It is committed to providing advanced equipment and process solutions for global IC manufacturing industry.

The Company mainly adopts the mode of independent R&D. The R&D department is guided by the international technical trends and customer demands of dedicated semiconductor equipment and adopts the strategy of differentiated competition. In the R&D process, relying on the Company's R&D team with rich

experience both home and abroad, the Company develops new processes and technologies, completes the verification of technical solutions, and applies for patent protection in major semiconductor production countries and regions to rapidly industrialize its R&D achievements.

The Company's core technologies, such as SAPS and TEBO megasonic cleaning, single-wafer & tank combined cleaning, advanced electroplating, stress-free polishing, etc. are independently developed and have built intellectual property protection. SAPS and TEBO cleaning equipment products of the Company have solved, for the first time ever in the world, two major global problems in the application of megasonic cleaning technology in single-wafer cleaning equipment: the problem of uneven distribution of surface megasonic energy caused by wafer warpage and the problem of chip structure damage caused by megasonic cavitation breakage on the surface of graphic wafers. SAPS technology of the Company has been successfully applied to the manufacturing of DRAM, 3D NAND and logic circuit chips to help customers improve product yield effectively. Meanwhile, SAPS technology is also used for final cleaning after polishing of the semiconductor silicon wafer. The equipment has entered many 8-inch and 12-inch semiconductor silicon wafer manufacturers in mainland China and Taiwan (China). TEBO technology has been preliminarily verified in the logic chip factory. It can realize non-destructive cleaning on graphic chips, and its performance is especially remarkable in the cleaning efficiency of small particles.

The Company has launched the Tahoe single-wafer & tank combined cleaning equipment with global intellectual property rights protection, as the first one in the world. The equipment has been preliminarily verified by large domestic clients. It can greatly save sulfuric acid consumption compared with the existing single-wafer cleaning equipment. In the next few years, it will solve the global semiconductor chip industry problems that have plagued integrated circuit manufacturers for many years, such as large sulfuric acid consumption and difficult processing.

In the field of semiconductor electroplating equipment, in 2018, the Company's advanced packaging and electroplating equipment entered the market. This equipment adopts the Company's unique patented technology to solve the uniformity problem of the plating film of wafer flat edges or notched area. With its technical innovation, it has broken up the market monopoly of global giants. In 2019, the first front-end copper interconnection electroplating equipment successfully entered the client. The equipment adopts the core technology of multi-anode local copper electroplating, independently developed by the Company with global intellectual property protection, which can realize uniform plating on ultra-thin seed crystal layers and greatly improve the process window of cavitation-free plating in small holes.

The stress-free copper polishing and chemical mechanical polishing (CMP) integrated equipment, independently developed by the Company with global intellectual property protection, also entered the advanced packaging client in 2019 for process testing. The equipment adopts the patented technology of stress-free electropolishing independently developed by the Company. It can greatly save the cost of polishing process consumables, compared with the traditional CMP equipment. The Company will apply the stress-free polishing technology to the copper interconnection process under the technical nodes of 5nm and 3nm. At the same time, because there is no mechanical stress, it is easier to integrate the ultra-low k dielectric ($k < 2$) with the copper wires, so as to improve the operation speed of the chip.

The Company has also developed a series of wet process equipment for advanced packaging, including scrubbing, wet etching, film lamination, developing, film stripping equipment, etc. These devices have successfully entered the main production lines of domestic advanced packaging clients, and combined with copper plating and stress-free polishing equipment, they can provide a complete set of wet process equipment and solutions for advanced packaging clients.

The company's technical level for the megasonic single-chip cleaning equipment, single-chip slot-type combined cleaning equipment and electroplating process equipment of copper interconnection, has reached international leading or international advanced level. As of December 31, 2019, the company and its holding subsidiaries has 232 main licensed patents, including 108 domestic patents and 124 overseas patents.

Among them, there are 227 invention patents. The company also won the title of “Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits”. It is the main subject unit of major scientific research projects in China such as “Research and development and application for 20-14nm copper plating equipment of copper interconnection” and “Research and development for 65-45nm stress-free polishing equipment of copper interconnection”, and other (“02 Special Project”) major scientific projects in China.

Through continuous R&D investment and technology and process accumulation, the Company boasts certain technological advantages in industrial competition with its development strategy of differentiated competition and innovation.

(2) Technical R&D team advantage

The Company attaches great importance to the development and training of its technology R&D team, and encourages independent innovation and independent R&D. Since its founding, the Company has continuously trained and brought in professional talents in the global industry. After years of accumulation, the Company now has an international professional technology R&D team. Dr. Hui Wang is the core leader of this core R&D team. Most of the main R&D personnel have overseas study or practice experience, with global vision and thinking, which is conducive to learning and mastering international advanced technologies. In addition, the company has established a professional R&D team in South Korea, and by relying on South Korea’s technical personnel in the field of mechanical and electronic, such team and the Mainland China’s R&D team learn from each other. By establishing an international and professional technical R&D team and adhering to differentiated technological innovation and competitive strategies, the Company ensures that it can continuously launch new products and continuously improve existing products to consolidate and enhance the Company’s technological research and development capabilities. As of December 31, 2019, the Company has 150 technical R&D personnel, accounting for 41.90% of the Company’s employees. During the reporting period, the Company’s core technology R&D team is stable and has a strong team advantage in technical R&D.

(3) Customer verification advantage

Integrated circuit manufacturing enterprises have strict requirements for the technical standards and reliability of all kinds of equipment, and they are very cautious in the selection of equipment suppliers. Usually, integrated circuit manufacturers will require equipment suppliers to provide equipment product for testing, and only after passing the internal verification (some need to obtain the verification of their downstream customers), can they formally sign a purchase contract, and once the equipment is verified and actually entered the production line, it will become the first choice for customers to build the next production line, and will not be easily replaced. After years of efforts, by virtue of our technical and service advantages in the field of cleaning equipment and semiconductor electroplating equipment, some equipment having passed the verification, and the Company has become the certified supplier of well-known semiconductor companies in the industry, such as Hynix, Yangtze Memory, Huahong group, SMIC, etc., and entered multiple production lines of these customers, achieved good market reputation, and established a good trust relationship with these customers. Through the cooperation with the above-mentioned integrated circuit manufacturing enterprises, the Company has a deeper understanding of customers’ core needs and technical trends, which helps the Company get closer to customers’ needs when choosing the R&D directions. Therefore, the Company currently has certain advantages in customer verification.

(4) Global procurement system advantage

As a company specializing in semiconductor equipment that faces the forefront of international technology and insisting on independent innovation, the Company is mainly engaged in technology and process R&D, design of equipment product, and providing equipment and process solutions to customers, with no engagement in parts processing business through following the global industry practice. Considering the precision of the semiconductor special equipment, the Company has strict requirements on the quality of raw materials and components. High-precision, high-quality, high-reliability raw materials and components are important guarantees for the Company’s equipment performance and stability.

The Company has established a global procurement system and a stable cooperative relationship with major suppliers. The Company has established ACM South Korea and ACM California branches to build a procurement team for raw materials and components. Relying on the relatively developed and sound semiconductor industry chains in these two countries, the Company finishes procurement of some key components overseas. At the same time, the Company actively cooperates with local raw material and parts suppliers in mainland China, While gradually improving the diversification of procurement channels for key parts, such efforts can also shorten the procurement cycle of raw materials and parts and reduce the procurement cost.

(5) Operation cost advantage

In the field of semiconductor cleaning equipment, the Company’s main competitors are in the United States and Japan, where the R&D and production staff costs are high, and the cost of serving customers in mainland China is rather high. The Company’s R&D and production are mainly located in mainland China, where the labor costs are relatively low. The Company has established a global procurement system and cultivated some suppliers in mainland China. Through close cooperation with suppliers in product design, the Company’s products are modular and easy to maintain, which reduces the Company’s raw material procurement costs. Compared with the Company’s main competitors, the Company has certain advantages in operating costs.

(6) Quick response advantage

The production bases of the Company’s main customers are all located in mainland China. Compared with its international competitors, the Company is closer to the main customers geographically and can provide faster and more economic technical support and customer maintenance. The Company has established a technical team and after-sales service team, made up of well-experienced veteran staff, in the production

bases of main customers. In this way, the Company can understand the needs of customers in real time, respond to customers' requirements quickly, and troubleshoot and solve problems in time, so as to ensure the normal, stable and continuous operation of the Company's equipment on the customers' production lines. Compared with major competitors, the Company has the advantages in quick response.

(7) Location advantage

The Company's main R&D and production base is located in Shanghai. Shanghai, as an important leading city of the integrated circuit industry in mainland China, has formed a complete integrated circuit industry chain which integrates design, manufacturing, packaging, measurement, materials, equipment and other supporting services. The city's industrial structure is the most complete and most balanced in the domestic IC industry chain.

Besides, as an integrated circuit industry cluster area with early development and the most complete industry chain in China, Shanghai has established a relatively complete integrated circuit talent education and training system. There are many institutions of higher learning and scientific research institutes in Shanghai, which not only provide talents to integrated circuit enterprises, but also provide the basis for the combination of production, learning and research.

With Shanghai being an international financial center and a leading IC city, the Yangtze River Delta region, which centers around Shanghai, has gathered many leading enterprises from the integrated circuit industry chain, such as Hynix, HLMC, Huahong Group, SMIC, etc. In addition, the presence of many supporting industries such as machining, production accessories, electronic information, etc. also gives Shanghai's dedicated semiconductor equipment enterprises obvious location advantages in terms of customer resources, supplier procurement, talent training and introduction, compared with domestic competitors.

(8) First mover advantage

ACMR, the controlling shareholder of the Company, was founded in Silicon Valley in 1998, the Company has been engaged in the R&D of special semiconductor equipment ever since. In 2005, ACMR invested in Shanghai to set up the Company's predecessor, Shengmei Co., Ltd., and invested the right to use the technology for semiconductor special equipment formed by its previous R&D into Shengmei Co., Ltd., and continued to carry out continuous research and technology accumulation with the Company as the subject..

The Company was one of the earliest enterprises to enter the field of semiconductor cleaning equipment and semiconductor electroplating equipment in mainland China. When its domestic competitors appear, the Company has formed a series of core technologies with independent intellectual property rights through long-term R&D and technology accumulation, and effectively reduced costs through large-scale procurement and production. Therefore, the Company has formed a strong first-mover advantage in the competition with domestic enterprises, it has become a leading company in the field of semiconductor cleaning equipment, and has the technical strength to compete with international giants.

2. Competitive disadvantages

(1) Its market reputation needs improving

In recent years, by virtue of stable and reliable quality and excellent after-sales service, the Company's equipment has gradually entered the production lines of many domestic and foreign leading manufacturing enterprises, and has obtained a certain market share. With the Company's continuous investment in R&D and market exploration, the Company has achieved a certain market reputation in the mainland China market. However, in the international market, international semiconductor special equipment giants have the advantages of long time to market, large scale, prominent market position and complete international layout. Compared with these international giants, the company still has certain disadvantages in market reputation.

(2) Its scale is small compared with that of international giants

Currently, the semiconductor professional equipment industry is highly concentrated. In 2018, the market share of the top five semiconductor special equipment companies in the world reached 71%, with a total sales of USD52.784 billion dollars. During the reporting period, the Company's main business revenue was RMB 249.1381 million Yuan, RMB 539.6117 million Yuan, and RMB 743.4081 million Yuan, respectively. Despite the trend of sustained and rapid growth, the Company's business scale is relatively small compared with that of global industry giants, and there are certain disadvantages in the bargaining power and risk resistance ability of raw material procurement.

(VII) Development Situation, Opportunities, and Challenges of the Industry

1. Development situation and opportunities of the industry

(1) The market demand for semiconductor application and consumption will continue to grow for the long term

In recent years, with the rapid development of electronic information technology, all types of intelligent, networked and mobile portable consumer electronic products have emerged one after another, and new-generation network communication, IoT, cloud computing, energy conservation and environmental protection, and other emerging industries have become the new driving force for the development of the semiconductor industry, jointly promoting the sustained, rapid and vigorous development of the global semiconductor industry. With China becoming one of the most important production bases of electronic information products in the world, more and more international semiconductor enterprises are shifting production capacity to China. The continuous production capacity migration not only promotes the overall industrial scale and technical level of the domestic semiconductor industry, but also provides huge market space for the dedicated semiconductor equipment manufacturing industry, and promotes the cultivation of professional talents in mainland China's semiconductor industry as well as supporting industries. The healthy development of the semiconductor industry provides opportunities for the expansion and upgrading of China's dedicated semiconductor equipment manufacturing industry.

(2) Regional shift of the global semiconductor industry

The semiconductor industry involves many production technology processes, many product types, rapid technological upgrades, high investment risks, wide downstream applications, etc.. With the continuous emergence of downstream emerging application markets, the trend of the semiconductor industry chain transforming from integration to vertical division of labor is becoming clearer and clearer. At present, the global semiconductor industry is starting its third industrial migration, this time to Chinese mainland. In history, the first industrial shift to Japan and the second industrial shift to South Korea and China Taiwan have driven the development of local industries, the advancement of vertical division of labor and the optimization of resource allocation. For the target countries and regions of industrial migration, the local semiconductor industry tends to extend from packaging & testing to wafer manufacturing and chip design, to semiconductor materials and equipment, and ultimately to realization of the overall development of the entire industry chain. Compared with developed countries and regions, the division of labor in the semiconductor industry chain in mainland China is still in the early stage, and the dedicated semiconductor equipment industry will become the focus of future growth.

The accelerated shift of the semiconductor industry towards mainland China brings direct benefits to China, which is the largest semiconductor terminal consumer market in the world. The scale of China's semiconductor industry is expanding. With the continuous shift of international capacity to China, semiconductor enterprises are investing in mainland China to build new plants. It is expected that the demand for dedicated semiconductor equipment in mainland China will continue to grow.

2. Challenges

(1) Lack of high-end technology and talent

The dedicated semiconductor equipment industry is a typical technology-intensive industry, which has high requirements for the knowledge background, R&D ability and operation experience accumulation of technical personnel. As R&D in China began very late, the industry still lacks talents and technology, which restricts the rapid development of the industry to a certain extent.

(3) Weak supporting capacity for domestic core components

The overall scale of domestic dedicated semiconductor equipment is not large enough, the pulling time of the parts market is short, and the matching capacity of parts of dedicated semiconductor equipment is weak. Consequently, the manufacturing cost of dedicated semiconductor equipment is high.

III. Issuer's Sales and Main Customers

(I) Output and Sales of Main Products

The Company designs its production process according to modularization. In the production process, the cavity, liquid supply system and electronic control module are pre-assembled before the whole equipment is assembled. The production process is relatively simple, and the pre-job training is fast. The Company can flexibly adjust the number of workers according to the actual order. Most parts of the Company's products are mainly procured through outsourcing. The assembly and inspection cycle in the factory is short, and the production process occupies only small numbers of fixed assets.

All in all, the Company's production capacity is flexible to a certain extent, and it can flexibly arrange manual production according to specific orders. Due to the fluctuation of the semiconductor industry demand, the investment expansion of downstream customers may be relatively concentrated, resulting in the sudden large order demand of equipment manufacturers. The Company's short-term labor force and assembly and testing equipment will limit the Company's production to a certain extent, and the short-term supply capacity of upstream suppliers' raw materials will also limit the production in response to the sudden demand. These factors restrict the Company's production capacity to some degree.

1. Output and sales of main products

(1) Output and sales of main products

During the reporting period, the Company's output and sales were as follows:

Unit: piece

Product Category	Item	2019	2018	2017
Semiconductor cleaning equipment	Output	28	22	11
	Sales	26	21	11
	Output/sale ratio	92.86%	95.45%	100.00%
Semiconductor electroplating equipment	Output	4	-	1
	Sales	4	1	-
	Output/sale ratio	100.00%	-	-
Advanced packaging wet process equipment	Output	9	13	7
	Sales	7	6	7
	Output/sale ratio	77.78%	46.15%	100.00%

2. Sales revenue of main products

During the reporting period, the revenue of the Company's main business was as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion	Amount	Proportion	Amount	Proportion
Semiconductor cleaning equipment	62,522.30	84.10%	50,135.96	92.91%	21,492.48	86.27%
In which: single-wafer cleaning equipment	55,099.52	74.12%	50,135.96	92.91%	21,492.48	86.27%
Tank cleaning equipment	4,801.36	6.46%	-	-	-	-
Single-wafer & tank combined cleaning equipment	2,621.43	3.53%	-	-	-	-
Semiconductor electroplating equipment	7,857.39	10.57%	1,191.13	2.21%	-	-
Advanced packaging wet process equipment	3,961.12	5.33%	2,634.07	4.88%	3,421.33	13.73%
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

The Company's main customers are as follows:

SN	Customer's Field	Customer Name
1	Wafer manufacturing	Hynix, Huahong Group, Yangtze Memory, SMIC, Hefei Innotron
2	Advanced packaging	JCET, Fujitsu, SMIC Long Power, Nepes
3	Semiconductor silicon wafer manufacturing and recycling	Shanghai ZINGSEMI, JRH, Taiwan Wafer Works Corporation, Taiwan Phoenix Silicon
4	Scientific research institutes	Institute of Microelectronics of the Chinese Academy of Sciences, Shanghai IC, NCAP China

3. Overall changes in sales prices

During the reporting period, the Company's main products were all customized. According to the different needs of customers, the average sales price of the products varies as follows:

Unit: RMB 10,000 Yuan/piece

Item	2019		2018		2017
	Average Price	Growth	Average Price	Growth	Average Price
Semiconductor cleaning equipment:					
Single-wafer cleaning equipment	2,504.52	4.90%	2,387.43	22.19%	1,953.86
Tank cleaning equipment	1,600.45	-	-	-	-
Single-wafer & tank combined cleaning equipment	2,621.43	-	-	-	-
Semiconductor electroplating equipment	1,964.35	64.91%	1,191.13	-	-
Advanced packaging wet process equipment	565.87	28.90%	439.01	-10.18%	488.76

(II) Sales to Top Five Customers

During the reporting period, the Company's sales to the top five customers were as follows:

Unit: RMB 10,000 Yuan

2019			
SN	Name	Amount	Proportion
1	Yangtze Memory	21,888.34	28.92%
2	Huahong Group	20,734.59	27.40%
3	Hynix	15,193.35	20.08%
4	JCET	5,620.56	7.43%
5	SMIC	2,649.74	3.50%
Total		66,086.58	87.33%
2018			
SN	Name	Amount	Proportion
1	Huahong Group	12,667.23	23.02%
2	Yangtze Memory	12,653.88	23.00%
3	Hynix	12,117.32	22.02%
4	Qianjing International	6,935.04	12.60%
5	ACMR	6,081.94	11.05%
Total		50,455.41	91.69%
2017			
SN	Name	Amount	Proportion
1	Qianjing International	13,844.90	54.60%
2	Hynix	6,784.03	26.75%
3	ACMR	4,389.52	17.31%
4	HANWOOL	183.01	0.72%
5	SMIC	109.95	0.43%
Total		25,311.40	99.81%

Note: 1. Yangtze Memory includes Yangtze Memory Technologies Co., Ltd. and Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. 2. Huahong Group includes Huahong Semiconductor (Wuxi) Co., Ltd., Shanghai Huahong Hongli Semiconductor Manufacturing Co., Ltd., Shanghai Huali IC Manufacturing Co., Ltd., Shanghai Huali Microelectronics Corporation, and Shanghai IC R&D Center. 3. Hynix includes SK Hynix Inc. and SK Hynix Semiconductor (China) Co., Ltd. 4. SMIC includes Semiconductor Manufacturing North China (Beijing) Corporation, SMIC IC Manufacturing (Shanghai) Co., Ltd., Semiconductor Manufacturing South China Corporation, and SMIC Long Power Semiconductor (Jiangyin) Co., Ltd.

During the reporting period, in 2017 and 2018, part of the Company's export business was carried out through Qianjing International, an import and export service provider. Specifically, the Company first sold the products to Qianjing International, which subsequently went through the customs declaration formalities. Qianjing International sold the products to the final customers at the same price, and the Company paid the export customs declaration agency fee to Qianjing International. After June 2018, the Company's export business was carried out through Hong Kong CleanChip, a wholly-owned subsidiary in Hong Kong. The Company no longer has business with Qianjing International.

In 2017 and 2018, some customers of the Company placed orders with ACMR, and the Company sold the products to ACMR, which then sold them to final customers. In 2019, the Company did not sell products to final customers through ACMR.

During the reporting period, the Company's top 5 final customers were as follows:

Unit: RMB 10,000 Yuan

2019			
SN	Name	Amount	Proportion
1	Yangtze Memory	21,888.34	28.92%
2	Huahong Group	20,734.59	27.40%
3	Hynix	15,193.35	20.08%
4	JCET	5,620.56	7.43%
5	SMIC	2,649.74	3.50%
Total		66,086.58	87.33%
2018			
SN	Name	Amount	Proportion
1	Yangtze Memory	18,735.81	34.05%
2	Huahong Group	15,314.19	27.83%
3	Hynix	12,117.32	22.02%
4	JCET	2,536.22	4.61%
5	SMIC	2,188.16	3.98%
Total		50,891.71	92.49%
2017			
SN	Name	Amount	Proportion
1	Hynix	6,784.03	26.75%
2	Huahong Group	5,413.51	21.35%
3	SMIC	5,097.38	20.10%
4	Yangtze Memory	4,389.52	17.31%
5	JCET	2,403.48	9.48%
Total		24,087.92	94.99%

Note: 1. Yangtze Memory includes Yangtze Memory Technologies Co., Ltd. and Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. 2. Huahong Group includes Huahong Semiconductor (Wuxi) Co., Ltd., Shanghai Huahong Hongli Semiconductor Manufacturing Co., Ltd., Shanghai Huali IC Manufacturing Co., Ltd., Shanghai Huali Microelectronics Corporation, and Shanghai IC R&D Center. 3. Hynix includes SK Hynix Inc. and SK Hynix Semiconductor (China) Co., Ltd. 4. SMIC includes Semiconductor Manufacturing North China (Beijing) Corporation, SMIC IC Manufacturing (Shanghai) Co., Ltd., Semiconductor Manufacturing South China Corporation, and SMIC Long Power Semiconductor (Jiangyin) Co., Ltd.

During the reporting period, the total sales of the Company's top five end customers accounted for 94.99%, 92.49% and 87.33% of the total sales of the current period respectively. The Company did not encounter situations where the proportion of sales to a single end customer exceeds 50% of the Company's total sales in the current year or relies heavily on a few customers. Except ACMR and Huahong Group's subsidiary, Shanghai IC, during the reporting period, the Company has no relationship with the top five customers and the top five end customers.

IV. Issuer's Procurement and Main Suppliers

(I) Issuer's Procurement

1. Procurement of main raw materials

(1) Procurement amounts of main raw materials

During the reporting period, the main raw materials procured by the Company included categories of gas circuit, material transport, machinery, electric components, etc. The composition of each category of raw materials is as follows:

SN	Category	Content
1	Gas circuit	Valve, contact, filter, pump, flowmeter, gas control module pneumatic components, cylinder, sensor, etc.
2	Material transport	Robot arm, wafer transport platform, etc.
3	Machinery	Cavity parts, cavity cabinet, rack, etc.
4	Electric components	Electronic components, sensor, programmable control module, DC power supply, circuit breaker, etc.
5	Special apparatus	Heater, functional water, ozone generator, CO ₂ mixing generator, cooler, hydrogen generator, megasonic generator, etc.
6	Drives	Motor and driver, guide rail, etc.
7	Others	Software, trunking, chemicals, procurement fees, etc.

During the reporting period, the procurement amounts of the Company's main raw materials and the proportions in the total raw material procurement amount were as follows:

Unit: RMB 10,000 Yuan

SN	Item	2019		2018		2017	
		Amount	Proportion	Amount	Proportion	Amount	Proportion
I. Gas circuit							
1	Valve	3,538.90	7.85%	3,541.02	8.13%	1,237.20	6.96%
2	Contact	1,932.78	4.29%	2,311.47	5.31%	865.20	4.87%
3	Filter	1,790.03	3.97%	1,528.20	3.51%	734.48	4.13%
4	Pump	1,578.02	3.50%	1,741.01	4.00%	808.86	4.55%
5	Flowmeter	1,366.91	3.03%	1,429.32	3.28%	530.36	2.99%
6	Others	2,668.42	5.92%	1,762.56	4.05%	656.88	3.70%
Subtotal		12,875.05	28.55%	12,313.58	28.28%	4,832.98	27.21%
II. Machinery							
1	Cavity parts	5,801.98	12.87%	4,647.12	10.67%	1,596.99	8.99%
2	Cavity cabinet	2,306.51	5.12%	1,902.72	4.37%	681.95	3.84%
3	Rack	1,356.39	3.01%	923.24	2.12%	321.76	1.81%
4	Others	303.26	0.67%	7.30	0.02%	66.45	0.37%
Subtotal		9,768.14	21.66%	7,480.38	17.18%	2,667.14	15.01%
III. Material transport							
1	Robot arm	7,280.47	16.15%	5,951.56	13.67%	2,557.46	14.40%
2	Others	415.73	0.92%	110.03	0.25%	165.18	0.93%
Subtotal		7,696.20	17.07%	6,061.59	13.92%	2,722.64	15.33%
IV. Electric components							
1	Electronic parts and components	2,089.10	4.63%	660.90	1.52%	230.80	1.30%
2	Sensor	1,944.46	4.31%	2,547.59	5.85%	1,022.54	5.76%

3	Programmable control module	1,179.77	2.62%	2,465.20	5.66%	808.06	4.55%
4	Others	855.83	1.90%	2,611.14	6.00%	297.52	1.67%
Subtotal		6,069.17	13.46%	8,284.83	19.03%	2,358.93	13.28%
V. Special apparatus							
1	Heater	2,086.26	4.63%	1,097.89	2.52%	627.65	3.53%
2	Functional water	1,002.58	2.22%	993.18	2.28%	779.61	4.39%
3	Generator	2,805.47	6.22%	4,945.97	11.36%	2,325.74	13.09%
4	Others	578.93	1.28%	212.74	0.49%	355.73	2.00%
Subtotal		6,473.24	14.36%	7,249.78	16.65%	4,088.73	23.02%
VI. Driver							
1	Motor and driver	977.53	2.17%	497.65	1.14%	487.77	2.75%
2	Others	98.47	0.22%	51.29	0.12%	13.70	0.08%
Subtotal		1,076.00	2.39%	548.94	1.26%	501.47	2.82%
VII. Others							
Subtotal		1,135.28	2.52%	1,598.08	3.67%	591.73	3.33%
Total		45,093.08	100.00%	43,537.19	100.00%	17,763.63	100.00%

(2) Procurement prices of main raw materials

Based on the different needs of customers, the Company carries out professional customization and purchase raw materials accordingly. There are many kinds and models of raw materials required by the Company, and the procurement unit prices are not comparable. During the reporting period, the price index changes of the procurement prices of some categories of main raw materials of the Company were as follows:

Raw Material Category and Model	Price Index		
	2019	2018	2017
Robot arm (8-cavity)	95.94	95.94	100.00
Robot arm (12-cavity)	95.79	95.79	100.00
Valve (402-1231)	100.00	100.00	100.00
Valve (402-1210)	100.00	100.00	100.00
Contact (400-1048)	103.02	102.89	100.00
Contact (400-1449)	102.99	102.65	100.00
Electronic parts and components (413-1165)	97.05	99.50	100.00
Megasonic generator (319-1073)	94.94	87.81	100.00
Megasonic generator (319-1047)	97.97	88.14	100.00
Cavity parts (110-6519)	93.69	96.28	100.00
Cavity cabinet	92.46	100.61	100.00

Note: It is assumed that the 2017 price index is set as 100, and the 2018 and 2019 price indexes are calculated based on the average purchase price in 2017.

2. Procurement of main energies and relevant price change tendencies

The issuer consumes small amounts of water, electricity and other energies in the production and R & D process. All the water and electricity are from the local water supply and power grid, and the supply is stable. The specific situation of the issuer's water and electricity consumption during the reporting period is as follows:

Energy	Item	2019	2018	2017
Water	Amount (RMB 10,000 Yuan)	17.16	10.78	3.96
	Unit price (RMB Yuan/ton)	4.95	4.92	4.87
Electricity	Amount (RMB 10,000)	161.91	150.15	121.79
	Unit price (RMB Yuan/kWh)	1.02	1.03	1.00

(II) Procurement from Top 5 Suppliers

During the reporting period, the amounts and proportions of the Company’s procurement from the top 5 suppliers were as follows:

Unit: RMB 10,000 Yuan

2019				
SN	Name	Amount	Proportion	Procured Items
1	ACMR	7,354.82	16.31%	Serving as an agent to procure valves, contacts, etc.
2	NINEBELL	5,955.30	13.21%	Robot arms, etc.
3	Goodwill Precision Machinery (SuZhou) Co.,Ltd	1,718.10	3.81%	Cavity parts, etc.
4	Shanghai Molan Electromechanical Equipment Co., Ltd.	1,419.04	3.15%	Programmable control modules, etc.
5	Wuxi PSK Technology Co., Ltd.	1,235.90	2.74%	Cavity cabinet
Total		17,683.16	39.22%	
2018				
SN	Name	Amount	Proportion	Procured Items
1	ACMR	10,393.20	23.87%	Serving as an agent to procure valves, contacts, etc.
2	NINEBELL	5,201.20	11.95%	Robot arms, etc.
3	MKS Instruments (HK) Company Ltd.	1,849.24	4.25%	Ozone generator, etc.
4	Shanghai Molan Electromechanical Equipment Co., Ltd.	1,648.57	3.79%	Programmable control modules, etc.
5	Goodwill Precision Machinery (SuZhou) Co.,Ltd	1,392.46	3.20%	Cavity parts, etc.
Total		20,484.67	47.05%	
2017				
SN	Name	Amount	Proportion	Procured Items
1	ACMR	4,726.39	26.61%	Serving as an agent to procure valves, contacts, etc.
2	NINEBELL	2,500.45	14.08%	Robot arms, etc.
3	Nomura	796.96	4.49%	Functional water, etc.
4	MKS Instruments (HK) Company Ltd.	787.26	4.43%	Ozone generator, etc.

5	Goodwill Precision Machinery (SuZhou) Co.,Ltd	744.27	4.19%	Cavity parts, etc.
Total		9,555.33	53.79%	

ACMR, as the Company's controlling shareholder, is a NASDAQ listed company. The supplier market of the American semiconductor industry chain is relatively mature. ACMR has certain market and price advantages in overseas raw material procurement. From the beginning of the reporting period to September 2019, ACMR was responsible for purchasing some overseas raw materials for the Company. During the reporting period, the top five final suppliers of the Company are as follows:

2019				
SN	Name	Amount	Proportion	Procured Items
1	NINEBELL	5,955.30	13.21%	Robot arms, etc.
2	Advance Electric America Co., Inc.	2,442.60	5.42%	Valves, flowmeters, etc.
3	Goodwill Precision Machinery (SuZhou) Co.,Ltd	1,718.10	3.81%	Cavity parts, etc.
4	Harrington Industrial Plastics	1,438.74	3.19%	Contacts, etc.
5	Shanghai Molan Electromechanical Equipment Co., Ltd.	1,419.04	3.15%	Programmable control modules, etc.
Total		12,973.78	28.77%	
2018				
SN	Name	Amount	Proportion	Procured Items
1	NINEBELL	5,201.20	11.95%	Robot arms, etc.
2	Advance Electric America Co., Inc.	2,579.86	5.93%	Valves, flowmeters, etc.
3	Product Systems Inc	2,520.36	5.79%	Ultrasonic generator, etc.
4	MKS Instruments (HK) Company Ltd.	1,849.24	4.25%	Ozone generator, etc.
5	Harrington Industrial Plastics	1,783.41	4.10%	Contacts, etc.
Total		13,934.07	32.00%	
2017				
SN	Name	Amount	Proportion	Procured Items
1	NINEBELL	2,500.45	14.08%	Robot arms, etc.
2	Product Systems Inc	1,218.99	6.86%	Ultrasonic generator, etc.
3	Advance Electric America Co., Inc.	913.50	5.14%	Valves, flowmeters, etc.
4	Nomura	796.96	4.49%	Functional water, etc.
5	MKS Instruments (HK) Company Ltd.	787.26	4.43%	Ozone generator, etc.
Total		6,217.16	35.00%	

During the reporting period, the total purchase amount of the Company's top five final suppliers accounted for 35.00%, 32.00% and 28.77% of the total purchase amount of the current period respectively. The Company did not purchase from a single supplier more than 50% of the Company's total purchase in the current year or rely heavily on a few suppliers.

During the reporting period, NINEBELL, one of the top five final suppliers of the Company, was the main supplier of the Company's key parts -- robot arm. ACMR, the controlling shareholder of the Company, holds a 20% stake, and Hui Wang, the chairman of the Company, also serves as its director, so NINEBELL is a related party of the Company. Apart from that, there was no relationship between the top five final suppliers and the Company during the reporting period.

V. Situation of Key Resource Elements, Such as Fixed Assets, Intangible Assets, ETC. That Have a Major Impact on Main Business

(I) Main Fixed Assets

As of December 31, 2019, the Company's fixed assets are as follows:

Unit: RMB 10,000 Yuan

Category	Original Value	Book Value	Newness Rate
Machines and equipment	2,787.16	1,196.90	42.94%
Means of transport	86.70	31.55	36.39%
Computers and electronic devices	312.83	148.48	47.46%
Office equipment	71.43	19.38	27.13%
Total	3,258.12	1,396.30	42.86%

1. Issuer's equipment

As of December 31, 2019, the Company's main R&D and production equipment is as follows:

Unit: RMB 10,000 Yuan

SN	Equipment	Original Value	Book Value	Newness Rate
1	Double-beam system electron microscope	726.13	393.42	54.18%
2	Wafer surface particle scanning device	300.53	172.32	57.34%
3	Bench prototype Module 300mm Wet station (300mm tank automatic cleaning machine)	246.26	217.08	88.15%
4	Semiconductor etching equipment	145.55	7.28	5.00%
5	Silicon wafer stress and thickness measuring instrument FSM	125.07	72.70	58.13%
6	Chemical mixer	82.16	4.11	5.00%
7	Hitachi Ion Milling Equipment	72.90	56.77	77.87%
8	POGD-0220 shape measuring instrument	67.19	61.88	92.10%
9	Scanning electron microscope	65.75	3.29	5.00%
10	ECI Qualilab QL-10EZ copper plating solution analyzer	58.94	40.32	68.41%

2. Issuer's house ownership status

As of the signing date of this [***], the Company has no house ownership.

(II) Leased Houses, Buildings, and Land

As of the signing date of this [***], the houses and buildings leased by the Company for production and operation are as follows:

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
1	Issuer	Zhangjiang	Floors 1-5, Building 4,	5,900.28	Jan. 1, 2018 to	RMB 2 Yuan	Productio

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
		Group	No. 1690, Cailun Road, Zhangjiang Hi-Tech Park, Shanghai		Dec. 31, 2024	per day per building square meter (Jan. 1, 2018 to Dec. 31, 2022) RMB 2.7 Yuan per day per building square meter (Jan. 1, 2023 to Dec. 31, 2024)	n and operation
2	Issuer	Shanghai Shengyu Culture Development Co., Ltd.	Whole building of Building 2, No. 365, Chuanhong Road, Shanghai	9,629.87	Sep. 26, 2019 to Jan. 15, 2023	RMB 389,824 Yuan per month (Since Jan. 16, 2020, the rent has increased by 5% every year on the basis of the previous year)	Assembly, warehousing, and office
3	Issuer	Sk Hynix Semiconductor (China) Ltd.	Section K7, Export Processing Area, Wuxi, Jiangsu	15.07	Jan. 1, 2020 to Dec. 31, 2020	RMB 362 Yuan per month	Office
4	Issuer	Wuhan	Room 207, 2nd Floor,	91	Apr. 1, 2019 to	RMB 45 Yuan	Office
SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
		Geological Resources Environmental Industry Technology Research Institute Co., Ltd.	Building 10, Phase I, IGE Industrial Incubation Base, East of Future 3rd Road, South of Keji 5th Road, East Lake New Technology Development District, Wuhan		Mar. 31, 2021	per month per building square meter	
5	Issuer	Wuxi Dongxing Yuehua Machinery Technology Co., Ltd.	Room 1113, Building 61, Tianan Digital City, No. 55 Changshan Avenue, High-tech District, Jiangyin, Jiangsu	157.7	Jul. 29, 2019 to Jul. 28, 2020	RMB 35,000 Yuan per year	Industrial Office
6	Issuer	Shanghai HLMC	Section A, 2F, project building (E1) in Party A's factory, No.100 Gubo Road, South Section of Kangqiao Industrial Zone, Pudong New Area, Shanghai	74.4	Jan. 1, 2019 to Dec. 31, 2020	RMB 123 Yuan per month per square meter	Office
7	Issuer	Gong **	Room 207, Building 3, Hailan MinghuaYuan, No. 35, Yanling Road, Jiangyin City, Jiangsu Province	110	Oct. 12, 2019 to Oct. 12, 2020	RMB 2,500 Yuan per month	Residence

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
8	Issuer	Wu **	Room 302, Building 15, Hailan Famous Garden, No. 35, Yanling Road, Jiangyin City, Jiangsu Province	179.5	Apr. 25, 2020 to Apr. 24, 2021	RMB 3,800 Yuan per month	Residence
9	Issuer	Xiang **	Room 403, Building 26, Xinhua Third Village, Jiangyin City, Jiangsu Province	140	Dec. 22, 2019 to Dec. 21, 2020	RMB 3,650 Yuan per month	Residence
10	Issuer	Shen **	Room 406, Building 29, Xinhua Third Village, Jiangyin City, Jiangsu Province	111.73	Sep. 23, 2019 to Sep. 22, 2020	RMB 3,800 Yuan per month	Residence
11	Issuer	Chen **	Room 2602, Building 45, Shangdong YaYuan, Xincheng District, Xinwu District, Jiangsu Province	81.67	Dec. 1, 2019 to Nov. 31, 2020	RMB 3,675 Yuan per month	Residence
12	Issuer	Liu **	Room 601, Building 17, Xinzhou Renjia, Xinwu District, Jiangsu Province	136.65	Oct. 1, 2019 to Sep. 30, 2020	RMB 3,500 Yuan per month	Residence
SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
13	Issuer	Hua **	Room 201, Building 20, Xinzhou Garden, Xinwu District, Jiangsu Province	128.39	Oct. 1, 2019 to Sep. 30, 2020	RMB 3,500 Yuan per month	Residence
14	Issuer	Zhang **	606-1-302, Green Town, Yizhuang Sub-district Office, Daxing District, Beijing	159.7	Jul. 18, 2019 to Jul. 17, 2020	RMB 9,500 Yuan per month	Residence
15	Issuer	Cui **	12-1-301, Tianbao Sili, Beijing Economic and Technological Development District, Beijing	137.1	Apr. 15, 2020 to Apr. 14, 2021	RMB 7,000 Yuan per month	Residence
16	Issuer	Yan **	Room 2204, Unit 1, Building 3, Baihu Community, Zuoling New Town, East Lake High-tech District, Wuhan	100	May. 4, 2020 to May 4, 2021	RMB 4,200 Yuan per month	Residence
17	Issuer	Luo **	No. 2601, Unit 2, Building 13, Community 3, Zuoling New Town, East Lake High-tech District, Wuhan	100	Nov. 12, 2019 to Nov. 11, 2020	RMB 35,400 Yuan per year	Residence

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
18	Issuer	Hu **	Room 804, Unit 1, Building 13, Yuquan Community, Huangbeiling Community, Zuoling New Town, East Lake High-tech District, Wuhan	100	Jan. 6, 2020 to Jan. 6, 2021	RMB 3,000 Yuan per month	Residence
19	Issuer	Wang **	No. 01, Floor 1, Unit 2, Building 3, District 8, Modern International Garden, 106 Guanggu Avenue, East Lake New Technology Development District, Wuhan	145.7	Sep. 10, 2019 to Sep. 10, 2020	RMB 6,500 Yuan per month	Residence
20	Issuer	Wang **	Room 604, No. 6, Alley 346, Hejie Road, Pudong New District, Shanghai	90	Jun. 6, 2019 to Jun. 5, 2020	RMB 4,300 Yuan per month	Residence
21	Issuer	Wang **	Room 502, No. 25, Alley 346, Hejie Road, Pudong New District, Shanghai	90	Jun. 6, 2019 to Jun. 5, 2020	RMB 4,000 Yuan per month	Residence
22	Issuer	Wang **	Room 401, No. 35,	102	Jun. 12, 2019 to	RMB 4,300	Residence
SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
			Alley 346, Hejie Road, Pudong New District, Shanghai		Jun. 11, 2020	Yuan per month	
23	Issuer	Chen **	Room 5C, Building 8, Phase 4, Lanfeng City Garden, Luoshan Street, Fupu Comprehensive Development District, Jinjiang	133.81	Sep. 9, 2019 to Sep. 8, 2020	RMB 3,500 Yuan per month	Residence
24	Issuer	Song **	Room 906, No. 24, NanzhuangYuan, Gaoliu Community, Hefei	80	Nov. 10, 2019 to Nov. 9, 2020	RMB 32,000 Yuan per year	Residence
25	Issuer	Yang **	Room 202, No. 24, NanzhuangYuan, Gaoliu Community, Hefei	80	Feb. 25, 2020 to May 31, 2021	RMB 2,599 Yuan per month	Residence
26	Issuer	Chen **	Room 602, No. 66, Lane 99, Jinhe Road, Pudong New District, Shanghai	101.61	Jun. 1, 2019 to May 31, 2021	RMB 12,000 Yuan per month	Residence
27	Issuer	Li **	Room 506, No. 282 Dangui Road, Shanghai	108.35	Dec. 16, 2019 to Dec. 15, 2020	RMB 6,000 Yuan per month	Residence

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
28	Issuer	Jin **	Room 902, No. 24, Alley 828, Chenhui Road, Pudong New District, Shanghai	60.89	Oct. 15, 2019 to Oct. 14, 2020	RMB 8,700 Yuan per month	Residence
29	Issuer	Liu **, Xue **	Room 401, Unit B, 4th Floor, Building 31, Liuli, Tianbao Home, Beijing Economic Development District, Beijing	91.62	May 6, 2020 to May 5, 2021	RMB 6,500 Yuan per month	Residence
30	Issuer	Guo **	Parking Spaces 7 and B3F, No. 27, 5th Floor, No. 27, Guanxin Road, Hsinchu City, Taiwan (No. 281, No. 282)	79.88	Oct. 1, 2019, Sep. 30, 2021	NTD 42,000 per month	Office, warehousing
31	ACM Wuxi	Wuxi Xingzhou Industrial Park Development Co., Ltd.	Room 6 in Lot J1, Export Processing Zone, Wuxi New District, Wuxi	10	Nov. 11, 2015 to Dec. 31, 2024	-	Office, production and operation
32	ACM Wuxi	Wuxi ChuangYuan Asset Management Co., Ltd.	33-1-601-04-01 & 02 (IC Design Building B604-1 & 2), Xinda Road, Xinwu District, Wuxi	148.55	April 1, 2020 to March 31, 2022	RMB 33 Yuan per month per square meter	Office
SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
33	ACM California	ACMR	42307 Osgood Road, Room B, Suite #I, Fremont CA 94539	1,500 square feet (about 139.35 square meters)	Jan. 1, 2020 to Mar. 31, 2022	USD 3,510 per month (2020.1.1-2020.3.31); USD 3,600 per month (Apr. 1, 2020-Mar. 31, 2021)	Office, warehouse
34	ACM South Korea	Jeong **	Room 402, Floor 4, Modern City Plaza, Outer Section 3, 726-9 Ami-ri Bubal-up, Icheon-si, Gyeonggi-do	164.55	Dec. 1, 2019 to Dec. 1, 2021	KRW 1,280,000 per month	Business facilities
35	ACM South Korea	Kim **	Rooms 101, 102, and 103, Floor 1, Sicox Tower, Sangdaewon-dong 517-14, Jungwon-gu, Seongnam-si, Gyeonggi-do	448.47	March 31, 2019 to March 30, 2024	KRW 5,000,000 per month	Factory
36	ACM South Korea	Aggregate Corporation of Seongnam	Rooms 1204&1205, Sicox Tower, No. 484 Dunchon-daero	342.97	April 30, 2019 to April 30, 2021	KRW 2,500,000 per month	Research institute

SN	Lessee	Lessor	Location	Leased Area (m ²)	Term of Lease	Rent	Use
36	ACM South Korea	Industry Park Management Community	(Sangdaewon-dong 517-14), Jungwon-gu, Seongnam-si, Gyeonggi-do				
37	ACM South Korea	Aggregate Corporation of Seongnam Industry Park Management Community	Room 1206, Sicox Tower, No.484 Dunchon-daero (Sangdaewon-dong 513-14), Jungwon-gu, Seongnam-si, Gyeonggi-do	188.78	Feb. 13, 2020 to April 30, 2021	KRW 1,200,000 per month	Research institute

Note: According to the *Shanghai Real Estate Registration Certificate* (registration certificate number: Pu 201514023937) issued by the Shanghai Pudong New Area Real Estate Registration Office, the issuer leased from Shanghai Shengyu Cultural Development Co., Ltd. 2 buildings located at 365 Chuanhong Road, Shanghai. The house has been mortgaged and registered for mortgage rights.

The land certificate for the houses of Floors 1-5, Building 4, No. 1690, Cailun Road, Zhangjiang Hi-Tech Park, Shanghai, which was leased by the issuer from Zhangjiang Group, with a total area of 5,900.28 square meters, has been obtained. The land certificate currently indicates that the rights owner is Shanghai Zhangjiang ChuangyeYuan Technology Development Co., Ltd..

In 2007, Zhangjiang Group signed a house purchase contract with Zhangjiang ChuangYuan, and Zhangjiang Group has fulfilled the obligations of payment and other obligations according to the house purchase contract. However, due to the fact that the records of the land contract, detailed control planning and land use purposes on relevant certificates are not completely consistent, it is estimated that it will take a long time for Zhangjiang ChuangyeYuan to issue the property ownership certificate. At present, the property right of Building 4, No. 1690, Cailun Road has not been transferred to Zhangjiang Group. Zhangjiang Group promises that it has the right to sign a house lease contract with the issuer, and will not affect the issuer's lease of such houses due to the above house ownership.

The issuer and its holding subsidiaries have no disputes in leasing the above-mentioned real estate; nor have they been investigated or punished by the government, and the actual use by the issuer and its holding subsidiaries has not been affected. The above-mentioned houses are mainly used for office, R&D and warehousing, and there are enough houses in the area to rent. The production and operation of the issuer and its holding subsidiaries are not significantly impacted by the house property right certificate not obtained.

ACMR, the controlling shareholder of the issuer, has made a commitment on the lease of the above property from Zhangjiang Group with respect to the issuer: during the validity of the lease contract, if for any reason the issuer is unable to renew the lease or use the above-mentioned property, ACMR is willing to unconditionally bear the costs and expenses incurred by the issuer due to the relocation (deducting the actual amount of insurance company claims).

(III) Main Intangible Assets

1. Land use rights

As of the signing date of this [***], the Company has no land use rights.

In May 2020, Shengwei Shanghai, the wholly-owned subsidiary of the issuer, signed a land transfer contract with the management committee of the Lingang New Area of China (Shanghai) Pilot Free Trade Zone. The area is 42,786.30 square meters,

and the amount transferred is RMB 61.68 million Yuan. The ownership certificate of the land use right is in the process of being handled.

2. Patents

As of December 31, 2019, the Company and its holding subsidiaries have 232 major patents that have been granted patent rights, including 108 domestic patents and 124 overseas patents, and including 227 invention patents. There is no restriction on the rights such as pledge, judicial seizure and so on in the authorized patents in China. Please refer to “Schedule I -- Important Patents” in this [***] for details of patents that have a significant impact on the main business of the issuer and its subsidiaries.

3. Trademarks

As of December 31, 2019, the issuer and its subsidiaries owned 14 trademarks registered in China, 8 trademarks registered overseas, and the trademarks registered in China are not subject to pledge, judicial seizure, or other restrictions of rights. For the details of the trademarks that have an important impact on the main business of the issuer and its subsidiaries, please refer to “Schedule II: Important Trademarks” of this [***].

(IV) Sharing of Key Resources with Other Parties

1. *Technology License Agreement* signed by the issuer and ACMR

On September 30, 2006, Shanghai Venture Capital, ACMR and ACMSH signed the Capital Increase Agreement, stipulating that Shanghai Venture Capital invested registered capital cash of RMB 40 million Yuan to ACMSH, and that ACMR invested registered capital of RMB 124 million Yuan to ACMSH, including RMB 40 million Yuan of fixed assets and RMB 84 million Yuan of an intellectual property exclusive license.

On January 31, 2007, ACMR and ACMSH signed the Technology License Agreement, stipulating that ACMR would grant the license of the intellectual property owned or controlled by ACMR to ACMSH globally, which means the permission to use, reproduce, modify, make derivative works of, or improve the licensed technologies for the purpose of processing, manufacturing, importing, exporting, selling or marketing or otherwise distributing products, or commercializing them. Such licensed intellectual property rights refer to any intellectual property rights owned or controlled by ACMR from the effective date of the agreement (that is, Ultra ECPTM and Ultra SFPTM licensed by ACMR), including but not limited to 45 patents and 62 patents under application); the validity of the agreement is 20 years from the date of signing the agreement, and the agreement will be automatically extended and continue to be valid at the end of the period, unless and until ACMR is no longer a shareholder of ACMSH; even if ACMR is no longer a shareholder of ACMSH, upon termination of this agreement, ACMSH shall still have the right to use the licensed technologies agreed in this agreement, unless ACMR pays ACMSH RMB 84 million Yuan.

According to the legal opinion on ACMR issued by foreign lawyers, as of December 31, 2019, the patents that are still valid among the above technology-licensed patents are as follows:

SN	Patentee	Patent Name	Patent Type	Application No./Patent No.	Application Date	Registration Place
1	ACMR	Electropolishing components and methods of electropolishing conductive layers	Invention	028225864	2002.11.13	China
2	ACMR	ADAPTIVE ELECTROPOLISHING USING THICKNESS	Invention	1020057001191	2003.7.22	South Korea

SN	Patentee	Patent Name	Patent Type	Application No./Patent No.	Application Date	Registration Place
		MEASUREMENTSAND REMOVAL OF BARRIER AND SACRIFICIAL LAYERS				
3	ACMR	Controlling the uniformity of removal rate of electropolishing in IC manufacturing	Invention	094105429	2005.2.23	Taiwan (China)
4	ACMR	The method and system of monitoring electropolishing process of metal layers, the system and monitoring methods and system of metal layers formed by electropolishing on wafers	Invention	093136793	2004.11.26	Taiwan (China)
5	ACMR	Electropolishing metal layers on wafers having trenches or vias with dummy structures	Invention	10/108614	2002.3.27	US

2. Patent Common Application Contract signed by the issuer and NOMURA, HJS Eng CO., LTD.

In 2016, the issuer and NOMURA and HJS Eng CO. LTD. signed a *Patent Common Application Contract*, which stipulates that the three parties jointly own the patent “WASHING HYDROGEN WATER PRODUCING METHOD AND PRODUCING APPARATUS” And “FUNCTIONAL WATER PRODUCING APPARATUS AND FUNCTIONAL WATER PRODUCING METHOD”, each party’s share is one third; the three parties share the patents of the above inventions in mainland China, South Korea, and Taiwan, and the patent rights obtained based on this, each party’s share is one-third; the three parties share the patent rights of the above inventions in the United States and the patent rights obtained based on this, and their shares are one-half for either of NOMURA and the issuer.

Except for the above circumstances, as of the signing date of this [***], the company does not share resource elements with others, or use them as licensed resource elements. There is no dispute or potential dispute over the resource elements owned or used by the company.

VI. Core Technologies of the Issuer

(I) Core technologies

The company’s main products include semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet process equipment, through years of technical research and development, the company has mastered the relevant core technologies in the above-mentioned product fields, and has been continuously innovating in continuously improving equipment technological performance, production capacity, improving customer product yield and reducing customer cost. All of these core technologies are continuously applied in the products sold by the company and form the competitiveness of the company’s products.

The core technologies owned by the Company are as follows:

Core Technology Name		Source of Technology	Patented or Protected by Other Measures	Technology Advancement	Technology Maturity
Cleaning equipment	SAPS Megasonic Cleaning Technology	Self-developed	Patented	International Advanced	Mass production
	SAPS Hydrogen-Functional Water Technology	Self-developed	Patented	International Advanced	Mass production
	Separate Discharge and Recovery System of Chemical Solution	Self-developed	Patented	Domestic leading	Mass production
	On-line high-temperature SPM mixing and temperature control system	Self-developed	Patented	Domestic advanced	Mass production
	Wafer Pattern Recognition and Position Monitoring System	Self-developed	Patented	Domestic advanced	Mass production
	Intelligent Exhaust Device with Automatic Cleaning	Self-developed	Patented	Domestic advanced	Mass production
	TEBO Megasonic Cleaning Technology	Self-developed	Patented	International leading	Mass production
	TEBO and Gas Atomizing Two-Fluid Integrated Cleaning Device	Self-developed	Patented	International leading	Mass production
	Wet bench Tahoe combined high temperature sulfuric acid cleaning technology for single wafer	Self-developed	Patented	International leading	Mass production
	Wafer Moisturizing System for Interaction Zone of wet bench and single wafer Based on Tahoe Equipment	Self-developed	Patented	International leading	Mass production
	Fully automatic wet bench cleaning equipment	Self-developed	Patented	Domestic leading	Mass production
	Single wafer Backside Cleaning Technology	Self-developed	Patented	Domestic leading	Mass production
	Design of Double-gas Bernoulli Chuck and Labyrinth Bearing Based on single wafer Backside Cleaning Equipment	Self-developed	Patented	Domestic leading	Mass production
Semiconductor electroplating equipment	Multi-anode Electroplating Technology	Self-developed	Patented	International Advanced	Mass production
	Sealing Technology of Electroplating Fixture	Self-developed	Patented	International Advanced	Mass production
	Multi-anode Flow Field Distribution Control Technology	Self-developed	Patented	Domestic leading	Mass production
	Gas Flow Distribution Technology in Annealing Cavity	Self-developed	Patented	Domestic leading	Mass production
	Modular layout of electroplating equipment	Self-developed	Patented	Domestic leading	Mass production

	Automatic rotation spray head technology for edge cleaning	Self-developed	Patented	Domestic leading	Mass production
Advanced packaging equipment	SFP Technology	Self-developed	Patented	International leading	Mass production
	SFP Liquid Electrode Technology	Self-developed	Patented	International leading	Mass production
	SFP Fixture Technology	Self-developed	Patented	International leading	Mass production
	Application Technology of SFP Double Damascus Process	Self-developed	Patented	International leading	Mass production
	Application Technology of SFP Advanced Packaging Process	Self-developed	Patented	International leading	Mass production
	Hot gas phase etching technology	Self-developed	Patented	Domestic leading	Mass production
	Gluing cavity with automatic cleaning function	Self-developed	Patented	International leading	Mass production
	Nitrogen assisted heat treatment unit	Self-developed	Patented	Domestic advanced	Mass production
	Optimized secondary rotation gluing process for thick glue	Self-developed	Patented	Domestic advanced	Mass production
	Compact and high yield structure of wet process equipment	Self-developed	Patented	Domestic advanced	Mass production
	Wet bench single wafer combined equipment based on degluing process of packaging equipment	Self-developed	Patented	Domestic leading	Mass production
	Wet cleaning equipment suitable for TSV process	Self-developed	Published Paper of the International Conference	Domestic leading	Mass production
	Wet TSV backside outcrop process and device	Self-developed	Patented	Domestic advanced	Mass production
	Wet Etching Equipment with Automatic Coating Thickness Adjustment Function	Self-developed	Patented	Domestic leading	Mass production

2. Technical advancement and specific representation of the issuer

(1) SAPS megasonic cleaning technology

In view of the problem that the energy of megasonic wave cannot be controlled uniformly in the traditional megasonic cleaning process, the Company developed SAPS megasonic cleaning technology, of which the megasonic frequency range is 1-3MHz and the maximum power is up to 3W/cm². By controlling the relative motion between the megasonic generator and the wafer during the process, the megasonic energy received at each point on the wafer during the process time is the same, is not affected by the warpage of the wafer, and ensure that the energy sustained at each point on the wafer is within the safe energy range of the process. The experimental results show that the energy non-uniformity of the SAPS megasonic cleaning technology on the controllable wafer surface is within 2%, which achieves the safe control of the megasonic wave energy.

(2) SAPS hydrogen-functional water technology

When the chip manufacturing process is developed to 14 / 16 nm and below, the sidewall loss in FinFET, channel and through-hole becomes an important factor affecting the characteristic process, and the cleaning with diluted solution becomes a new trend in the process development. However, for diluted chemical solution the cleaning effect is usually not ideal.

SPAS hydrogen-functional water cleaning technology developed by the company decomposes water molecules into H radicals and OH radicals under the action of megasonic waves, and OH radicals can react with H₂ molecules dissolved in ultrapure water in hydrogen-functional water generating water molecules and H radicals, and the H radicals will gradually accumulate to excess. Excess H radicals have a strong reactivity, and by reacting with dangling bonds on the surface of the substrate, the bonding between the substrate surface and the contamination particles can be disrupted, resulting in a reduction in the likelihood of bonding, and as well excess H radicals can replace the terminal groups of bondings such as SI-H, SI-O-H to prompt the contamination particles away from the substrate surface.

(3) Separate discharge and recovery system of chemical solution

There are strict requirements on the discharge and recovery of chemical solution for the production process of special semiconductor equipment. The discharge pipelines of water, waste acid liquid, waste alkaline liquid and waste organic liquid shall be completely separated; for saving cost, some high-value chemical liquid needs to be recovered for reuse after the single wafer cleaning process is completed, but the cross-contamination of chemical solution recovered for reuse must be controlled within acceptable limits.

The separate discharge and recovery system of chemical solution developed by the company for the advanced process can achieve the recovery or discharge of up to five kinds of chemical solutions by raising or lowering the position of the shutter in combination with the rotation of the solution recovery plate to align the discharge port with different solution receiving port. Also the cross contamination can be controlled within the < 10 ppm/wafer, which adequately meets the customer's needs for cleaning complex processes.

(4) On-line high-temperature SPM mixing and temperature control system

High-temperature SPM (Sulfuric Peroxide Mixture), as a common chemical solution for removing photoresist, is usually used in wet bench cleaning equipment, but rarely used in single wafer cleaning equipment, mainly because of its high process temperature which makes it difficult to ensure that the temperature and concentration of the SPM solution supplied to each wafer in each processing chamber are uniform.

The on-line high temperature SPM acid mixing temperature control system developed by the company for single wafer cleaning machine can preheat the chemical solution to a preset temperature by a preheating device, and accurately control the amount of injected sulfuric acid and hydrogen peroxide through the fluid control device, and transmits the high-temperature SPM cleaning solution in the mixing container to the wafer surface in each cavity by gas pressurization after sufficient mixing, so as to realize instant using after mixing supplying fresh SPM cleaning solution for each wafer during that process. The system has low application cost and can achieve the control of key process parameters such as chemical freshness, temperature and active ingredient yield of wafer surface using points via simple fluid control device to successfully maintain SPM solution property between wafers and between cleaning chambers in a high degree of consistency.

(5) Wafer pattern recognition and position monitoring system

In the manufacture process of special semiconductor equipment, the wafer is usually placed on the wafer holder in the process chamber by the manipulator for processing, and whether the wafer can be accurately placed on the preset position of the wafer holder will have a great impact on process effect.

The wafer pattern recognition and position monitoring system developed by the company is a simple, low cost, stable and reliable wafer position detection device,

which includes an industrial camera, a conversion unit, a comparison unit and a decision unit. The camera captures the edge of the wafer in rotation to obtain pattern data; the conversion unit receives the pattern data from the camera and converts the received pattern data into several pixel values; and the comparison unit converts compare the pixel values converted by the conversion unit with a predetermined reference pixel value to obtain a comparison result; the determination unit determines whether or not the position of the wafer is correct according to the comparison result of the comparison unit.

(6) Intelligent exhaust device with automatic cleaning

The main pollutants in the chip manufacturing process are acid gas, alkaline gas, combustible gas, etc. generated in processes such as etching, cleaning and the like, which need to be discharged, collected and treated separately due to different treatment methods. The conventional semiconductor manufacturing equipment is usually provided with three exhaust devices, each of which has a gas inlet and a gas outlet, and its disadvantages are those the volume of the exhaust device is too large and the utilization rate of the exhaust device is low.

A set of self-cleaning intelligent exhaust devices developed by the Company includes outer pipe, inner pipe, actuator and flushing liquid inlet, a plurality of exhaust ports are provided on the side wall of the outer pipe, and the inner pipe is accommodated in the outer pipe with one end open while the other end closed, the side wall of which is provided with a TSV; the actuator is connected with the closed end of the inner pipe to drive the inner pipe to rotate, and make the TSV of the inner pipe aligned with the outer pipe exhaust port, and different rotation positions correspond to different exhaust ports to achieve the separate exhaust of various gases. In the meantime, the rest exhaust ports will be closed by the side wall of the inner pipe when one kind of gas is exhausted, and the exhaust device is provided with a flushing liquid inlet to convey the flushing liquid into the gap between the outer pipe and the inner pipe to remove the crystal on the outer wall of the inner pipe, and the residual liquid of the flushing liquid can be discharged smoothly through the liquid discharge port provided on the intake pipe, thus it can greatly save the maintenance time of the equipment and help improve the production efficiency.

(7) TEBO megasonic cleaning technology

As the chip technology node is further developed to a smaller dimension and the aspect ratio is further increased, the difficulty of pattern wafer cleaning becomes greater. When the chip technology node extends to below 20nm and the pattern structure develops to multi-layer 3D, it is difficult for the traditional megasonic cleaning to control the bubble to make steady cavitation effect, which causes the bubble to break and consequently produce the high energy microstream to damage the wafer surface pattern structure.

The TEBO cleaning equipment, self-developed by the company, is suitable for pattern wafer cleaning at 28nm or below, which allows bubbles to oscillate with steady size and shape at controlled temperatures through a series of rapid (frequency up to one million times per second) pressure changes, in this way the bubble can be controlled in a stable oscillation state without imploding, so that the wafer microstructure can be kept from being destroyed, and the surface pattern structure of the wafer can be cleaned without damage. The TEBO cleaning equipment of the company, in the technology transition of the device structure from 2D to 3D, can be applied to more fine products with 3D structure such as FinFET, DRAM, emerging 3D NAND, etc., as well as new nano-devices, quantum devices and the like in the future, playing an increasingly important role in improving the yield of customers' products.

(8) TEBO and Gas Atomizing Two-Fluid Integrated Cleaning Device

Compared with the traditional megasonic cleaning process, TEBO megasonic cleaning process has a shorter action period and a better removal effect for small particles, but for the particles of big size, the removal effect is bad because there is no shock wave microstream generated by instantaneous cavitation. The gas atomizing two-fluid cleaning technology, which use gas atomizing device to carry chemical solution

or pure water to clean the wafer surface, has a good removal effect for large-size particle, but a bad removal effect for particles or particles in the wet bench and TSV.

The TEBO and gas atomizing two-fluid integrated cleaning device by the company combines the advantages of the above two technologies, which cleans with the medium flow of nitrogen gas atomizing device before the megasonic acts to improve the particle removal effect of the TEBO megasonic cleaning. This device can make large particles removed, loosened, or broken up into small particles on the premise of ensuring the safety of the pattern.. In conjunction with the subsequent TEBO megasonic cleaning, it can achieve a good removal effect for both large and small particles without damage to the pattern.

(9) Wet bench Tahoe combined high temperature sulfuric acid cleaning technology for single wafer

The Wet bench Tahoe combined high temperature sulfuric acid cleaning equipment for single wafer developed by the company integrates a single-cavity cleaning module and a wet bench cleaning module, which can be used in front end and back end processes of 12-inch wafer production line, especially applicable to high-temperature sulfuric acid processes. Based on the advantages of wet bench cleaning and single wafer cleaning technology, the cleaning processes of this two technologies are completed separately in the same equipment, which not only saves the sulfuric acid consumption, but also guarantees the good cleaning effect, and it is a great technology breakthrough of green process in cost saving, environmental protection, which solves the excessive consumption of sulfuric acid and treatment problems in large amount of industry for many years.

(10) Moisturizing system during wafer transfer based on Tahoe equipment

In the single wafer wet bench combining Tahoe high temperature sulfuric acid cleaning equipment, after the wet bench soaking and photoresist removing process of wafer completes, the process problems such as water marks or adhesion particles are likely to occur when the wafer surface becomes dry or semi-dry, so the wafer transfer between wet bench module and the cavity modules is the most difficult part for the entire photoresist removing process. In viewing of this problem, the company has designed a wafer moisturizing system in the buffer loading unit of the wet bench module and the cavity module completely ensuring that the wafer surface in well moisturized conditions during the whole transfer process and ensure that final particle cleaning efficiency.

(11) Automatic wet bench cleaning equipment

The automatic wet bench cleaning equipment developed by the company is widely used in cleaning, etching, photoresist removal and other processes in the field of chip manufacturing and advanced packaging. The equipment has high automation degree, good equipment stability, high productivity and low cross-contamination risk, and has made innovations and improvements on the basis of conventional wet bench cleaning process, and as compared with the conventional method, the IPA drying section has added a wafer guide groove to prevent debris caused in the wafer pulling process.

(12) Single wafer backside cleaning technology

The backside cleaning equipment is generally used for backside coating removal, polysilicon etching and wafer backside thinning, as well as removal of backside metal contamination. As the thickness of the chip is trending to be thinner and thinner, the requirements on backside thinning of the wafer is higher and higher. when the thickness of the wafer is less than 300um, the conventional mechanical clamping method is no longer applicable because it easily causes the wafer to warp, deform or even crack, besides, some processes, for example, requires the wafer front surface protected by nitrogen atmosphere during the processing of the wafer back to prevent damage to the wafer front surface caused by solution, vapor or chemical contact and mechanical scratch.

The single wafer backside cleaning equipment developed by the company adopts the Bernoulli chuck of the aerodynamic suspension principle, use the manipulator to send the wafer into the cavity, with the backside of the wafer faces upward and the front

side of the wafer faces downward. During the process, highly pure nitrogen gas with precisely controlled flow rate is continuously fed into the gap between the wafer and the fixture through the gas pipe under the fixture and the annular small hole on the surface of the chuck. When the gap between the chuck and the wafer is small, the reduced gas flow results in a greater pressure to the front surface of the wafer, and when the gap between the chuck and the wafer is large, a greater gas flow rate results in a smaller pressure to the front surface of the wafer. During the process, only the flow rate and pressure of the gas source need to be precisely maintained, and the wafer will be maintained in an equilibrium position.

(13) Design of double-gas-path Bernoulli chuck and labyrinth bearing based on single wafer backside cleaning equipment

The Backside cleaning equipment of the Company adopts double nitrogen gas path chuck design with a annular Bernoulli nitrogen gas path at the periphery of the chuck, which is always in the open state during the process to keep the wafer in a stable suspension state. In addition, the interior area of the chuck near the center also involves a ring-shaped lift-up nitrogen gas path, the opening of lift-up nitrogen gas can increase the balance space between the wafer and the chuck, and by precise control of the flow rate of the lift-up nitrogen gas path, the precise spacing control between the wafer and the chuck can be achieved. The addition of nitrogen gas path can protect the front surface of the wafer from the risk of contact with the bottom of the fixture due to deformation caused by the Bernoulli effect, and can also guarantee the etching uniformity.

Based on the backside cleaning equipment, the company adopts a labyrinth bearing design, which includes a hollow shaft and a rotating shaft, the rotating shaft is configured in the hollow shaft, and the outer wall of the rotating shaft is spaced apart from the inner wall of the hollow shaft. The hollow shaft is set with a gas groove for supplying gas to the front surface of the wafer, and the particles in the space between the outer wall of the rotary shaft and the inner wall of the hollow shaft is prevented by the retaining wall and the groove provided on the outer wall of the rotary shaft from entering the gas groove on the hollow shaft, so as to avoid contaminating front surface of the wafer.

(14) Multi-anode local electroplating technology

The multi-anode local electroplating technology developed by the company can independently control the working voltage and working time zone of each anode, and thereby control the electric field and current distribution on the surface of the wafer, which improves the control response of electroplating power supply up to the millisecond level and enhances the uniformity of the electroplated copper coating on the thin subcrystalline layer, and realize the hole-free filling electroplating of nano-level pores. In that technology, the independent electroplating flow field control system is set to separately control the supply of the electroplating solution to each anode, precisely controls the fluid field in the electroplating chamber, independently controls the wafer cut-in system, controls the angle and speed of the wafer entering the electroplating solution, and decreases gas bubbles adhered to the wafer surface, so as to reduce defects generated during electroplating. It realizes intelligent current protection when entering electroplating solution in combination with multi-anode pulse power supply.

(15) Sealing technology of electroplating fixture

The electroplating fixture sealing technology developed by the company wraps the flank and bottom side of the contact electrode through the outer sealing ring, so as to avoid exposure of the contact electrode to the electroplating solution on the premise that the contact electrode of the wafer is in good contact, and further enhance process performance as well as prolong the service life of the contact electrode, and also reduce the consumable cost of the fixture.

(16) Multi-anode flow field distribution control technology

The multi-anode flow field distribution control technology developed by the company adopts multi-direction electrolyte circulation system to control local fluid

field, multi-concentric annular insulation electrolyte inlet/outlet channels, electrolyte flow from the annular anode to the cathode, and then flow out from the annular insulation ring walls between the anodes, this circulation controls the fluid field distribution on the wafer surface and inside the electroplating chamber. Local fluid field control technology may maintain freshness of the electrolyte mixture in the area near the electroplating surface, thereby affect electroplating rate, filling capacity and defects on the electroplating coating. This technology may adjust the electrolyte flow control device to obtain a uniform fluid field across the electroplating substrate to ensure that there are equal exchange rate of fresh organic additives and reaction by-products both in area near the center and edge area of the electroplating substrate and to ensure the compositional uniformity of the final electroplated coating throughout the electroplating substrate range.

(17) Gas flow distribution technology of annealing chamber

The annealing chamber is mainly composed of gas inlet, hot plate, cold plate, manipulator arm and gas outlet. It is mainly a mixed gas of hydrogen used in the annealing chamber, and the wafer after copper electroplating is to be annealed to make the copper coating in large grain size, low resistance, uniform atoms. With the application of gas flow distribution technology of annealing chamber, aided by the simulation design, it can form uniform and stable gas flow directly above the hot plate to ensure that the surface copper oxide layer of the wafer on the hot plate is sufficiently reduced during the annealing process.

(18) Modular layout of electroplating equipment

The multi-anode electroplating equipment developed by the company adopts the dry-wet separation module layout, which can effectively reduce the damage of the corrosive liquid in the electroplating chamber and the cleaning chamber on the other modules of the equipment. This equipment also adopted the modular design, each module has an independent control system to ensure that other modules can also run normally in the case of failure of one module, reducing the influence of cavity alarm on the overall productivity of the equipment. Each module can be maintained separately to improve the effective operation time of the equipment, and enhance the capacity of the equipment.

(19) Automatic rotation spray head technology for edge cleaning

The automatic rotation spray head technology of edge cleaning developed by the company can automatically rotate the spray head according to the shift of rotation direction during the process to keep the angle between the spray head and the wafer rotation direction constant, and effectively improve the efficiency of edge cleaning and the control accuracy of the edge scope.

(20) SFP technology

The SFP technology developed by the company designs the cathode as an inert metal electrode, connects the wafer with the metal copper coating to the anode, through the electrolysis reaction process, the copper coating on the wafer loses electrons, and forms copper ions into the electrolyte solution (polishing liquid), hydrogen gas will be generated in the cathode area. As the progress of the electrolysis process, the copper coating on the wafer surface gradually dissolves into the polishing solution, thus achieving the polishing effect to the surface copper coating.

(21) SFP liquid electrode technology

In the SFP liquid electrode technology developed by the company, the anode is the polishing liquid ejected by the anode spray head in contact with the edge of the wafer, and the anode spray head is stationary with respect to the center of the wafer during the entire polishing process. The area of contact between the polishing liquid sprayed by the cathode spray head and the front surface of the wafer is limited. when the fixture is stationary with respect to the cathode spray head, it can only polish the local area of contact. The polishing liquid sprayed by the cathode spray head intersects the edge of the wafer, and the main contact surface is on the plastic ring of the fixture. When the anode spray head is in the starting position, its center point coincides with

the center point of the fixture. In that polishing process, the fixture is kept rotating all the time, and the cathode spray head can move along its diameter of the fixture in the horizontal direction.

(22) SFP Fixture Technology

The SFP fixture technology developed by the company fixes the wafer by vacuum adsorption in the process of polishing, and is equipped with an inner and outer double-ring vacuum adsorption rings to ensure that the wafer remains steady in pre-wetting, polishing, and spin-drying processes, thereby ensuring the uniformity of the edge polishing removal rate of the wafer with assistance of the liquid electrode.

(23) Application technology of SFP double damascus process

The application technology SFP double-damascus process developed by the company adopts combined process of chemical mechanical grinding, SFP, and hot gas phase etching for the pattern wafer in the dual-damascus copper interconnection planarization application, which combines the respective advantages of chemical mechanical grinding process and SFP process.

(24) Application technology of SFP advanced packaging process

The application technology of SFP advanced packaging process developed by the Company is derived from the SFP technology of the Company, which integrates SFP, chemical mechanical polishing and wet etching processes. Before the chemical mechanical grinding and wet etching process, it uses the electrochemical method to removes the copper layer on the surface of the wafer in a stress-free way, releases the stress of the wafer, and also achieves the recovery and reuse of the electrochemical polishing solution. The SFP advanced packaging process application technology can remarkably reduce the use of chemical and consumables, save the cost of equipment and benefit the environment protection.

(25) Hot gas phase etching technology

The hot gas phase etching technology developed by the company can meet the requirements under high vacuum environment and high temperature conditions, the process gas chemically react with the layer to be etched on the wafer surface to form gaseous products; use the vacuum pump to expel the vapour reactants after etching so as to achieve the surface etching of wafer.

(26) Automatic cleaning function of glue coater

During the process of gluing and evening up, as the rotation speed of the wafer chuck is enhanced, the photoresist may be ejected from the surface of the wafer and contaminate the inner wall of the gluing chamber, which will cause the wafer to be contaminated and adversely affect the effects of the gluing process. As a result, the chamber will need to be disassembled and cleaned regularly.

The gluing chamber with automatic cleaning developed by the company can lower the chuck to the lowest position driven by the motor during automatic cleaning, and open the cleaning liquid valve to fill up the glue chamber, and dissolve the photoresist in the cleaning liquid. After the cleaning, the cleaning liquid discharge valve opens, the cleaning liquid will be discharged out of the cavity. The whole process is controlled by the computer program, which improves the use efficiency of the equipment and reduces the uncertainty caused by manual disassembly and cleaning.

(27) Nitrogen assisted heat treatment device

In the heat treatment of the gluing process, it is very important to ensure the uniformity of the heating of the wafer for the effect of gluing process.

The nitrogen-assisted heat treatment device developed by the company includes an exhaust system and a heating chamber. In the device, when the heated nitrogen gas flows through the surface of the wafer, the temperature unevenness of the wafer due to warpage and the like can be compensated; the nitrogen gas assisted heating can form an insulating layer on the surface of the wafer. The heated nitrogen gas flows through the gap between the wafer and the heat shield to the wafer, and flows out through the

exhaust port above the wafer, which forms a heated nitrogen protective layer over the wafer, provide good thermal insulation and reduce heat loss over the wafer, thereby maintaining the uniformity of surface temperature of the wafer; the nitrogen assisted heating can also remove the exhaust gas, prevent the liquid glue on the wafer surface from flowing to the back side. The nitrogen gas can take away the volatilized vapour of residual glue when flowing over the wafer through the gap between the wafer and the insulating chamber wall. In addition, since the gap is small and the nitrogen flow rate is large, a protective layer can be formed to prevent the glue from flowing to the Backside of the wafer, thereby avoid causing structural damage of wafer.

(28) The optimized secondary rotation gluing process of thick glue

The rotation gluing process of thick glue usually needs a secondary gluing to meet the requirements of the process for the thickness of the glue coating.

The gluing method of thick glue developed by the company, has innovated on the basis of the existing gluing technology, by setting the glue dropping position of the glue head and add the thinning step of wafer edge glue coating before the secondary gluing, which solves the problem of greater thickness at the wafer center and edge in the existing glue coating technology and meet the technological requirements on the uniformity of the thickness of the glue coating,

(29) Compact and high yield structure of wet process equipment

The chip manufacturing enterprises need to organize the production in a high standard clean room, thus has strict requirements on semiconductor special equipment preferring compact structure and small floor area as well as high productivity.

In the stack layout of wet process equipment developed by the company, multiple process chambers are stacked and symmetrically arranged forming a compact and high-yield semiconductor special equipment. In this model, two processing robots are used to realize the transfer and pick&place of the wafer, so that the efficiency and floor area of the wafer can be optimized.

(30) Wet bench single wafer combined device based on degluing process of packaging equipment

The degluing equipment used in the semiconductor packaging industry is usually wet bench degluing equipment with completely independent solution wet bench and pure water wet bench, which occupies a large area, consume a large amount of chemicals and pure water, and has the risk of cross-contamination between wafers. However, the single wafer wet process degluing combined device occupies a smaller floor area, consumes less pure water and has higher flexibility in process adjustment, but for many products requiring thick glue, it need a longer time to peel off, so the single wafer de-gluing equipment will result in low overall production efficiency.

The single wafer wet bench process and single wafer cavity-type process integrated de-gluing equipment applicable for advanced packaging developed by the company can be applied to wet degluing process of 12-inch and 8-inch wafers. The equipment integrates the advantages of wet bench degluing device with the single wafer degluing device, the soaking process is completed in the wet bench, most of the thick glue is softened and removed, and subsequently remove the residual glue, contaminants and particles by the single wafer degluing process, which can solve the shortage of the capacity of the single wafer cleaning equipment.

(31) Wet cleaning equipment suitable for TSV process

As the TSV aspect ratio increases (the mainstream TSV aspect ratio has reached 10: 1, and the 3D Integrated Circuit aspect ratio is expected to reach 15: 1 or even higher in the future), the difficulty of TSV cleaning process rises up rapidly.

The wet cleaning equipment developed by the company which is suitable for TSV processing can be used in 12-inch and 8-inch wafer TSV deep hole cleaning process. The device is equipped with the company SAPS (space alternating phase shift) megasonic cleaning technology, under the action of megasonic wave, the boundary layer thickness of the wafer surface cleaning solution becomes very thin, and the solution can enter the pattern by convection stirring and expediting the cleaning. In

addition, megasonic cleaning technology can also reduce the thickness of the viscous lay of the cleaning solution on the silicon surface, and increase the lateral pulling force on the residue, thereby acting as a simulated wiping. The mechanical and chemical cleaning of the equipment is enhanced at the same time, so that the cleaning efficiency is greatly improved.

(32) Wet TSV backside outcrop process and device

In a conventional 3D TSV fabrication process, the conductor is exposed from the back side of the silicon substrate, and in the CMP process, the copper layer polishing rates are relatively high and the hot oxygen layer grinding rates are relatively low, which may cause conductive materials, such as copper and tungsten, to contaminate the silicon layer resulting in reduced device reliability, or resulting in defects like scratches, depressions, and corrosion, etc.

The wet TSV backside outcrop process and device developed by the company uses two kinds of silicon etchants with different etching rates one after another, and first rotates the wafer and sprays high etching rate etchant onto the Backside of the wafer, stop etching before the TSV is exposed from the back of the wafer; then spray a low etching rate etchant to the back of the wafer until the TSV is exposed from the back of the wafer. This technology adopts two-step wet etching to realize the backside exposure and outcrop of the through-silicon via. Compared with the traditional CMP method, it has a high etching selection ratio on silicon and silicon dioxide and avoids the copper contamination to the silicon substrate.

(33) Wet etching equipment with automatic coating thickness adjustment function

In the traditional wet etching process, chemical liquid is sprayed onto the surface of the wafer, and the etching process of the coating layer or silicon material is completed by chemical reaction between the chemical liquid and the wafer.

The wet etching equipment and etching method with automatic adjustment function of coating thickness developed by the company are equipped with optical centering and notch aligner to accurately position the wafer, and the on-line silicon thickness measuring instrument non-contact is also provided to monitor the coating thickness before and after the process. The equipment software system can automatically calculate the etching rate of the wafer in current process according to the thickness data recorded by the thickness gauge, and automatically calculate the processing time of the wafer according to the set target value of the etching thickness.

3. Application and contribution of core technologies in main business and products or services

The core technology of the Company is widely used in the main business. During the reporting period, the ratio of core technology product income to operating income is as follows:

Unit: RMB 10,000 Yuan

Project	2019	2018	2017
Income from core technology products	74,340.81	53,961.17	24,913.81
Operating income	75,673.30	55,026.91	25,358.73
Proportion of income from core technology products	98.24%	98.06%	98.25%

4. Protection measures for core technologies

(1) Patent protection

The core technology owned by the company is critical to the long-term development of the company. The Company attaches great importance to the protection of the core technology, and in order to strengthen the unified management of the confidentiality of technical materials and prevent technology leakage, the Company has established the intellectual property management system and standardized and the patent application process to guaranteed the company's technical research and

development achievement can be timely, efficiently applied for intellectual property protection. At present, the company has applied for a number of patents for core technologies, for details, please refer to “Attachment 1 List of Important Patent” in this [***].

(2) System of confidentiality and prohibition of competition

The Company has established a strict confidentiality system, and core employees have signed the Confidentiality and Intellectual Property Protection Agreement and the Non-compete Agreement to clarify the relevant confidentiality matters, confidentiality period, confidentiality scope and liability for illegal disclosure. It stipulate that the employee shall not work in the company of same industry within a certain period of time after his / her departure.

(3) Equity incentives and option incentives

At present, all the major technical R & D personnel of the Company indirectly hold the shares of the Company. In addition, in order to establish a long-term incentive mechanism, fully mobilize the enthusiasm of technical R & D personnel, attract and retain excellent professionals, effectively combine the interests of shareholders, the Company and the personal interests of the technical R & D personnel, make all parties work together and focus on the long-term development of the Company, the Company granted stock options to some technical R & D personnel. For the implementation of the stock option incentive plan of the Company, please refer to XIII Equity Incentives and Relevant Arrangements of the Issuer prior to this Offering of Section V Overview of the Issuer.

(II) Scientific research strength and achievements

1. Important awards received by the Company

The details of important awards granted to the Company are as follows:

SN	Name of Award	Awarding time	Awarding body
1	Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits	January 2020	Shanghai Municipal Commission of Science and Technology
2	China's Top Five Semiconductor Equipment Enterprises in 2018	May 2019	China Semiconductor Industry Association
3	Top 10 Units in China Semiconductor Equipment Industry in 2017	May 2018	China Electronics Special Equipment Industry Association
4	The TEBO megasonic wave non-damage cleaning technology won the twelfth (2017) China semiconductor innovative products and technologies award	April 2018	China Semiconductor Industry Association, China Electronics Materials Industry Association, China Electronics Special Equipment Industry Association, China Electronics Daily
5	Advanced packaging electroplating equipment Ultra ECP ap Tool won the 12th China Semiconductor Innovation Product and Technology Award (2017)	April 2018	China Semiconductor Industry Association, China Electronics Materials Industry Association, China Electronics Special Equipment Industry Association, China Electronics Daily
6	Megasonic single wafer Cleaning equipment won Innovation Award of Integrated Circuit Industry Technological Innovation Alliance: Achievement Industrialization Award	March 2018	Strategic Alliance of Technology Innovation in Integrated Circuit Industry
7	Shanghai Patent Work Pilot Enterprise	September 2017	Shanghai Intellectual Property Office
8	Top 10 Units in China's Semiconductor Equipment Industry in 2016	May 2017	China Electronics Special Equipment Industry Association

SN	Name of Award	Awarding time	Awarding body
9	The development and application of single wafer gluing equipment won the third prize of Shanghai Pudong New Area Science and Technology Award	January 2017	Shanghai Pudong New Area People's Government
10	China's Top 10 Semiconductor Equipment Units in 2015	May 2016	China Electronics Special Equipment Industry Association
11	Ultra C SAPS Megasonic single wafer Cleaning Equipment won the Bronze Medal of the Fifteenth China International Industrial Expo:	November 2013	Organizing Committee of China International Industrial Expo
12	The development and application of 45nm-22nm single wafer wafer cleaning equipment won the second prize of Pudong New Area Science and Technology Award	October 2013	Shanghai Pudong New Area People's Government
13	The Superior Winning Enterprise of start-up group in second China Innovation and Entrepreneurship Competition (Shanghai Competition Region) in 2013	September 2013	The organizing committee of the second China Innovation and Entrepreneurship Competition (Shanghai Competition Region) in 2013, Shanghai Science and Technology Entrepreneurship Center and Shanghai University Student Science and Technology Entrepreneurship Foundation
14	Ultra C 45nm-12 inch-Single Wafer Cleaning Equipment obtained the fourth (2009) China Semiconductor Innovation Products and	March 2010	China Semiconductor Industry Association, China Electronics Materials Industry Association, China Electronics Special
SN	Name of Award	Awarding time	Awarding body
	Technologies Award		Equipment Industry Association, China Electronics Daily
15	The 12-inch 65-nm single wafer cleaning equipment won the 2008 China International Industrial Expo Innovation Award	November 2008	Organizing Committee of China International Industrial Expo

2. Major scientific research projects undertaken by the Company

Serial Number	Project name	Department	Project Category	Implementation cycle	Budget (RMB10,000 Yuan)	Progress	Field of Technology
1	Development and Industrialization of Copper electroplating Equipment (Ultra ECP™) and SFP Equipment (Ultra SFPT™) in Semiconductor Copper Manufacturing Process	The promotion office of Shanghai leading group of prospering the city with science and education	Key Industry Science and Technology Tackling Project in prospering the city with science and education plan in 2005	From January 2006 to August 2009	22,000.00	Post-assessment Completed	Copper electroplating, SFP, cleaning

Serial Number	Project name		Department	Project Category	Implementation cycle	Budget (RMB10,000 Yuan)	Progress	Field of Technology
2	Development of 65-45nm SFP Equipment for Copper Interconnect	Development of SFP Subsystem and Process for SFP	Ministry of Science and Technology	China 02 Major Science and Technology Special Project	October 2008 to September 2016	34,538.00	Application for acceptance has been submitted	SFP, copper electroplating
		Integrated Alpha-Tool and Process Development						
		Integrated Beta-Tool and Process Optimization industrialization						
3	Development and Application of 20-14nm Copper Interconnect Copper electroplating Equipment	Development and Application of 45-14nm Copper Interconnect Copper electroplating Equipment	Ministry of Science and Technology	China 02 Major Science and Technology Special Project	January 2014 to December 2019	18,444.50	In implementation	Electroplating
4	ACM Research (Shanghai), Inc.		Shanghai Municipal Commission of Science and Technology	Small Giant Project of Science and Technology	From January 1, 2017 to December 31, 2018	5,967.00	Acceptance completed	Wet-process equipment

Serial Number	Project name	Department	Project Category	Implementation cycle	Budget (RMB10,000 Yuan)	Progress	Field of Technology
5	Topic 1: A Study of PTFE Molding and Sintering Technology of Development and Industrialization of Polytetrafluoroethylene Cavity Manufacturing Technology for Semiconductor Equipment	Shanghai Municipal Commission of Science and Technology	Action Plan for Scientific and Technological Innovation	From July 1, 2018 to June 30, 2020	450.00	In implementation	Verify PTFE material
6	Shanghai enterprise and public institution patent work pilot unit project	Shanghai Intellectual Property Office	Pilot Enterprise of Patent Work	September 2017 to August 2019	80.00	About to be accepted	Wet-process equipment
7	R & D and Industrialization of Single wafer wet bench Combined Cleaning equipment	Shanghai Development and Reform Commission, Shanghai Economic and Credit Commission	Major Project of Strategic Emerging Industry in Shanghai	May 2019 to December 2021	11,276.00	In implementation	Wet-process equipment

The company is the major research units of “20-14nm copper interconnection copper electroplating equipment R & D and application” and “65-45nm copper interconnection SFP equipment R & D” projects, with the leader of both projects being HUI WANG.

(III). R & D projects

The basic information of the main projects in research and development by the Company is as follows:

Serial Number	Project name	Research content and objectives to be achieved	Corresponding personnel	The stage and progress of the project	Comparison with the technology level in the industry
1	SAPS Megasonic Cleaning Technology	Develop cleaning processes for flat wafer surface and deep hole, such as cleaning before and after thin coating deposition, cleaning after dry etching, cleaning after ion implantation ashing, cleaning after chemical mechanical polishing, etc. Focusing on the removal of small particles, the process below 45 nm effectively solves the organic contamination and cleaning of the particles after etching, and the cleaning efficiency is greatly improved; and develop the cleaning process applied to the polishing and epitaxial processes of the wafer manufacturing process.	Independent research and development	Process Verification Stage	Having reached the international advanced level
2	ECP Electrochemical Electroplating Technology	Application 1: Logic and storage products: ECP map developed by the company can be applied to 12-inch wafer fabrication at 28 nm and above nodes, as well as more advanced technology nodes; in terms of application breadth, The ECP map device can be applied to products with 3D structure such as FinFET, DRAM and 3D NAND, as well as metal line interconnections of new nano devices and quantum devices in the future. Application 2: Wafer-level advanced packaging: The advanced package plating equipment ECPap developed by the company can be mainly applied to copper, nickel, tin, silver and gold plating processes in advanced Pillar Bump, RDL, HD Fan-Out and TSV packaging.	Independent research and development	Process Verification Stage	Having reached the international advanced level
3	Wet Bench Slot-type Cleaning Technology	Through the study of wet bench treatment process, we master the influence of wet bench cleaning process on relevant parts, the performance of parts at high temperature, and the optimization of parameters of the process.	Independent research and development	Process Verification Stage	Having reached the domestic leading level

4	Backside cleaning technology	Develop the technology of removing back surface coating, etching of polysilicon on back surface of wafer and coating reduction on back surface of wafer, and the main performance indexes are up to the international advanced level, which is suitable for 55nm and above, 40nm and 28nm technology nodes	Independent research and development	Process Verification Stage	Having reached the domestic leading level
5	TEBO Megasonic Cleaning Technology	Aiming at the difficulties of future cleaning technologies, such as micro-fragile structure cleaning, high aspect ratio structure cleaning, micro-particle removal and material loss control, based on the current TEBO megasonic cleaning technology, Develop applications to extend to smaller size and higher aspect ratio structures, as well as acoustic wave control models for different sizes and different structures, in conjunction with TEBO cleaning processes for extremely dilute liquids, to control less material loss.	Independent research and development	Process Verification Stage	Having reached the international advanced level
6	Research & Development and Industrialization of Tahoe Single wafer wet bench Combined Cleaning Equipment	The equipment includes modules such as wet bench cleaning and single wafer cleaning cavities, which can be used in front end and back end processes of 12-inch wafer production line: (1) Reduce operating costs: compared to current single wafer high-temperature sulfuric acid cleaning equipment it largely reduces the amount of high-temperature sulfuric acid used; (2) reduce the emission, which is beneficial to environmental protection; (3) integrate the wet bench and single wafer cleaning process, reduce the process steps, improve the process performance, and shorten the product production cycle..	Independent research and development	Process validation of 40 nm and 28 nm	First innovation in the world, preliminary data show that cleaning efficiency is equivalent to single wafer high-temperature sulfuric acid cleaning equipment, which can greatly save the amount of sulfuric acid

7	SFP Copper Polishing Technology	<p>Application 1: Front end interconnects planarization: Integrated SFP copper polishing Ruk process and wet etching process, applicable for Copper interconnects structure ruthenium barrier layer removal of 5 nm process of 12 inch wafer production line: (1) solve the problem of low rate of removal of ruthenium barrier layer by chemical mechanical grinding; (2) reduce environmental pollution, The electrochemical polishing solution and wet etching solution can be recycled to reduce emission and process cost.</p> <p>Application 2: Advanced packaging metal layer planarization: SFP ap copper polishing equipment process combined with wet etching process, which can be used in RDL, HD Fan-Out, TSV structure metal copper layer and its barrier layer planarization process: (1) Process no stress (2) reduces the amount of CMP used, reduces the emission, reduces the process cost, and protects the environment.</p>	Independent research and development	Process verification of 5 nm below progress	The innovation technology line is waiting to be verified; meet the same level of international industry enterprises
8	Fully Automatic wet bench phosphoric acid cleaning technology	<p>The apparatus can be used in the front end hot phosphate nitride thin coating wet etching process of 12-inch wafer production line: (1) the phosphoric acid temperature is generally above 160 centigrade, Select appropriate equipment materials and exhaust capacity; (2) ensure the heating capacity of phosphoric acid and the stability of hot phosphoric acid temperature during the process; (3) increase of phosphoric acid concentration at high temperature will lead to decrease of silicon nitride etching rate, How to maintain the concentration of water in the hot phosphoric acid solution is the key to maintain a stable etch rate of silicon nitride; (4) How to control the Si content of the hot phosphoric acid solution.</p>	Independent research and development	Engineering design phase	Meeting the same level of international industry enterprises

9	Vertical Furnace Tube Technology	The apparatus can be used in a 12-inch wafer production line to mainly implement different types of thin coating deposition processes on the wafer surface: (1) wafer automatic transfer module; (2) process cavity module, including a vacuum chamber, a heating furnace, (3) a reaction gas path control and distribution module, (4) a temperature control module, (5) an exhaust gas treatment module, and (6) a software control module, and the field of application will be developed to oxidation and diffusion furnaces, and finally to ALD applications.	Independent research and development	The device has entered the client and is being installed	Waiting for process and reliability results
10	Research & Development and Industrialization of Polytetrafluoroethylene Cavity Manufacturing Technology for Semiconductor Equipment	By developing and optimizing the molding, sintering and machining process, realize the PTFE material production process which can be applied to the products and parts of the company.	Co-developed with Shanghai Sanaifu New Materials Technology Co., Ltd and Yixun Automobile Equipment (Shanghai) Co., Ltd	Process validation	Having reached the advanced level of the industry

(IV). Investment in R & D

During the reporting period, the Company's R & D input was as follows:

Unit: RMB 10,000 Yuan

Project	2019	2018	2017
R & D input	9,926.80	7,941.50	5,217.24
Operating income	75,673.30	55,026.91	25,358.73
Ratio	13.12%	14.43%	20.57%

(V) Cooperation in R & D

In February 2017, the company signed the Technical Cooperation Agreement with Shanghai Sanaifu New Material Technology Co., Ltd. and Automobile Equipment (Shanghai) Co., Ltd., with project name "The R & D and industrialization of PTFE cavity manufacturing process for semiconductor equipment", all parties agree to cooperate in R&D to realize the application of large-size PTFE parts in ACMSH products.

In addition, the Company did not carry out cooperative R & D projects during the reporting period.

(VI) R & D personnel

As of December 31, 2019, the Company had 150 technical R & D personnel, accounting for 41.90% of the total employees of the Company.

The Company has signed the Confidentiality and Intellectual Property Protection Agreement and the Non-compete Agreement with the key technician, and granted the equity incentive & option incentive to the core technician to motivate their R & D work. During the reporting period, the staff of core technology teams of the Company remained stable without material adverse changes.

(VII) Mechanism of technological innovation, technical reserve and arrangement of technological innovation

Since its establishment, the Company has always adhered to a differentiated innovation and competition strategy, established a relatively perfect technological innovation mechanism, and reasonably arranged future technological reserves and technological innovation, mainly including the following aspects:

1. Establish and improve the R & D system, promote independent R & D and pay attention to intellectual property protection

The Company pays special attention to technology R & D, establishes innovation mechanism and innovation system, encourages the R & D team to develop products suitable for market demand, and promotes the combination of scientific research, development, production and market. The Company attached great importance to the protection of intellectual property, and formulated the Workflow Regulations for Intellectual Property Rights, the Control Procedure for Intellectual Property Risk Management, the Strategic Planning for Intellectual Property Rights, the Early Warning Mechanism for Intellectual Property Rights, etc, to encourage employees, especially technical R & D personnel, to apply for patents and protect patented technological achievements while raising awareness of non-infringement of intellectual property rights of others. For the R & D projects of major new technologies and new products, or the technological innovation achievements requiring application for foreign patents with major market prospects, the Company will also conduct project patent strategy research and put forward a patent strategy analysis report. The Company also will organize experts to conduct technical review on the innovative points of patent application, and conduct review on the patent application according to the search results to determine the feasibility of patent application. At the same time, the company also set up appropriate incentive mechanism to enhance the enthusiasm of technical personnel, for patent application or patented achievement, the relevant patent inventor will be awarded performance incentive according to the Patent Management Code.

2. Increase investment in R & D to ensure the operation of innovation mechanism

In the last three years, the amount of R & D investment of the Company was RMB 52.1724 million Yuan, RMB 79.4150 million Yuan and RMB 99.2680 million Yuan respectively, showing a steady upward trend. In the future, the Company will continue to increase its R & D investment according to its own development, and build a good material foundation for the Company's innovation mechanism such as technological innovation and personnel training.

3. Build a fair and effective incentive mechanism to enhance the enthusiasm of R & D personnel

The Company has established a fair and effective incentive mechanism, deeply understood the needs of employees, and provided rewards and incentives to employees, especially technology R & D personnel, through performance evaluation, so as to broaden the promotion route of technology R & D personnel and make technology R & D personnel continuously motivated in innovation practice. At the same time, by implementing equity incentive and option incentive to core employees, the Company further enhanced the stability and enthusiasm of core R & D team.

4. Strengthen the personnel training system and strengthen the development of R & D teams

(1) Cultivation and introduction of technology R & D talents: technology R & D talents are the core competitiveness of scientific and technological innovative enterprises. The Company regularly organizes employees to participate in technical exchanges, improves the knowledge structure and professional skills of technology R&D personnel, and in the meantime of cultivating interior technology R & D talents, the company also established the basic talent structure with the graduates of college and universities as the important reserve force for the technology R&D team.

(2) Establish system of technology leaders: In order to mobilize the enthusiasm of professional technology managers and production technology backbone, promote the scientific research progress and development of enterprises, and form the corporate cultural atmosphere of “respect for knowledge, respect for talents and respect for technology”, the company establishes system of professional technology leader to collect a professional technology core team and improve the technical innovation ability of production and R&D in an all-round way.

(3) Assessment and incentive mechanism: The Company has established an innovative incentive system, linking R & D tasks, achievements and inputs with the performance assessment, remuneration reward and promotion of employees and their departments, effectively stimulated the independent innovative actions by the technology R&D personnel.

VII. Overseas Operation of the Issuer

As of the date of signing of this [***], the Issuer has three controlled subsidiaries abroad, including Hong Kong CleanChip, ACMR Korea and ACMR CA. Hong Kong CleanChip is mainly engaged in the sales of its products; ACMR Korea is mainly engaged in the research and development of semiconductor special equipment and spare parts; ACMR CA is mainly engaged in the overseas procurement of some parts and components required for semiconductor special equipment. For details, please refer to “IV. (1) Information of the Controlled Subsidiaries” of Section V Overview of the Issuer of the [***].

Section VII Corporate Governance and Independence

During the Reporting Period, the Company was normatively operated as a foreign-invested enterprise in accordance with *the Company Law*, *the Law on Sino-foreign Equity Joint Ventures*, *the Law on Foreign-invested Enterprises* and other laws and regulations, as well as then effective *Articles of Association* and other provisions before it was changed into a joint stock company in its entirety. Since the establishment of the joint stock company, the Company further perfected its governance structure, passed the new Articles of Association, formulated an system of rules (including the Rules on Procedures of General Meeting of Shareholders, the Rules on Procedures of Meeting of Board of Directors, the Rules on Procedures of Meeting of Supervisory Board, the Working Rules of Independent Directors, the Working Rules of Secretary of Board of Directors, the Rules for the Administration of External Investments, the Rules for the Administration of External Securities, the Administrative Measures on Related Transactions), built a relatively perfect internal governance structure, and formed a coordinated and balanced mechanism among body of power, decision-making body, supervisory body and management personnel, providing powerful security for the normative development of the Company.

I. Establishment, Perfection and Operation of Systems of General Meeting of Shareholders, Board of Directors, Supervisory Board, Independent Directors, Secretary of Board of Directors, Special Committees of Board of Directors

(I) Establishment, Perfection and Operation of the System of General Meeting of Shareholders

On November 14, 2019, the establishment meeting and the first session general meeting of shareholders of the Company deliberated and adopted the Articles of Association, the Rules on Procedures of General Meeting of Shareholders and other

documents as required by the Company Law, the Securities Law and other relevant laws, regulations and normative documents. The above constitutional documents and rules formulated by the Company specifically govern the convening, proposal, notification, holding, voting, resolution and other aspects of a general meeting of shareholders.

Since the incorporation of the joint stock company, the general meeting of shareholders has always operated normatively in accordance with provisions of the Articles of Association, the Rules on Procedures of General Meeting of Shareholders and other documents. As of the execution date of this [***], the general meeting of shareholders has been held for 4 times, persons attending the general meeting of shareholders comply with relevant provision, and means of convening, procedures of discussion, voting methods and content of resolutions of meetings are lawful and effective. The information on all previous general meetings of shareholders is as below:

Serial Number	Reference Number of Meeting	Time of Holding	Attendees
1	Establishment Meeting	November 14, 2019	All shareholders or shareholder representatives
2	First-session Extraordinary General Meeting of Shareholders in 2019	November 29, 2019	All shareholders or shareholder representatives
3	First-session Extraordinary General Meeting of Shareholders in 2020	March 30, 2020	All shareholders or shareholder representatives
4	Second-session Extraordinary General Meeting of Shareholders in 2020	May 15, 2020	All shareholders or shareholder representatives

(II) Establishment, Perfection and Operation of the System of Board of Directors

The Company has established the board of directors in accordance with the Company Law, Articles of Association and other provisions, which is accountable to the general meeting of shareholders. The board of directors consists of 9 directors, among which, 1 director is the chairman and 3 directors are independent directors. On November 14, 2019, the establishment meeting and the first session general meeting of shareholders of the Company deliberated and adopted the Rules on Procedures of Meeting of Board of Directors as required by the Company Law, the Securities Law and other relevant laws, regulations and normative documents, specifically governing the convening, proposal, holding, reviewing, voting, resolution, meeting records and other aspects of a meeting of board of directors.

Since the incorporation of the joint stock company, the board of directors has always operated normatively in accordance with provisions of the Articles of Association, the Rules on Procedures of Meeting of Board of Directors and other documents. As of the execution date of this [***], the meeting of board of directors has been held for 4 times, persons attending each meeting of board of directors comply with relevant provision, and means of convening, procedures of discussion, voting methods and content of resolutions of meetings are lawful and effective. The information on all previous meetings of board of directors is as below:

Serial Number	Sequence Number of Meeting of Board of Directors	Time of Holding	Attendees
1	First Session Meeting of the First Board of Directors	November 14, 2019	All directors
2	Second Session Meeting of the First Board of Directors	December 31, 2019	All directors

3	Third Session Meeting of the First Board of Directors	March 13, 2020	All directors
4	Fourth Session Meeting of the First Board of Directors	April 30, 2020	All directors

(III) Establishment, Perfection and Operation of the System of Supervisory Board

The Company has established the supervisory board in accordance with the Company Law, Articles of Association and other provisions, which is accountable to the general meeting of shareholders. The supervisory board consists of 3 supervisors, among which, 1 supervisor is the president of the supervisory board, and 1 supervisor is an employee representative supervisor. On November 14, 2019, the establishment meeting and the first session general meeting of shareholders of the Company deliberated and adopted the Rules on Procedures of Meeting of Supervisory Board as required by the Company Law, the Securities Law and other relevant laws, regulations and normative documents, specifically governing the authority, procedures of discussion and other matters of a meeting of supervisory board.

Since the incorporation of the joint stock company, the supervisory board has always operated normatively in accordance with provisions of the Articles of Association, the Rules on Procedures of Meeting of Supervisory Board and other documents. As of the execution date of this [***], the meeting of supervisory board has been held for 5 times, persons attending each meeting of supervisory board comply with relevant provision, and means of convening, procedures of discussion, voting methods and content of resolutions of meetings are lawful and effective. The information on all previous meetings of supervisory board is as below:

Serial Number	Sequence Number of Supervisory Board	Time of Holding	Attendees
1	First Session Meeting of the First Supervisory Board	November 14, 2019	All supervisors
2	Second Session Meeting of the First Supervisory Board	November 25, 2019	All supervisors
3	Third Session Meeting of the First Supervisory Board	December 31, 2019	All supervisors
4	Fourth Session Meeting of the First Supervisory Board	March 13, 2020	All supervisors
5	Fifth Session Meeting of the First Supervisory Board	April 30, 2020	All supervisors

(IV) Establishment, Perfection and Operation of the System of Independent Directors

To further perfect corporate governance structure of the Company, improve structure of the board of directors, strengthen restrictive and supervisory mechanism against internal directors and managers, protect interests of minority shareholders and creditors and promote normative operation of the Company, the Company has established working rules of independent directors in accordance with the Guiding Opinions on the Establishment of System of Independent Directors in Listed Companies, the Governance Standards of Listed Companies, the Articles of Association and other relevant provisions. On November 14, 2019, the establishment meeting and the first session general meeting of shareholders of the Company deliberated and adopted the Working Rules of Independent Directors, explicitly specifying qualification, nomination, election and change, special duty, independent opinion, safeguarding exercise of authority, etc. of independent directors in detail.

Since the engagement of independent directors of the Company, all of them are able to be diligent and responsible, fully take advantage of their roles in the operation

of the Company, make decisions on material matters and related transactions of the Company, and play a positive role in perfecting the corporate governance structure of the Company. The abundant professional knowledge and professional ethics of due diligence owned by independent directors play a positive role in the formulation of development strategies, development plans, operation decisions and other aspects by the board of directors, effectively safeguard the information and fairness of operation decisions made by the Company.

(V) Establishment, Perfection and Operation of the System of Secretary of Board of Directors

On November 14, 2019, the first session meeting of the first board of director of the Company deliberated and adopted the Working Rules of Secretary of Board of Directors. The board of directors has established 1 secretary of board of directors, who shall be engaged or dismissed by the board of directors. The secretary of board of directors shall be a senior manager of the Company, who shall be accountable to the Company and the board of directors and perform his/her duties faithfully and diligently.

Since the engagement of the secretary of board of directors of the Company, he/she has diligently and responsibly performed his/her duties in accordance with relevant requirements of the Company Law, the Article of Association, the Working Rules of Secretary of Board of Directors and other documents.

(VI) Special Committees of Board of Directors

The board of directors of the Company has established four special committees, i.e. Strategy Committee, Audit Committee, Nomination Committee and Compensation and Appraisal Committee, and each committee shall carry out its works in accordance with the Working Rules of Strategy Committee, the Working Rules of Audit Committee, the Working Rules of Nomination Committee and the Working Rules of Compensation and Appraisal Committee respectively. The special committees shall be accountable to the board of directors and provide advisory opinions to the board of directors for its decision-making. Each committee shall all consist of directors, among which, independent directors shall account for the majority of the Audit Committee, the Nomination Committee and the Compensation and Appraisal Committee, and the convener of each of the above committees shall be served by an independent director. One independent director of the Audit Committee shall be an accounting professional.

The composition of each special committee of board of directors of the Company is as below:

Committee	Convener	Members
Strategy Committee	HUI WANG	HUI WANG, HAIPING DUN, STEPHEN SUN-HAI CHIAO
Audit Committee	MINGXIU PENG	MINGXIU PENG, ZHANBING REN, STEPHEN SUN-HAI CHIAO
Nomination Committee	DI ZHANG	DI ZHANG, MINGXIU PENG, QIANLI LUO
Compensation and Appraisal Committee	ZHANBING REN	ZHANBING REN, DI ZHANG, HAIPING DUN

Since the establishment of each special committee of board of directors, each special committee of board of directors and its members have diligently and responsibly performed their duties in accordance with provisions of the Article of Association, the Working Rules of Board of Directors and the working rules therefor.

(VII) Defects and Improvements in the Corporate Governance of the Issuer

Since the incorporation of the joint stock company, the Company has gradually established and perfected systems of general meeting of shareholders, board of directors, supervisory board, independent directors, secretary of board of directors and special

committees, formulated a series of rules, such as the Rules on Procedures of General Meeting of Shareholders, the Rules on Procedures of Meeting of Board of Directors, the Rules on Procedures of Meeting of Supervisory Board, the Working Rules of Independent Directors, the Working Rules of Strategy Committee, the Working Rules of Audit Committee, the Working Rules of Nomination Committee, the Working Rules of Compensation and Appraisal Committee, the Rules for the Administration of External Securities, the Rules for the Administration of External Investments, the Measures for the Administration of Related Transactions, the Rules for the Administration of Preventing the Controlling Shareholder and Related Parties from Occupying and Using Funds of the Company, in accordance with relevant laws, regulations and the Articles of Association, and is able to effectively implement and enforce the above rules and normatively operate according to laws.

II. Shares with Special Voting Rights of the Issuer

As of the execution date of this [***], the Issuer does not have any share with special voting rights or any other similar arrangement. ACMR, the controlling shareholder of the Company, is a listed company of the NASDAQ stock market in the U.S., which has shares with special voting rights, please refer to “V(I) Controlling Shareholder and Actual Controller” of “Section V Overview of the Issuer” for details.

III. Structure of Contractual Control of the Issuer

As of the execution date of this [***], the Issuer does not have any structure of contractual control.

IV. Self-appraisal of the Management and Certification Opinions of Certified Public Account on Internal Control

(I) Self-appraisal Opinions on the Completeness, Reasonableness and Effectiveness of Internal Control

The Company has maintained effective internal control of financial reports in all material respects as required by the normative system of enterprise internal control and relevant provisions.

According to rules on the determination of major deficiencies in internal control of non-financial reports, as of the base date of the appraisal report on internal control, the Company has not found any major deficiencies in internal control of non-financial reports.

During the period commencing from the base date of the appraisal report on internal control to the date on which the appraisal report on internal control is issued, no factor affecting appraisal conclusion on the effectiveness of internal control occurs.

(II) Evaluation of the Accounting Firm on the System of Internal Control of the Company

According to the Certification Report of Internal Control (Xin Kuai Shi Bao Zi [2020] NO. Z110342) issued by BDO China SHU LUN PAN Certified Public Accountants LLP with respect to the internal control of the Company, “On December 31, 2019, ACMSH maintains effective internal control in connection with financial reports in all material respects in accordance with the Basic Rules on Enterprise Internal Control and relevant provisions.”

V. Funds Occupancy and External Securities of the Issuer

During the Reporting Period, the Company exists fund transactions with the controlling shareholder, ACMR, please refer to “(II) Non-recurrent Related Transactions” of “X Related Transactions” of this Section for details.

Except for the above, during the Reporting Period, the Company does not exist

any occupancy of funds by the controlling shareholder, the de facto controller or any other enterprise controlled by it, nor does it exist any security created for the controlling shareholder, the de facto controller or any other enterprise controlled by it.

VI. Violations of Laws or Regulations by the Issuer

During the Reporting Period, the specific circumstances under which the Company and its subsidiaries are subject to administrative punishments are as follows:

1. In December 2017, the Company received the Decision on Administrative Punishment (Hu Guan Ji Wei Zi (2017) No.36) issued by the customs authority of Shanghai Pudong because the Company had successively applied to the customs authority for tax exemption of 458 pieces of various imported equipment in the trading means of “joint-venture equipment” or “foreign-invested equipment and items” for 16 times during the period commencing from April 30, 2008 to June 10, 2009. After imported, the Company arbitrarily disposed of the above tax-exempted equipment or used them for other purposes without the consent of the customs authority, and a fine of RMB 582,000 Yuan was thereby imposed on the Company according to provisions of the Customs Law of the People’s Republic of China and the Implementation Regulations on Customs Administrative Punishments of the People’s Republic of China. The above disposal or change of use for other purposes was the export of sample cleaning equipment for research and development which were assembled and completed by using tax-free parts subject to the regulation of customs to Korean clients beyond the jurisdiction of Chinese customs for research, development and testing under the circumstances that the Company fails to apply to the customs. As of the execution date of this [***], the above fine has been paid in full.

On October 9, 2019, the Company received the Decision on Administrative Punishment (Hu Pu Ji Guan Jian Wei Zi [2019] No.2546) issued by the customs authority of Shanghai Pudong International Airport, which states “the party holding the declaration form numbered 223320191001125917 applies to the customs authority for importing goods in the trading means of general trade, but the application was found to be untrue after examination: the specifications and model of goods in the third item were applied and reported as resistors switching different value of resistance through band switches within the designated scope of frequency, but were actually used for power of silicon chip cleaning machines; the application and reporting number of goods was 8543709990 but actually was 8548900002.” According to provisions of paragraph 3 of Article 86 of the Customs Law and paragraph (1) of Article 15 of the Implementation Regulations on Customs Administrative Punishments, the customs authority of Shanghai Pudong International Airport imposed a fine of RMB 1,000 Yuan on the Company. As of the execution date of this [***], the above fine has been paid in full.

According to paragraph 1 of Article 18 of the Implementation Regulations on Customs Administrative Punishments, “If there is any of the following acts, a fine of more than 5% and less than 30% of the value of goods will be imposed, and the proceeds (if any) arising from any violation of laws shall be confiscated: (1) arbitrarily open up, withdraw, deliver, ship, exchange, refit, mortgage, pledge, create lien over, change marks, use for other purposes or otherwise dispose of goods under the supervision of customs authorities without the permission of customs authorities.”

Considering that among the above fines, the fine of RMB 582,000 Yuan approximately accounts for 9% of the value of corresponding goods, being relatively low level within the specified range; the amount of the fine of RMB 1,000 Yuan is relatively small. Accordingly, the above administrative punishments imposed over the Company do not constitute material violations of laws or regulations.

2. In April 2018, due to the expiration of work visa of LISA YI LU FENG, an employee of the Company, the Pudong branch of Shanghai Municipal Public Security Bureau issued a notification of administrative punishment against the Company and LISA YI LU FENG respectively, and imposed a fine of RMB 10,000 Yuan and RMB 5,000 Yuan respectively. As of the execution date of this [***], the above fines have been paid in full.

According to provisions of Article 41 of the Exit and Entry Administration Law, foreigners who work in China shall obtain work permits and work-type residence permits in accordance with relevant provisions. No entities or individuals shall employ foreigners who have no work permits or work-type residence permits. The paragraph 3 of Article 80 provides that individuals or entities that illegally employ foreigners shall be fined of RMB 10,000 Yuan for each illegally employed foreigner, with a cap of RMB 100,000 Yuan in total; and the illegal proceeds, if any, shall be confiscated.

Considering that the Company has already corrected the violations and paid such fines in full, therefore, the above administrative punishments imposed on the Company do not constitute material violations of laws or regulations.

3. In 2019, ACM Wuxi was subject to the confiscation of proceeds (fine of act) of RMB 1,000 Yuan imposed by tax authorities due to its failure to go through tax declaration of stamp taxes (purchase and sale contracts) as scheduled. As of the execution date of this [***], the above fines have been paid by ACM Wuxi in full.

On March 9, 2020, Wuxi City Xinwu District Tax Bureau in Wuxi National High-Tech Industrial Development Zone of State Administration of Taxation issued a Notification on Search Results of Tax-related Information to confirm that ACM Wuxi failed to file tax returns of stamp taxes (purchase and sale contracts) as scheduled for the period commencing from March 1, 2017 to October 31, 2017 within the period commencing from January 1, 2007 to December 31, 2019, which has been rectified at present; in addition, ACM Wuxi does not have any other punishment records.

According to provisions of Article 62 of the Law on the Administration of Tax Collection of the People's Republic of China, "If a taxpayer fails to accomplish declaration of tax or to submit tax payment materials within the specified period, or a person having the withholding obligation fails to submit statements on tax withholding, collection and remittance within the specified period, the tax authority shall order him to make corrections within a given time limit and may impose a fine not exceeding RMB 2,000 Yuan or a fine exceeding RMB 2,000 Yuan but not exceeding RMB 10,000 Yuan if the circumstance is serious." Considering that the amount of the fine imposed by the above tax authority is RMB 1,000 Yuan, the amount is relatively small, and thus shall not constitute a serious circumstance, and ACM Wuxi has already made corrections and paid the fine in full, therefore, the above tax-related violation made by ACM Wuxi shall not constitute a material violation of tax laws, nor the above tax-related punishment will constitute a material tax-related punishment.

4. In conclusion, the above acts on which administrative punishments were imposed conducted by the Issuer do not constitute serious circumstances or material violations of laws or regulations. Considering the amounts involved in the above administrative punishments are relatively small, the acts will not constitute material adverse effect on operational or financial circumstances of the Issuer, and the Company have already corrected the above acts. At the same time, the above violations of laws or regulations have not resulted in any serious environmental pollution, material casualties or odious social effect, do not constitute materially illegal acts involving national security, public security, ecological security, production safety, public health safety, etc. Therefore, the violations of laws or regulations involved in the above administrative punishments will not constitute a substantive obstruction to this public offering.

Except for the above, the Issuer does not have any other illegal act during the Reporting Period.

VII. Independent and Continuous Operation of the Issuer Directed to the Market

Since the incorporation of the Company, it has established a normative corporate governance structure as required by the Company Law, the Securities Law and the Articles of Association, is independent of shareholders of the Company and other enterprises controlled by such shareholders in terms of assets, personnel, finance, organization, business, etc., and has an independent and complete system of R&D,

procurement, production, sales and services and the ability to independently face the market and carry out its operational activities by itself.

(I) Completeness of Assets

The Company is incorporated from the change of ACMSH in its entirety and succeeds to all assets of ACMSH according to laws, and the Company's sponsors have completed their contribution of assets to the Company in full. The Company legally owns machinery, equipment and other fixed assets and intangible assets, such as patents, necessary for its production and operation, and the title to them is clear. The Company has an independent system of raw materials procurement and product sales. As of the execution date of this [***], none of the controlling shareholder or other enterprises controlled thereby illegally occupies or uses any asset of the Issuer.

(II) Independence of Personnel

The Company has an independent system of human resources management, and all directors, supervisors and senior managers of the Company are generated and hold their positions in strict accordance with relevant provisions of the Company Law and the Articles of Association. All of the general manager, deputy general managers, person in charge of financial matters, secretary of board of directors and other senior managers of the Company work for the Company on a full-time basis and receive compensations from the Company, they do not hold any position (other than director, supervisor) in any other enterprise controlled by the controlling shareholder or the actual controller, or any other enterprise engaging in the business identical or similar with that of the Company. No financial personnel of the Company hold any position in a shareholder, or any other enterprise controlled thereby on a part-time basis.

(III) Independence of Finance

The Company has established an independent system of financial accounting, is able to make financial decisions and has normative financial accounting rules and rules on the administration of financial matters of its subsidiaries, without any circumstance under which any shareholder interferes with the Company's use of its funds. The Company opens bank accounts independently and pays taxes independently according to laws.

(IV) Independence of Organization

The Company has established the general meeting of shareholders, board of directors, supervisory board and other decision-making and supervisory bodies, built an effective corporate governance structure according to laws and independently exercises its authorities of operation and management. There is no mix-up situation between the Company and any of its shareholders or other enterprises controlled by it, since the incorporation of the Company, no shareholder has ever interfered with the normal activities of production and operation of the Company.

(V) Independence of Business

The Company and its subsidiaries independently carry out their operational activities, mainly engage in the R&D, production and sales of special-purpose semiconductor equipment, their main products include semiconductor cleaning equipment, semiconductor plating equipment, advanced package wet process equipment, etc. The Company is independent of major shareholders and enterprise thereby in terms of business, makes its own decisions on operation independently, owns a complete system of procurement, production and sales, and does not have any related transaction which will seriously affect independence or is obviously unfair with any of its major shareholders. Both ACMR, the controlling shareholder of the Company, and HUI WANG, the de facto controller of the Company, have issued the Commitment Letter on Avoiding Horizontal Competition to undertake that they will not directly or indirectly engage in any competing business identical or similar with the principal business of the Company.

(VI) Stability of Directors, Senior Managers and Key technicians

The Issuer and its subsidiaries have always been committed to researching and developing, producing and selling special-purpose semiconductor equipment in the most recent two years, their main products include semiconductor cleaning equipment, semiconductor plating equipment, advanced package wet process equipment, etc., and there is no change in their principal business; there is no material adverse change in directors, senior managers and key technicians of the Issuer in the most recent two years; the ownership over shares held by ACMR, the controlling shareholder of the Issuer, and major shareholders is clear without any material dispute on the ownership which may result in any change in control.

(VII) Other Matters

The ownership over main assets, core technologies and trademarks of the Issuer is clear without any material dispute on the ownership or material repayment risk, material security, litigation, arbitration or other contingent matters. There is no circumstance under which the continuous operation will be materially affected, like the business environment has or will be changed materially.

VIII. Horizontal Competition

(I) Information on Horizontal Competition

The controlling shareholder of the Company is ACMR, and the de facto controller of the Company is HUI WANG. There is no horizontal competition between the Company and its controlling shareholder, de facto controller or other enterprises controlled thereby.

ACMR holds 91.67% of equity of the Company and 100% of equity of ACM Research (Cayman), INC. ACMR is a holding company without engaging in other businesses; ACM Research (Cayman), INC. does not engage in any actual business.

Neither HUI WANG, the de facto controller of the Company, nor ACMR, the controlling shareholder of the Company, controls any other company engaging in special-purpose semiconductor equipment, without any horizontal competition with the Company.

(II) Commitments on Avoidance of Horizontal Competition

To avoid horizontal competition or potential horizontal competition, preserve interests of the Company, safeguard normal operation of the Company, the de facto controller and controlling shareholder of the Company have issued the Commitment Letter on Avoiding Horizontal Competition respectively to undertake that:

“1. I/Our enterprise has not engaged in any business or activity which is competing with the principal business of the Issuer (including enterprises directly and indirectly controlled by the Issuer) at present in any form; the assets of the Issuer are complete, and all of its assets, businesses, personnel, finance and organization are independent of me/our enterprise.

2. As of the date on which this Letter is issued, I/our enterprise will not engage in any business or activity which is competing with the principal business of the Issuer in any form, or support any enterprise other than the Issuer in engaging in any business or activity which is competing with the principal business of the Issuer in any manner.

3. As of the date on which this Letter is issued, if I/our enterprise inevitably engage in any business or activity which is competing with that of the Issuer in the future, I/our enterprise will initiatively, or upon a dispute raised by the Issuer, transfer or terminate the above business in a timely manner, and the Issuer shall have the right of first refusal with respect to such business.

4. The above commitments shall remain in force within the period in which I/our enterprise is controlling shareholder of the Issuer.”

IX. Related Party and Related Relationship

According to provisions of the Company Law, the Accounting Standards for Business Enterprises and the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*, related parties and their related relationship of the Company are as follows:

(I) De facto Controller and Controlling Shareholder

The controlling shareholder of the Company is ACMR, and the de facto controller of the Company is HUI WANG. For basic information on them, please refer to “V. (I) Controlling Shareholder and Actual Controller” of “Section V Overview of the Issuer” of this [***].

(II) Shareholders Directly or Indirectly Holding more than 5% of Shares of the Issuer

Except for the controlling shareholder, there is no shareholder directly holding more than 5% of shares of the Issuer.

The legal persons or other organizations indirectly holding more than 5% of shares of the Issuer are Shanghai Science and Technology Venture Capital Co., Ltd. and Pudong Science and Technology Cayman Co., Ltd.

(III) Subsidiaries and Equity Participation Corporations of the Issuer

As of the execution date of this [***], the Company has 5 subsidiaries in total, i.e. CleanChip HK, ACM Wuxi, Shengwei Shanghai, ACMKR and ACM CA, and both Shengyi Technology and Shixi Chanheng are equity participation corporations. For specific information on the above corporations, please refer to “IV. Controlled Subsidiaries and Equity Participation Companies of the Issuer” of “Section V Overview of the Issuer” of this [***].

(IV) Legal Person or Other Organizations Directly or Indirectly Controlled by Legal Persons or Other Organizations Directly Holding more than 5% of Shares of the Issuer

As of the execution date of this [***], the legal person directly holding more than 5% of shares of the Issuer is ACMR which holds 100% of shares in ACM Research (Cayman), INC.

(V) Directors, Supervisors, Senior Managers of the Issuer and their Closely Related Family Members

The directors, supervisors and senior managers of the Company and their closely related family members are related parties of the Company.

(VI) Directors, Supervisors, Senior Managers and other Main Responsible Persons of Legal Persons or Other Organizations Directly or Indirectly Controlling the Issuer

The controlling shareholder of the Company is ACMR, and directors of ACMR are HUI WANG, HAIPING DUN, CHENMING C. HU, TRACY DONG LIU, YINAN XIANG, ZHENG FAN YANG. HUI WANG and MARK MCKECHNIE serve as CEO and CFO of ACMR respectively.

(VII) Legal Persons or Other Organizations (other than the Issuer and its Subsidiaries) which are Directly or Indirectly Controlled or Materially Affected by Directors, Supervisors, Senior Managers of the Issuer and their Closely Related Family Members or Directors, Supervisors, Senior Managers or other Main Responsible Persons of Legal Persons or Other Organizations Directly or Indirectly Controlling the Issuer, or in which the above Persons (except for Independent Directors) Serve as Directors or Senior Managers.

1. Legal persons or other organizations (other than the Issuer and its subsidiaries) which are directly or indirectly controlled or materially affected by directors, supervisors, senior managers of the Issuer and their closely related family members or in which the above persons (except for independent directors) serve as directors or senior managers

Legal persons or other organizations (other than the Issuer and its subsidiaries) which are directly or indirectly controlled or materially affected by directors, supervisors, senior managers of the Company or in which the above persons (except for independent directors) serve as directors or senior managers are related parties of the Company, please refer to “(X) External Investments Made by Directors, Supervisors, Senior Managers and Key Technicians of the Company” and “(VII) Brief Information of Directors, Supervisors, Senior Managers and Key Technician” of “Section V Overview of the Issuer” of this [***] for specific information.

Legal persons or other organizations (other than the Issuer and its subsidiaries) which are directly or indirectly controlled or materially affected by closely related family members of directors, supervisors, senior managers of the Company or in which the above persons (except for independent directors) serve as directors or senior managers are related parties of the Company, specifically:

Name	Relationship	Entity in which the Position is Held/Controlled Entity	Information on the Position/Control
PAT PING-HAI CHIAO	Brother of STEPHEN SUN-HAI CHIAO, a director	Zhengzhou Xingjingwang Enterprise Management Consulting Partnership (Limited Partnership)	Holding 76.69% of interest shares
		Shanghai Jingmeng Silicon Materials Co., Ltd.	Director
		Shanghai Wafer Works Materials Co., Ltd.	Director
		Taiwan Wafer Works	Chairman
		Silicon Technology Investment (Cayman) Corp.	Director
		Grand Sea Investments Limited	Holding 100% of shares
		Jingcai Technology Co., Ltd.	Chairman
		Helitek Company Ltd	Executive Officer
		Wafer Works Investment Corp.	Director
		Ruizheng Co., Ltd	Director
		Wafermaster Investment Corp.	Director
Ren Du Xiaochun	Sister of ZHANBING REN, a director	Shanghai Ruizhong International Trading Co., Ltd.	Holding 70% of equity interests
		SinoGroupe Sàrl	CEO

ZHONGRUI XIA	Spouse of QIAN DONG, a supervisor	Ruizhang Technology Co., Ltd.	Chairman
		Shanghai Lianwan Investment Management Center (Limited Partnership)	Executive Partner
		Amlogic Holding Ltd	Director
		Shanghai Ruizhang Internet of Things Technology Co., Ltd.	Chairman
		Shanghai Yuezhong Investment Co., Ltd.	Director, General Manager
		Shanghai Ruizhang Investment Co., Ltd.	Director, General Manager
		Shanghai Wearlinks Technology Inc.	Chairman
		Shanghai Datatist Information Technology Inc.	Director
		Chongqing Ruizhang Technology Co., Ltd.	Executive Director
		Aliaen Technology, LLC	Chairman

2. Legal persons or other organizations (other than the Issuer and its subsidiaries) which are directly or indirectly controlled or materially affected by directors, supervisors, senior managers or other main responsible persons of legal persons or other organizations directly or indirectly controlling the Issuer, or in which the above persons (except for independent directors) serve as directors or senior managers

Specific information on legal persons or other organizations (other than the Issuer and its subsidiaries) which are directly or indirectly controlled or materially affected by directors, supervisors, senior managers or other main responsible persons of legal persons or other organizations directly or indirectly controlling the Issuer, or in which the above persons (except for independent directors) serve as directors or senior managers is as follows:

Name	Position in ACMR	Entity in which the Part-time Position is Held/Controlled Entity	Information on the Part-time Position/Control
CHENMING HU	Director	Ambarella Inc.	Director
		Inphi Corporation	Director
ZHENGFAN YANG	Director	Huaxin Investment Management Co., Ltd.	Deputy General Manager of Investment III Department
		AMEC	Director
		Hubei Xinhua Equity Investment Management Co., Ltd.	Director
		Shenyang Piotech Co., Ltd.	Deputy Chairman
		Hangzhou Changchuan Technology Co., Ltd.	Director
		Jiangsu Xinhua Semiconductor Materials Technology Co., Ltd.	Director
		GrandiT Co., Ltd.	Director
		NAURA	Director

		Jiangsu Yoke Technology Co., Ltd.	Director
		Darbond Technology Co., Ltd.	Director
		National Silicon Industry Group Co., Ltd.	Director
		Shanghai Precision Measurement Semiconductor Technology, Inc.	Director
		Raintree Scientific Instruments (Shanghai) Corporation	Director
YINAN XIANG	Director	Shanghai Science and Technology Venture Capital (Group) Co., Ltd.	Deputy General Manager
		Shanghai Venture Capital Consultant Co., Ltd.	Executive Director
		Ensense Biomedical Technologies (Shanghai) Co., Ltd	Director
		Shanghai International Wine Exchange Center Co., Ltd.	Director
		Shanghai Sand Information Technology System Co., Ltd	Director
		CETC Shanghai Microwave Communication CO., LTD	Director
		Shanghai COSUNET Technology Co., Ltd.	Director
		Shanghai Radk-Tech Hydraulic System Co., Ltd.	Director
		RolandBerger Yunsai (Shanghai) Enterprise Service Co., Ltd.	Director
		Shanghai Railway Certification Co., Ltd.	Director
		Shanghai Huaxiang Computer Communication Engineering Co., Ltd.	Director
		Shanghai Zhongheng Information Industry Co., LTD.	Director
		Shanghai Science & Technology Park of ECUST Co., Ltd.	Director
		Shanghai Caohejing Venture Capital Co., Ltd.	Chairman
		Shanghai Tissue Engineering Life Science Co., Ltd.	Chairman
		Shanghai Masteck Environment Co., Ltd.	Director

3. Information on business contacts between the Company and the above related parties

During the Reporting Period, the information on business contacts between the Company and the above related parties is as follows:

Serial Number	Name of Related Party	Information on Related Relationship
1	NINEBELL	HUI WANG, a director of the Company, serves as a director of this company
2	Shanghai Jingmeng Silicon Materials Co., Ltd.	PAT PING-HAI CHIAO, a brother of STEPHEN SUN-HAI CHIAO who is a director of the Company, served as a director of this company

3	Taiwan Wafer Works	PAT PING-HAI CHIAO, a brother of STEPHEN SUN-HAI CHIAO who is a director of the Company, served as the Chairman and CEO of this company
4	AMEC	ZHENG FAN YANG, a director of ACMR, serves as a director of this company
5	Shanghai Sand Information Technology System Co.	YINAN XIANG, a director of ACMR, serves as a director of this company
6	Law and Law	Charles Law, a director of ACMR, serves as the managing partner of this firm

(VIII) Other Related Parties

Except for the above disclosed related parties, other related parties of the Issuer also include natural persons, legal persons or other organizations which had related relationship with the Company during the Reporting Period, and other persons deemed to be related parties of the Issuer determined based on the principle of substance over form, which have special relationship with the Issuer which may result in the inclination of interests of the Issuer to it or are deemed to be related parties of the Issuer within 12 months as of the date of transaction or 12 months after relevant transaction agreements take effect or relevant arrangements are put into place.

During the Reporting Period, the information on business contacts between the Company and the above related parties is as follows:

Serial Number	Name of Related Party	Information on Related Relationship
1	Shengxin Shanghai	JIAN WANG, the general manager of the Issuer, holds 100% of equity interest in ShengYuan Management Consulting (Shanghai) Co., Ltd. which was the general partner of Shengxin Shanghai
2	Shanghai Integrated Circuit	LING LIN and ZHIDE Yuan served as directors of the Company during the Reporting Period, who serves or served directors of Shanghai Integrated Circuit

The basic information on Shengxin Shanghai is as follows:

Name	Shengxin (Shanghai) Management Consulting Partnership (L.P.)
Uniform Social Credit Code	91310115MA1K3BAU2L
Principal Place of Business	Room 210-32, 2 nd Floor, Building 1, No.38 Debao Road, China (Shanghai) Pilot Free Trade Zone
Executive Partner	Xinrun Management Consulting (Shanghai) Co., Ltd.
Category of Company	Limited Partnership
Scope of Business	Enterprise management consultancy; enterprise marketing planning; commercial information consultancy; market information consultancy and investigation (being prohibited from engaging in social investigation, social survey, public opinion survey, public opinion poll); conference services. [For projects subject to any approval in accordance with laws, business activities may be carried out only after such approval of relevant authorities has been obtained]

Date of Establishment	May 4, 2016
-----------------------	-------------

As of the execution date of this [***], the shareholding structure of Shengxin Shanghai is as follows:

Name of Partner	Category of Partner	Shareholding Percentage	Amount of Subscribed Contribution (in RMB ten thousand)	Position
YIQUN HU	Limited Partner	15.50%	325.000	No position in the Company
LINLI YU	Limited Partner	10.97%	230.000	No position in the Company
XIAOHONG WANG	Limited Partner	9.54%	200.000	No position in the Company
YUN MA	Limited Partner	9.54%	200.000	No position in the Company
YITONG TANG	Limited Partner	7.75%	162.500	No position in the Company
GANG HUANG	Limited Partner	4.65%	97.500	No position in the Company
WEI CAO	Limited Partner	3.34%	70.000	No position in the Company
FUPING CHEN	Limited Partner	2.94%	61.750	Deputy General Manager
LIN LIU	Limited Partner	2.38%	50.000	No position in the Company
BEIYI WANG	Limited Partner	2.32%	48.750	No position in the Company
QIN LI	Limited Partner	2.09%	43.875	No position in the Company
HONGCHAO YANG	Limited Partner	1.55%	32.500	Core Business Personnel
HUI SHEN	Limited Partner	1.55%	32.500	Core Manager
MINGZHU LUO	Limited Partner	1.55%	32.500	Secretary of Board of Directors
YAN LI	Limited Partner	1.55%	32.500	Core Manager
BAOMING LI	Limited Partner	1.55%	32.500	Core Business Personnel
HONG ZHOU	Limited Partner	1.55%	32.500	Core Business Personnel
SHENA JIA	Limited Partner	1.55%	32.500	Core Manager
ZHAOWEI JIA	Limited Partner	1.47%	30.8750	Core Manager
YULU HU	Limited Partner	1.16%	24.375	Core Business Personnel

XIAOFENG TAO	Limited Partner	1.16%	24.375	Core Business Personnel
YU HOU	Limited Partner	1.14%	24.000	Core Business Personnel
WEN SUN	Limited Partner	0.77%	16.250	Core Business Personnel
JUN WU	Limited Partner	0.77%	16.250	Core Manager
HU ZHAO	Limited Partner	0.77%	16.250	Core Business Personnel
JINGWEN HE	Limited Partner	0.77%	16.250	Core Business Personnel
DEYUN WANG	Limited Partner	0.77%	16.250	Core Manager
JUN WANG	Limited Partner	0.77%	16.250	Core Technician
XIAYUN YANG	Limited Partner	0.77%	16.250	Core Manager
XI WANG	Limited Partner	0.77%	16.250	Core Manager
XIAOYAN ZHANG	Limited Partner	0.77%	16.250	Core Manager
QIANG WANG	Limited Partner	0.77%	16.250	Core Business Personnel
WENQING JI	Limited Partner	0.77%	16.250	Core Manager
XUEJUN LI	Limited Partner	0.77%	16.250	Core Technician
ANYUN BI	Limited Partner	0.62%	13.000	Core Manager
XIAOWEI DI	Limited Partner	0.62%	13.000	Core Business Personnel
YANLI HU	Limited Partner	0.62%	13.000	Core Business Personnel
MINLI GU	Limited Partner	0.39%	8.125	Core Manager
YU WANG	Limited Partner	0.39%	8.125	Core Business Personnel
YUFENG HUANG	Limited Partner	0.31%	6.500	Core Business Personnel
TAO TAO	Limited Partner	0.23%	4.875	Core Business Personnel
GUANGYU XIA	Limited Partner	0.23%	4.875	Core Business Personnel
FANGYONG ZHEN	Limited Partner	0.23%	4.875	Core Business Personnel
WENJUN WANG	Limited Partner	0.23%	4.875	Core Business Personnel

Xinrun Management Consulting (Shanghai) Co., Ltd.	General Partner	0.02%	0.500	-
Total	-	100.00%	2,097.25	-

X. Related Transactions

(I) Recurrent Related Transactions

During the Reporting Period, the information on recurrent related transactions occurred between the Company and related parties is as follows:

1. Procurement of Commodities or Labor Services

(Unit: RMB 10,000 Yuan)

Related Party	Content of Transaction	2019		2018		2017	
		Amount	Percentage of Operating Costs	Amount	Percentage of Operating Costs	Amount	Percentage of Operating Costs
ACMR	valves, sensors, connectors, pumps, procurement service fees, etc.	7,354.82	17.72%	10,393.20	33.84%	4,726.39	33.66%
NINEBELL	robot arms, etc.	5,955.30	14.34%	5,201.20	16.94%	2,500.45	17.81%
Shengyi	filters, etc.	590.24	1.42%	-	-	-	-
Technology							
AMEC	testing service fees	14.57	0.04%	9.71	0.03%	3.98	0.03%
Shanghai Integrated Circuit	lens and accessories, software development services, etc.	-	-			102.56	0.73%
	testing service fees	-	-	615.75	2.01%	-	-
Total		13,914.93	33.52%	16,219.86	52.82%	7,333.38	52.23%

During the Reporting Period, there are circumstances where the Company purchased raw materials from related parties, i.e. ACMR, NINEBELL and Shengyi Technology, and purchased testing services from AMEC and Shanghai Integrated Circuit, specifically:

(1) During the Reporting Period, the Company purchased valves, sensors, connectors, pumps and other raw materials through ACMR, the transaction amount of which was RMB 47.2639 million Yuan, RMB 103.9320 million Yuan and RMB 73.5482 million Yuan respectively. The main reasons why the Company purchased raw materials through ACMR are relatively convenient for ACMR, as an enterprise registered in the U.S., purchasing products from the U.S. and Japan and certain price advantages.

The price at which the Company purchased raw materials from ACMR is determined by reference to the price at which ACMR purchased such materials from its suppliers, without any circumstance where the price in related transactions is obviously unfair.

The Company has established a subsidiary, i.e. ACM CA, to take place of ACMR

for the purpose of purchasing raw materials in the U.S. on behalf of the Company, so that the issue of recurrent related transaction arising out of ACMR's purchasing raw materials for the Company will be solved completely.

(2) During the Reporting Period, the Company purchased robot arms and other raw materials from NINEBELL. The amount of products purchased by the Company from NINEBELL had increased along with the increase in the amount of sales of the Company, which was RMB 25.0045 million Yuan, RMB 52.0120 million Yuan and RMB 59.5530 million Yuan respectively. NINEBELL is a company focus on the production of robot arms, its level of processing and technology is relatively high, and its products of robot arms match with products of the Company well, therefore, the Company has always cooperated with it. To further deepen the business cooperation relationship between both parties, ACMR increased its investment in NINEBELL in September 2017, acquiring 20% equity interest of NINEBELL, and HUI WANG began to serve as a director of this company at the same time.

The price at which the Company purchases robot arms from NINEBELL is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

(3) In 2019, the Company purchased filters and other raw materials from Shengyi Technology, the transaction amount of which is RMB 5.9024 million Yuan. The price at which the Company purchases filters and other raw materials from Shengyi Technology is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

(4) During the Reporting Period, the Company purchased wafer testing services from AMEC for RMB 39,800 Yuan, RMB 97,100 Yuan and RMB 145,700 Yuan respectively. The price of testing services is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

(5) LING LIN and ZHIDE Yuan served as directors of the Company during the Reporting Period, and they serve or served as directors of Shanghai Integrated Circuit. The board of directors of the Company reviewed and passed the resolution of the resignation of ZHIDE Yuan and LING LIN as directors of the Company on August 10, 2017 and August 18, 2017 respectively. The Company determines that Shanghai Integrated Circuit is a related party of the Company during the period from January 1, 2017 to August 18, 2018.

In 2017, the Company purchased lens and accessories, software development services, etc. from Shanghai Integrated Circuit for RMB 1.0256 million Yuan. In January-August 2018, the Company purchased testing services from Shanghai Integrated Circuit for RMB 6.1575 million Yuan. The price at which the Company purchases lens and accessories, software development services, testing services, etc. from Shanghai Integrated Circuit is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

2. Sale of Commodities or Labor Services

(Unit: RMB 10,000 Yuan)

Related Party	Content of Transaction	2019		2018		2017	
		Amount	Percentage of Operating Costs	Amount	Percentage of Operating Costs	Amount	Percentage of Operating Costs
ACMR	semiconductor cleaning equipment	-	-	6,081.94	11.05%	4,389.52	17.31%
Taiwan Wafer Works	semiconductor cleaning equipment	-	-	496.31	0.90%	-	-
	services and	11.27	0.01%				

	accessories						
Shanghai Jingmeng Silicon Materials Co., Ltd.	semiconductor cleaning equipment	793.33	1.05%	-	-	-	-
	services and accessories	43.71	0.06%	7.31	0.01%	12.14%	0.05%
Shanghai Integrated Circuit	semiconductor cleaning equipment	-	-	2,646.96	4.81%	825.58	3.26%
Total		848.31	1.12%	9,232.52	16.78%	5,227.24	20.62%

During the Reporting Period, there are circumstances where the Company sold semiconductor cleaning equipment to related parties, i.e. ACMR, Taiwan Wafer Works, Shanghai Jingmeng Silicon Materials Co., Ltd. and Shanghai Integrated Circuit, specifically:

(1) In 2017 and 2018, the Company sold semiconductor cleaning equipment to ACMR, the amount of sales of which is RMB 43.8952 million Yuan and RMB 60.8194 million Yuan respectively. In 2019, the Company did not sell any product to ACMR.

In 2017, Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. and Yangtze Memory directly ordered one set of semiconductor cleaning equipment from ACMR respectively, therefore, the Company produced and sold to ACMR 2 sets of semiconductor cleaning equipment; in 2018, Yangtze Memory ordered 2 sets of semiconductor cleaning equipment from ACMR, and the Company produced and sold to ACMR 2 sets of semiconductor cleaning equipment. The price at which the Company sold semiconductor cleaning equipment to ACMR is determined by reference to the price at which Yangtze Memory and Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. purchased such products from ACMR, without any circumstance where the price in related transactions is obviously unfair.

(2) In 2018 and 2019, the Company sold semiconductor cleaning equipment to Taiwan Wafer Works and Shanghai Jingmeng Silicon Materials Co., Ltd. for RMB 4.9631 million and RMB 7.9333 million Yuan respectively. In addition, during the Reporting Period, the revenue from the Company's sale of accessories to Shanghai Jingmeng Silicon Materials Co., Ltd. is RMB 121,400 Yuan, RMB 73,100 Yuan and RMB 437,100 Yuan respectively; and the revenue from the sale of accessories to Taiwan Wafer Works in 2019 is RMB 112,700 Yuan. Shanghai Jingmeng Silicon Materials Co., Ltd. is a subsidiary of Taiwan Wafer Works. The price at which the Company sells semiconductor cleaning equipment to them is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

(3) In 2017 and January-August 2018, the Company sold semiconductor cleaning equipment to Shanghai Integrated Circuit for RMB 8.2558 million Yuan and RMB 26.4696 million Yuan respectively. The price at which the Company sells semiconductor cleaning equipment to it is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

3. Payment of Remuneration to Key Managers

During the Reporting Period, the allowances and remuneration paid by the Company to current key managers are as follows:

(Unit: RMB 10,000 Yuan)

Item	2019	2018	2017
Remuneration of Key Managers	578.06	446.77	317.88

(II) Non-recurrent Related Transactions

1. Related Securities

During the Reporting Period, the related securities in connection with the Company were securities provided by HUI WANG, the de facto controller of the Company, for the Company in order to obtain borrowings, specifically:

(Unit: RMB 10,000 Yuan)

Person Providing Security	Secured Amount	Starting Date	Expiring Date	Status of Performance
HUI WANG	3,000.00	March 1, 2018	March 1, 2021	In performance
HUI WANG	5,500.00	February 25, 2019	January 23, 2020	Completed
HUI WANG	5,000.00	February 25, 2019	February 24, 2020	Completed
HUI WANG	2,200.00	February 19, 2019	January 13, 2020	Completed
HUI WANG	1,000.00	January 24, 2018	January 23, 2019	Completed
HUI WANG	500.00	September 30, 2017	September 29, 2018	Completed
HUI WANG	2,750.00	August 21, 2017	August 20, 2018	Completed

2. Borrowing and Lending Monies

During the Reporting Period, there are circumstances where the Company borrowed and lent monies, specifically:

Related Party	Amount of Money Borrowed/Lent	Starting Date	Expiring Date
Borrow-in			
Shengxin Shanghai	RMB 20.1235 million Yuan	December 9, 2016	October 30, 2023
ACMR	USD 6 million Dollars	December 10, 2017	November 6, 2019
Lend-out			
ACMR	USD 5 million Dollars	June 21, 2019	June 21, 2020

(1) Information on borrowing and lending monies between the Company and Shengxin Shanghai

① Generation process of credits and debts among the Company, Shengxin Shanghai and ACMR

On October 30, 2016, Shengxin Shanghai and ACMSH entered into the Debt-to-Equity Conversion Agreement and agreed that Shengxin Shanghai provides a loan of RMB 20,123,500 Yuan to ACMSH for the development of ACMSH's businesses and needs of relevant businesses, the loan rate of which is fixed annual rate equal to 1% per year on the basis of simple interest; Shengxin Shanghai shall subscribe for newly increased registered capital of ACMSH at the price of RMB 3 Yuan corresponding to RMB 1 Yuan/registered capital by using the loan through the means of debt-to-equity conversion after 6 months as of the date on which ACMR succeeds in listing in the NASDAQ stock market in the U.S. and within 84 months as of the date on which the amounts have actually remitted into its account.

On October 30, 2016, Shengxin Shanghai and ACMSH, ACMR entered into the Options Agreement and agreed that Shengxin Shanghai will obtain the equity of ACMSH in the future under the Debt-to-Equity Conversion Agreement, ACMR granted Shengxin Shanghai an option to sell its equity in ACMSH to ACMR, and Shengxin Shanghai granted ACMR an option to purchase its limited equity in Shengmei from Shengxin Shanghai; The exercise price shall be paid in USD cash at the price of USD 2.5 dollars per share.

On March 14, 2017, Shengxin Shanghai and ACMSH, ACMR entered into the

Share Subscription Agreement and agreed that Shengxin Shanghai or its assignee may subscribe for 1,192,504 Class A common shares of ACMR in total at the price of USD 2.50 dollars per share in cash or non-cash, the deadline of exercise is May 17, 2023, and the total consideration of exercise is USD 2,981,259.26 dollars. If shares of ACMR are subsequently subject to any split/consolidation or other arrangement, the exercise price of Shengxin Shanghai shall be decreased/increased accordingly, and the number of exercisable shares shall be increased/decreased accordingly.

On March 30, 2018, Shengxin Shanghai entered into the Exercise Agreement with ACMSH and ACMR and agreed that Shengxin Shanghai would subscribe for 397,502 common shares of ACMR in total according to the adjustment mechanism under the above Share Subscription Agreement and other provisions, the exercise price shall be USD 7.50 dollars per share, and the total consideration of exercise shall be USD2,981,259.26 dollars; the funds used for exercise made by Shengxin Shanghai would source from the loan provided by ACMR to it, and at the same time, Shengxin Shanghai, upon the request of ACMR, would issue a senior guaranteed promissory note of US2,981,259.26 dollars to ACMSH, in addition, as the consideration for the above transfer of creditor's rights, ACMSH would issue a commercial promissory note of equivalent amount to ACMR.

In conclusion, as of March 30, 2018, Shengxin Shanghai held 397,502 Class A common shares of ACMR, representing 2.97% of all Class A shares.

In August 2019, ACMR entered into the Share Purchase Agreement with some of its shareholders (including Shengxin Shanghai), pursuant to which ACMR finally repurchased 154,821 Class A common shares from Shengxin Shanghai on August 14, 2019. As of December 31, 2019, the number of shares in ACMR held by Shengxin Shanghai is 242,681, accounting for 1.50% of all Class A common shares of ACMR at the end of that year.

②Settlement of credits and debts among the Shengxin Shanghai, ACMR and ACMSH

A. Repayment of certain funds

On August 14, 2019, ACMR repurchased 154,821 Class A common shares from Shengxin Shanghai at the price of USD 13.195 dollars per share, the total consideration of such repurchase is approximately USD 2,042,863.10 dollars, among which, USD 1,161,157.50 dollars is deducted by ACMR, the loan principal under the senior guaranteed promissory note between Shengxin Shanghai and ACMSH and the commercial promissory note between ACMSH and ACMR is therefore deceased to USD 1,820,101.76 dollars.

On October 29, 2019, ACMSH repaid the loan principal of RMB 7,837,039.02 Yuan (as calculated based on the exchange rate at the time of executing the Debt-to-Equity Conversion Agreement, the amount was approximately USD 1,161,157.50 dollars) under the Debt-to-Equity Conversion Agreement to Shengxin Shanghai.

B. Termination of credits and debts under promissory notes

On April 30, 2020, Shengxin Shanghai, ACMR and ACMSH entered into the Agreement on Assignment and Termination of Promissory Notes and agreed that the Company transfers all of its right and interests under the senior guaranteed promissory note between Shengxin Shanghai and ACMSH to ACMR; as the consideration for the above assignment, ACMR agreed to terminate the commercial promissory note between ACMSH and ACMR, and the obligations and liabilities of the Company under the commercial promissory note were discharged accordingly.

On the same day, ACMR and Shengxin Shanghai entered into the Agreement on Share Transfer and Termination of Promissory Notes and agreed that Shengxin Shanghai transfers all of 242,681 shares in ACMR held by it at present to ACMR, subject to the approval of relevant competent governmental authorities before December 31, 2023, both parties may choose one of the following methods as the method of paying the consideration of such share transfer:

Method I: A. ACMR terminates the senior guaranteed promissory note of

Shengxin Shanghai, and releases it from all of its obligations and liabilities under the promissory note; B. ACMR grants a new warrant to Shengxin Shanghai, pursuant to which Shengxin Shanghai may purchase 242,681 Class A common shares of ACMR at the price of USD 7.50 dollars per share;

Method II: A. Shengxin Shanghai performs the obligation of paying USD 1,820,101.76 dollars under the senior guaranteed promissory note and other obligations to ACMR; B. ACMR issues 242,681 Class A common shares to Shengxin Shanghai;

Method III: Any other method of payment approved by competent governmental authorities and agreed by ACMR and Shengxin Shanghai.

If the above methods fail to be approved by competent governmental authorities and ACMR and Shengxin Shanghai fail to enter into a new agreement on the payment of the above consideration before December 31, 2023, the cancellation of the senior guaranteed promissory note of Shengxin Shanghai will be deemed as the full performance of the obligation of paying consideration by ACMR.

C. Termination the Debt-to-Equity Conversion Agreement between the Company and Shengxin Shanghai and repayment of funds

On April 28, 2020, the Company repaid the loan principal of RMB 12,286,460.98 Yuan under the Debt-to-Equity Conversion Agreement to Shengxin Shanghai, and so far, the loan principal under the Debt-to-Equity Conversion Agreement was repaid in full.

On April 30, 2020, the Company and Shengxin Shanghai entered into the Termination Agreement and agreed that the Company shall pay interest payable equal to RMB 643,357.51 Yuan under the Debt-to-Equity Conversion Agreement to Shengxin Shanghai within 5 days from the effective date of the Termination Agreement, and the Debt-to-Equity Conversion Agreement shall be automatically terminated as of the date on which the above interest is repaid in full; both parties confirmed that no dispute has arisen from the Debt-to-Equity Conversion Agreement, and they will not make any litigation, arbitration or other claim for relevant matters in connection with the Debt-to-Equity Conversion Agreement.

On April 30, 2020, the Issuer paid the interest payable equal to RMB 643,357.51 Yuan to Shengxin Shanghai, the Debt-to-Equity Conversion Agreement was therefore terminated on April 30, 2020.

(2) In November 2017, in order to meet the needs of working capital turnover, the Company entered into a loan agreement with ACMR and agreed that, within the limit of USD10,000,000.00 dollars, ACMR would provide the Company with loan of which annual interest rate is 2.5%. The Company actually borrowed USD6,000,000.00 dollars on December 18, 2017, the original maturity date of such loan was November 6, 2018. In October 2018, the Company entered into the *Agreement on Extension of Foreign-debt Borrowing* and agreed that the one-year effective period of the original loan agreement would be extended to November 6, 2019 which date should be the maturity date, and within the extension period of November 7, 2018 to November 6, 2019, the annual interest rate of the borrowing should be changed into 4%. The Company has repaid such borrowing in December 2019.

(3) In June 2019, in order to raise funds to be used for the increase in capital of the Company, ACMR entered into the Loan Agreement with CleanChip HK, a then wholly-owned subsidiary, and agreed that CleanChip HK would provide ACMR with an one-year loan of which the principal is USD 5 million dollars, the annual interest rate of such loan is 2.5%. The Company acquired 100% equity interest of CleanChip HK from ACMR and put CleanChip HK in the scope of consolidated statements. Therefore, as of December 31, 2019, within the scope of consolidated statement of the Company, the Company had a balance of fund transfer with ACMR. ACMR had fully repaid such loan to CleanChip HK, a subsidiary of the Company, in January 2020.

3. Acquisition of CleanChip HK

On November 29, 2019, the Company held the first session extraordinary general meeting of shareholders in 2019 to resolve that the Company would acquire 100%

equity interest of CleanChip HK from ACMR in cash. The Company entered into the Share Transfer Agreement with ACMR and agreed that the Company would purchase all shares of CleanChip HK from ACMR for USD3.5 million dollars. The consideration of this transaction was determined based on the Project Asset Appraisal Report on the Appraisal of All Interests of Shareholders Involved in the Proposed Acquisition of CleanChip Technologies Limited by ACM Research (Shanghai), Inc. (Zhong Lian Ping Bao Zi [2019] No.1879) issued by China United Assets Appraisal Group Co., Ltd. After the appraisal, as of June 30, 2019, the appraised value of CleanChip HK and its subsidiaries is RMB 24.8750 million Yuan.

On February 24, 2020, the Company completed formalities of foreign exchange registration involved in the payment of acquisition price in the transaction, and paid the amount of equity transfer of USD 3.5 million dollars to ACMR on the next day.

4. Payment of Fees by the Company on behalf of ACMR

The Company paid allowances of Chinese directors, U.S. listing fees, patent fees, etc. on behalf of ACMR, specifically:

(Unit: RMB 10,000 Yuan)

Item	2019	2018	2017
Allowances of Chinese directors of ACMR	44.70	-	-
U.S. listing fees of ACMR	-	8.61	33.58
Patent fees of ACMR	2.64	11.02	11.54
Others	3.38	7.23	2.18

5. Acceptance of Technology License

On January 31, 2007, ACMR entered into the *Technology License Agreement* with ACMSH and agreed that ACMR would grant a global license of intellectual property rights owned or controlled by ACMR to ACMSH, i.e. to use, reproduce, modify, make derivative works or improve licensed technologies for the purpose of processing, manufacturing, importing, exporting, offering for sale or selling or otherwise distributing or commercializing products, such licensed intellectual property rights refer to any intellectual property rights owned or controlled by ACMR with respect to licensed technologies (i.e. Ultra ECPTM and Ultra SFPTM technologies owned by ACMR on a proprietary basis) as of the date on which the agreement takes effect, including but not limited to 45 patents and 62 pending patents; the effective period of the agreement is 20 years commencing from the execution date of the agreement, and the agreement shall be extended automatically and remain in full force and effect when it expires unless and until ACMR is no longer a shareholder of ACMSH; notwithstanding the agreement is terminated because ACMR is no longer a shareholder of ACMSH, ACMSH shall still have the right to use licensed technologies agreed upon in the agreement, unless ACMR pays RMB 84 million Yuan to ACMSH. For specific information on the Company's acceptance of technology license, please refer to "V(IV) Sharing of Key Resources with Other Parties" of "Section VI Business and Technology".

6. Other Related Transactions

(1) Purchase of smartpass cards from Shanghai Sand Information Technology System Co., Ltd.

During the Reporting Period, the Company purchased smartpass cards from Shanghai Sand Information Technology System Co., Ltd. for distributing benefits to employees, the amounts of which were RMB 375,400 Yuan, RMB 453,000 Yuan and RMB 580,300 Yuan. The price at which the Company purchases smartpass cards is determined based on market conditions, without any circumstance where the price in related transactions is obviously unfair.

(2) Provision of legal services by Law and Law to the Company

In April 2019, the Company and Law and Law entered into the Regular Legal Consultant Contract, the Company engaged Law and Law to serve as the regular legal consultant of the Company, the period of service commenced from April 16, 2019 to April 15, 2020, and the fees of legal consultant was USD 30,000 dollars. The Company paid RMB 157,500 Yuan to it for the fees of legal consultant in 2019.

(3) Payment of remuneration to MARK MCKECHNIE

In August 2018, the Company and MARK MCKECHNIE entered into the Labor Contract. In January 2019, MARK MCKECHNIE obtained the Foreigner Working Permit, and the Company paid the remuneration of RMB 501,900 Yuan to MARK MCKECHNIE in 2019. In March 2020, MARK MCKECHNIE resigned from the ACMSH.

(III) Related Receivables and Payables of the Company during the Reporting Period

At the end of each period during the Reporting Period, the information on the balance of each item of related parties is as follows:

(Unit: RMB 10,000 Yuan)

Item	Corporation	December 31, 2019	December 31, 2018	December 31, 2017
Receivables	ACMR	-	3,257.34	4,307.41
	Shanghai Jingmeng Silicon Materials Co., Ltd.	97.47	1.18	6.82
	Taiwan Wafer Works	6.17	-	-
	Shanghai Integrated Circuit	-	-	78.41
Prepaid Amounts	ACMR	309.73	-	-
	NINEBELL	243.07	392.61	149.63
Other Receivables	ACMR	3,693.14	139.93	113.06
	JIAN WANG	1.03	2.33	4.13
	FUPING CHEN	1.90	1.28	1.22
	Shengxin Shanghai	-	-	16.92
Long-term Receivables	Shengxin Shanghai	1,371.16	2,092.29	-
Payables	ACMR	2,419.57	5,482.65	3,442.52
	NINEBELL	587.43	1,013.81	1,387.54
	Shengyi Technology	340.45	-	-
Deposits received	Shanghai Jingmeng Silicon Materials Co., Ltd.	941.79	710.34	-
	Taiwan Wafer Works	-	-	343.05
Other Payables	ACMR	3,458.32	5,817.63	4,963.77
	Shengxin Shanghai	1,288.95	2,053.84	-
	Shengyi Technology	-	75.00	-
	HUI WANG	19.29	7.86	-38.70
	JIAN WANG	10.49	3.63	6.06
	FUPING CHEN	3.43	-	7.64
	LISA YI LU FENG	3.74	0.41	21.93
Long-term Payables	ACMR	1,371.16	2,092.29	-
	Shengxin Shanghai	-	-	2,033.72

Receivables between the Company and related parties are amounts receivable by the Company from ACMR, Shanghai Jingmeng Silicon Materials Co., Ltd. and Shanghai Integrated Circuit for purchasing cleaning equipment, and the change in amounts receivable by the Company from ACMR, Shanghai Jingmeng Silicon Materials Co., Ltd. and Shanghai Integrated Circuit is caused by unsettled amounts of products sold by the Company to ACMR, Shanghai Jingmeng Silicon Materials Co., Ltd. and Shanghai Integrated Circuit.

Prepaid amounts between the Company and related parties are amounts prepaid by the Company to ACMR and NINEBELL for purchasing raw materials. The main reason for the change in the balance of prepaid amounts of the Company is the increase in procurement from ACMR and NINEBELL arising out of the increase in sales revenue of the Company.

Other receivables between the Company and related parties are borrowed amounts receivable by the Company from ACMR. In June 2019, in order to raise funds for the increase in capital of the Company, ACMR borrowed USD 5 million dollars from CleanChip HK which is a wholly-owned subsidiary of it at that time. In December 2019, the Company acquired 100% of equity interest in CleanChip HK from ACMR and included CleanChip HK in its scope of consolidated financial statements. Therefore, as of December 31, 2019, within the scope of consolidated financial statements of the Company, the Company existed the balance of other receivables from ACMR arising out of the merger of CleanChip HK.

Long-term receivables between the Company and related parties are the balance of the senior guaranteed promissory note issued by Shengxin Shanghai to ACMSH. The reason for the change in long-term receivables between the Company and related parties is that, in August 2019, ACMR repurchased 154,821 Class A common shares from Shengxin Shanghai, the consideration of such repurchase was approximately USD 2,042,863.10 dollars, among which, USD 1,161,157.50 dollars is deducted by ACMR, the loan principal under the senior guaranteed promissory note between Shengxin Shanghai and ACMSH and the commercial promissory note between ACMSH and ACMR is therefore deceased to USD 1,820,101.76 dollars (RMB 7.8370 million Yuan).

Payables between the Company and related parties are amounts payable by the Company to ACMR, NINEBELL and Shengyi Technology for products. The main reason for the change in payables between the Company and related parties is that in order to reduce related transactions, the Company established a subsidiary, i.e. ACM CA, to purchase raw materials and thus to undertake the business of purchasing raw materials of ACMR in the U.S., therefore, amounts payable by the Company to ACMR are decreased.

Deposits received between the Company and related parties are amounts of goods received from Shanghai Jingmeng Silicon Materials Co., Ltd. and Taiwan Wafer Works in advance. The main reason for the change in deposits received between the Company and related parties is that the Company delivers products to Shanghai Jingmeng Silicon Materials Co., Ltd. and Taiwan Wafer Works and Shanghai Jingmeng Silicon Materials Co., Ltd. purchases products from the Company.

Other payables between the Company and related parties are mainly the balance of price for the acquisition of CleanChip HK, procurement service fees and borrowed amounts payable by the Company to ACMR and the balance of borrowed amounts payable by the Company to Shengxin Shanghai. The change in other payables between the Company and related parties is caused by the change in payable procurement service fees, repayment of borrowings provided by ACMR and payable price for the acquisition of CleanChip HK and repayment of borrowings provided by Shengxin Shanghai.

Long-term payables between the Company and related parties are mainly the balance of commercial promissory note issued by ACMSH to ACMR and the balance of borrowings payable to Shengxin Shanghai. The main reason for the change in long-term receivables between the Company and related parties is that, in August 2019, ACMR repurchased 154,821 Class A common shares from Shengxin Shanghai, the consideration of such repurchase was approximately USD 2,042,863.10 dollars, among which, USD 1,161,157.50 dollars is deducted by ACMR, the loan principal under the senior guaranteed promissory note between Shengxin Shanghai and ACMSH and the commercial promissory note between ACMSH and ACMR is therefore deceased to USD 1,820,101.76 dollars (RMB 7.8370 million Yuan).

(IV) Briefly Summarization of Related Transactions

During the Reporting Period, related transactions of the Company are summarized as follows:

(Unit: RMB 10,000 Yuan)

Item	2019	2018	2017
Related Procurement	13,914.93	16,219.86	7,333.38
Related Sales	848.31	9,232.52	5,227.24
Remuneration of Key Managers	578.06	446.77	317.88
Fees Paid for the account of others	50.72	26.86	47.30
Other related transactions	123.97	45.30	37.54

(V) Effect of Related Transactions on Financial Status and Operating Results of the Company

During the Reporting Period, there is no material difference between related sales made by the Company and related parties and contemporaneous market prices, and the amount and percentage of recurrent related transactions appear to be in decline, therefore, they have no material effect on financial status and operating results of the Company.

(VI) Commitments on Regulating and Reducing Related Transactions

To reduce and normalize related transactions which may occur in the future between the Company and related parties and ensure that interests of minority shareholders will not be impaired, the de facto controller and controlling shareholder of the Company make the following commitments with respect to the normalization and reduction of related transactions:

“1. I/Our enterprise will take measures to normalize related transactions with the Issuer and endeavor to reduce such related transactions, provided that the interests of the Issuer and its shareholders shall not be adversely affected.

2. With respect to related transactions which are in the normal course of business or necessary to be carried out based on other reasonable reasons or unavoidable, I/our enterprise and other enterprises controlled by me/our enterprise will enter into normalized transaction agreement with the Issuer according to laws, and go through approval procedures in accordance with provisions of relevant laws, administrative regulations, departmental rules, normative documents and the Articles of Association of ACM Research (Shanghai), Inc. then effective, and ensure the enforcement of such related transactions based on the principle of fair pricing.

3. I/our enterprise will perform necessary obligations, such as the obligation of related parties' avoidance of voting, legal approval procedures approving related transactions and the obligation of information disclosure in strict accordance with relevant provisions.

4. I/Our enterprise undertakes not to make use of related transactions for illegally transferring funds, profits of the Issuer or engaging in any other act infringing on interests of the Issuer, other shareholders or creditors.”

XI. Decision-making Procedures and Opinions of Independent Directors of Related Transactions during the Reporting Period

During the Reporting Period, related transactions occurred by the Company have performed approval procedures of related transactions as provided for in the Articles of Association and other documents. Meanwhile, to further normalize and reduce related transactions, the Issuer has formulated the *Rules on Procedures of General Meeting of Shareholders*, the Rules on Procedures of Meeting of Board of Directors, the *Working Rules of Independent Directors*, the *Administration Rules on Related Transactions*, etc., which has further specified approval procedures of related transactions, information disclosure of related transactions and other matters.

On April 30, 2020, the Issuer held the fourth session meeting of the first board of

directors, the independent directors gave their opinions on the legality of approval procedures performed by related transactions and fairness of trading prices during the Reporting Period as follows:

Related transactions between the Company and related parties during the Reporting Period have observed the principle of fairness, voluntariness and reasonableness, and the price of related transactions are fair without infringing on the interests of the Company and non-related shareholders.

XII. Changes in Related Parties

During the Reporting Period, changes in related parties of the Company are mainly as below:

(I) Changes in Related Legal Persons during the Reporting Period

1. New Subsidiary or Equity Participation Company Created through Merger by an Enterprise under Common Control

During the Reporting Period, there are three new subsidiaries of the Company, i.e. CleanChip HK, ACMKR and ACM CA, through merger by enterprises under common control. For specific information, please refer to “Section V. IV. Controlled Subsidiaries and Equity Participation Companies of the Issuer” of this [***].

2. Changes in Legal Persons Directly or Indirectly Controlled or Significantly Affected by Related Natural Persons

During the Reporting Period, any change in legal persons or other organizations which are directly or indirectly controlled by related natural persons of the Issuer or in which the above persons (except for independent directors) serve as directors or senior managers constitutes a change in related legal persons during the Reporting Period.

3. Changes in Other Related Legal Persons

During the Reporting Period, any change in legal persons or other organizations which are directly or indirectly controlled by any shareholder directly holding more than 5% of shares of the Issuer constitutes a change in related legal persons during the Reporting Period.

(II) Changes in Related Natural Persons during the Reporting Period

1. Changes in Directors, Supervisors or Senior Managers

During the Reporting Period, any change in directors, supervisors or senior managers shall constitute a change in related natural persons.

2. Changes in Other Related Natural Persons

During the Reporting Period, any change in closely related family members of directors, supervisors or senior managers of the Issuer, including spouse, children of age of 18 years or above and their spouses, parents and spouse’s parents, brothers and sisters and their spouses, spouse’s brothers and sisters, parents of children’s spouse.

Section VIII Financial Accounting Information and Management Analysis

The financial accounting data and relevant financial information in this Section, unless otherwise specified, are based on the audited financial statements and the notes thereto. Unless otherwise noted, the Company's financial data and financial indicators are calculated on the basis of the data in the consolidated financial statements. The financial and accounting data and relevant instructions in this Section reflect the main contents of the audited financial statements and notes of the Company during the Reporting Period. The Company reminds investors to pay attention to the full text of the financial statements and audit reports to obtain all the financial information.

I. Audited Financial Statements

(I) Consolidated Financial Statements

1. Consolidated Balance Sheet

Unit: RMB 1 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Current assets:			
Cash and bank balances	440,029,105.69	95,828,639.76	45,153,190.82
Accounts receivables	209,896,421.78	173,605,541.67	97,704,922.53
Prepayments	11,244,578.61	13,360,469.02	3,905,821.92
Other receivables	47,638,486.72	17,160,806.70	6,373,285.85
Inventory	307,274,118.34	264,159,937.04	135,531,891.91
Other current assets	192,567,769.71	3,717,096.53	989,597.80
Total current assets	1,208,650,480.85	567,832,490.72	289,658,710.83
Non-current assets:			
Long-term receivables	14,841,790.94	24,704,508.34	696,937.77
Long-term equity investments	30,719,024.14	739,752.09	
Fixed assets	13,963,028.87	16,384,814.69	14,169,046.69
Construction in progress	3,702,119.11	-	-
Intangible assets	2,400,762.49	1,881,893.23	693,745.70
Long-term deferred expenses	8,295,263.44	8,689,887.89	1,122,116.94
deferred tax assets	20,120,805.29	11,086,424.72	12,457,173.66
Other non-current assets	5,308,201.87	4,702,696.64	2,122,055.55
Total non-current assets	99,350,996.15	68,189,977.60	31,261,076.31
Total Assets	1,308,001,477.00	636,022,468.32	320,919,787.14

(Continued)

Unit: RMB 1 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Current liabilities:			
Short-term borrowings	96,958,575.62	64,835,620.60	33,300,000.00
Accounts payable	143,174,383.74	188,211,170.82	88,130,207.32

Deposit received	68,022,078.58	68,258,641.92	8,603,248.60
Employee benefits payable	13,478,935.67	3,416,152.85	649,603.00
Taxes payable	29,038,214.04	9,241,710.55	70,040.30
Other payables	61,905,739.91	91,372,797.93	63,154,597.49
Total current liabilities	412,577,927.56	425,336,094.67	193,907,696.71
Non-current liabilities:			
Long-term payables	13,711,646.54	20,922,885.14	24,529,579.95
Long-term employee benefits payable	1,114,296.57	212,643.68	
Estimated liabilities	22,053,589.22	13,163,850.07	3,859,193.72
Deferred income	28,615,025.37	31,339,538.78	50,264,734.81
Total non-current Liabilities	65,494,557.70	65,638,917.67	78,653,508.48
Total liabilities	478,072,485.26	490,975,012.34	272,561,205.19
Shareholders' Equity			
Share capital / paid in capital	390,201,347.00	213,124,950.00	213,124,950.00
Capital reserve	366,545,796.07	7,748,794.15	3,751,014.56
Other comprehensive income	115,559.34	163,531.34	2,827.06
Surplus reserve	7,471,613.51	-	-
Retained earnings	65,594,675.82	-75,989,819.51	-168,520,209.67
Total shareholders' equity attributable to the parent company	829,928,991.74	145,047,455.98	48,358,581.95
Minority interest	-	-	-
Total shareholders' equity	829,928,991.74	145,047,455.98	48,358,581.95
Total liabilities and shareholders' equity	1,308,001,477.00	636,022,468.32	320,919,787.14

2. Consolidated Income Statement

Unit: RMB 1 Yuan

Item	2019	2018	2017
I. Total operating income	756,732,956.80	550,269,055.81	253,587,250.17
Including: Operating income	756,732,956.80	550,269,055.81	253,587,250.17
II. Total operating cost	626,548,338.60	464,868,954.67	252,729,671.93
Including: operating cost	415,158,395.29	307,096,125.81	140,427,291.41
Taxes and surcharges	647,614.16	421,488.03	285,904.30
Selling expenses	84,754,934.36	60,046,855.52	43,493,320.88
Administrative expenses	30,297,265.12	20,404,116.85	13,942,792.96
Research and development expenses	99,268,029.88	79,414,978.15	52,172,371.35
Financial expenses	-3,577,900.21	-2,514,609.69	2,407,991.03

Including: Interest expenses	7,456,097.63	5,047,846.77	2,082,525.24
Interest income	2,046,399.55	638,352.04	58,452.12
Add: Other income	26,715,646.95	20,876,330.34	15,965,166.08
Investment income (“-” for loss)	1,240,299.89	-10,247.91	-
Including: investment income from associated enterprises and joint ventures	-20,727.95	-10,247.91	-
Credit impairment losses (“-” for loss)	-2,235,058.65	-	-
Asset impairment losses (“-” for loss)	-788,808.94	-2,373,682.39	-2,986,596.54
III. Operating profit (“-” for loss)	155,116,697.45	103,892,501.18	13,836,147.78
Add: Non-operating income	33,632.92	54,367.47	217,903.96
Less: Non-operating expenses	2,031,271.51	1,115,198.33	713,472.88
IV. Total profit (“-” for total losses)	153,119,058.86	102,831,670.32	13,340,578.86
Less: Income tax expenses	18,231,716.42	10,301,280.16	2,479,984.75
V. Net profit (“-” for net loss)	134,887,342.44	92,530,390.16	10,860,594.11
(I) Classified by business continuity			
1. Net profit from continuing operations (“-” for net loss)	134,887,342.44	92,530,390.16	10,860,594.11
2. Net profit from discontinued operations (“-” for net loss)	-	-	-
(II) Classified by ownership			
1. Net profits attributable to shareholders of the parent company (“-” for net loss)	134,887,342.44	92,530,390.16	10,860,594.11
2. Profit or loss of minority interest (“-” for net loss)	-	-	-
VI. Other comprehensive income, net of tax	-47,972.00	160,704.28	2,827.06
Other comprehensive income attributable to owners of the parent company, net of tax	-47,972.00	160,704.28	2,827.06
(I) Other comprehensive income that cannot be reclassified to profit or loss	-	-	-
(II) Other comprehensive income to be reclassified to profit or loss	-47,972.00	160,704.28	2,827.06
Including: Foreign currency translation reserve	-47,972.00	160,704.28	2,827.06
Other comprehensive income attributable to owners of minority shareholders, net of tax	-	-	-
VII. Total comprehensive income	134,839,370.44	92,691,094.44	10,863,421.17
Total comprehensive income attributable to owners of the parent company	134,839,370.44	92,691,094.44	10,863,421.17
Total comprehensive income attributable to minority shareholders	-	-	-
VIII. Earnings per share:			
(I) Basic earnings per share (RMB 1 Yuan/share)	0.36	-	-
(II) Diluted earnings per share (RMB 1	0.36	-	-

Yuan/share)

3. Consolidated Statement of Cash Flows

Unit: RMB 1 Yuan

Item	2019	2018	2017
I. Cash flows from operating activities			
Cash received from sales of goods or rendering of services	730,630,575.46	540,892,514.09	179,871,258.38
Refunds of taxes	51,415,157.90	31,616,948.86	22,944,850.31
Cash received relating to other operating activities	32,124,009.88	4,266,384.04	23,079,888.82
Subtotal of cash inflows from operating activities	814,169,743.24	576,775,846.99	225,895,997.51
Cash paid for goods and services	538,881,062.29	400,716,490.93	138,752,796.19
Cash paid to and on behalf of employees	84,379,310.56	58,378,437.95	35,035,843.57
Cash paid for all types of taxes	8,575,237.99	265,012.03	215,864.00
Cash paid relating to other operating activities	109,627,644.35	78,605,561.90	60,883,758.26
Subtotal of cash outflows from operating activities	741,463,255.19	537,965,502.81	234,888,262.02
Net cash flows from operating activities	72,706,488.05	38,810,344.18	-8,992,264.51
II. Cash inflows from investing activities			
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	2,350.00	8,200.00	-
Subtotal of cash inflows from investing activities	2,350.00	8,200.00	-
Cash paid for acquisition and construction of fixed assets, intangible assets and other long-term assets	10,165,874.74	14,731,164.00	2,052,347.92
Cash paid for investment	188,852,600.00	-	-
Net cash paid by acquisition of subsidiaries and other business units	30,750,000.00	-	-
Cash paid relating to other investment activities	34,492,500.00	-	-
Subtotal of cash outflows from investing activities	264,260,974.74	14,731,164.00	2,052,347.92
Net cash flows from investing activities	-264,258,624.74	-14,722,964.00	-2,052,347.92
III. Cash flows from financing activities			
Cash received from investment absorption	560,661,364.69	-	-

Cash received from borrowings	128,873,975.15	121,295,620.60	72,898,750.23
Cash received relating to other financing activities	-	-	39,205,200.00
Subtotal of cash inflows from financing activities	689,535,339.84	121,295,620.60	112,103,950.23
Cash paid for debt repayment	97,735,510.19	89,760,000.00	72,615,241.78
Cash paid for distribution of dividends or profits and for interest expenses	7,611,020.80	2,640,570.32	1,775,707.74
Cash paid relating to other financing activities	49,994,239.02	-	-
Subtotal of cash outflows from financing activities	155,340,770.01	92,400,570.32	74,390,949.52
Net cash flows from financing activities	534,194,569.83	28,895,050.28	37,713,000.71
IV. Effect of foreign exchange rate changes on cash and cash equivalents	1,558,032.79	-2,306,981.52	-1,310,938.21
V. Net increase in cash and cash equivalents	344,200,465.93	50,675,448.94	25,357,450.07
Add: Cash and cash equivalents at beginning of period	95,828,639.76	45,153,190.82	19,795,740.75
VI. Cash and cash equivalents at end of period	440,029,105.69	95,828,639.76	45,153,190.82

(II) Financial Statements of the Parent Company

1. Balance Sheet of the Parent Company

Unit: RMB 1 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Current assets:			
Cash and bank balances	286,781,661.15	27,215,160.52	41,504,289.26
Accounts receivables	320,416,930.78	195,092,417.32	97,704,922.53
Prepayments	23,159,474.00	13,328,626.96	3,905,821.92
Other receivables	11,555,869.32	17,064,181.28	6,405,194.89
Inventory	295,107,215.49	263,975,720.12	135,531,891.91
Other current assets	192,023,607.72	2,944,359.83	989,597.80
Total current assets	1,129,044,758.46	519,620,466.03	286,041,718.31
Non-current assets:			
Long-term receivables	14,841,790.94	24,704,508.34	696,937.77
Long-term equity investments	36,719,024.14	5,739,752.09	5,000,000.00
Fixed assets	13,651,736.37	16,305,494.30	14,168,744.79
Construction in progress	3,702,119.11	-	-
Intangible assets	1,997,794.83	1,600,080.80	693,745.70

Long-term deferred expenses	8,116,458.98	8,669,850.06	1,122,116.94
deferred tax assets	17,951,274.93	11,070,257.47	12,457,173.66
Other non-current assets	4,644,711.91	4,518,951.92	2,122,055.55
Total non-current assets	101,624,911.21	72,608,894.98	36,260,774.41
Total Assets	1,230,669,669.67	592,229,361.01	322,302,492.72

(Continued)

Unit: RMB 1 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Current liabilities:			
Short-term borrowings	96,958,575.62	64,835,620.60	33,300,000.00
Accounts payable	115,306,027.30	188,130,524.93	88,130,207.32
Deposit received	23,322,451.48	32,405,506.20	13,403,248.60
Employee benefits payable	11,559,044.56	2,788,215.49	649,603.00
Taxes payable	27,931,334.97	8,196,421.68	70,040.30
Other payables	61,196,982.56	90,312,457.45	59,287,214.68
Total current liabilities	336,274,416.49	386,668,746.35	194,840,313.90
Non-current liabilities:			
Long-term payables	13,711,646.54	20,922,885.14	24,529,579.95
Estimated liabilities	22,053,589.22	13,163,850.07	3,859,193.72
Deferred income	28,615,025.37	31,339,538.78	50,264,734.81
Total non-current Liabilities	64,380,261.13	65,426,273.99	78,653,508.48
Total liabilities	400,654,677.62	452,095,020.34	273,493,822.38
Shareholders' Equity			
Share capital / paid in capital	390,201,347.00	213,124,950.00	213,124,950.00
Capital reserve	365,097,509.99	7,222,320.06	3,751,014.56
Surplus reserve	7,471,613.51	-	-
Retained earnings	67,244,521.55	-80,212,929.39	-168,067,294.22
Total shareholders' equity	830,014,992.05	140,134,340.67	48,808,670.34
Total liabilities and shareholders' equity	1,230,669,669.67	592,229,361.01	322,302,492.72

2. Income Statement of the Parent Company

Unit: RMB 1 Yuan

Item	2019	2018	2017
I. Operating income	727,990,275.70	538,268,092.74	253,587,250.17
Less: operating cost	415,095,559.79	307,096,125.81	140,427,291.41
Taxes and surcharges	647,614.16	421,488.03	285,904.30

Selling expenses	59,017,992.96	58,120,402.63	43,493,320.88
Administrative expenses	27,274,443.41	18,028,288.17	13,887,959.04
Research and development expenses	89,291,097.73	75,582,755.94	52,172,371.35
Financial expenses	-3,651,805.80	-833,760.93	2,410,035.58
Including: Interest expenses	7,447,466.67	5,047,846.77	2,082,525.24
Interest income	1,562,504.19	632,774.75	57,226.63
Add: Other income	26,715,646.95	20,876,330.34	15,965,166.08
Investment income (“-” for loss)	1,240,299.89	-10,247.91	-
Including: investment income from associated enterprises and joint ventures	-20,727.95	-10,247.91	-
Credit impairment losses (“-” for loss)	-4,401,517.26	-	-
Asset impairment losses (“-” for loss)	-788,808.94	-2,390,364.32	-2,986,596.54
II. Operating profit (“-” for loss)	163,080,994.09	98,328,511.20	13,888,937.15
Add: Non-operating income	24,971.35	836.81	217,903.96
Less: Non-operating expenses	2,030,140.30	1,113,405.44	712,972.88
III. Total profit (“-” for total losses)	161,075,825.14	97,215,942.57	13,393,868.23
Less: Income tax expenses	20,315,527.09	9,361,577.74	2,479,984.75
IV. Net profit (“-” for net loss)	140,760,298.05	87,854,364.83	10,913,883.48
(I) Net profit from continuing operations (“-” for net loss)	140,760,298.05	87,854,364.83	10,913,883.48
(II) Net profit from discontinued operations (“-” for net loss)	-	-	-
V. Other comprehensive income, net of tax			
(I) Other comprehensive income that cannot be reclassified to profit or loss	-	-	-
(II) Other comprehensive income to be reclassified to profit or loss	-	-	-
VI. Total comprehensive income	140,760,298.05	87,854,364.83	10,913,883.48
VII. Earnings per share:			
(I) Basic earnings per share (RMB 1 Yuan/share)	0.36	-	-
(II) Diluted earnings per share (RMB 1 Yuan/share)	0.36	-	-

3. Statement of Cash Flows of the Parent Company

Unit: RMB 1 Yuan

Item	2019	2018	2017
I. Cash flows from operating activities			
Cash received from sales of goods or rendering of services	603,269,257.85	461,257,053.63	179,707,776.95
Refunds of taxes received	51,415,157.90	31,616,948.86	22,944,850.31
Cash received relating to other operating activities	31,998,311.79	4,284,153.45	19,868,533.49

Subtotal of cash inflows from operating activities	686,682,727.54	497,158,155.94	222,521,160.75
Cash paid for goods and services	544,449,905.39	399,376,146.95	138,707,965.72
Cash paid to and on behalf of employees	74,857,899.56	52,924,907.19	35,032,161.07
Cash paid for all types of taxes	8,584,497.05	294,768.20	215,864.00
Cash paid relating to other operating activities	104,829,026.11	72,855,435.20	60,933,091.24
Subtotal of cash outflows from operating activities	732,721,328.11	525,451,257.54	234,889,082.03
Net cash flows from operating activities	-46,038,600.57	-28,293,101.60	-12,367,921.28
II. Cash flows from investing activities			
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	2,350.00	8,200.00	-
Subtotal of cash inflows from investing activities	2,350.00	8,200.00	-
Cash paid for acquisition and construction of fixed assets, intangible assets and other long-term assets	8,832,529.79	14,288,397.74	2,052,347.92
Cash paid for investment	188,852,600.00	-	-
Net cash paid by acquisition of subsidiaries and other business units	31,750,000.00	-	-
Cash paid relating to other investing activities	-	-	-
Subtotal of cash outflows from investing activities	229,435,129.79	14,288,397.74	2,052,347.92
Net cash flows from investing activities	-229,432,779.79	-14,280,197.74	-2,052,347.92
III. Cash flows from financing activities			
Cash received from investment absorption	560,661,364.69	-	-
Cash received from borrowings	128,873,975.15	121,295,620.60	72,898,750.23
Cash received from other financing activities	-	-	39,205,200.00
Subtotal of cash inflows from financing activities	689,535,339.84	121,295,620.60	112,103,950.23
Cash paid for debt repayment	97,735,510.19	89,760,000.00	72,615,241.78
Cash paid for distribution of dividends or profits and for interest expenses	6,624,389.84	2,640,570.32	1,775,707.74
Cash paid relating to other financing activities	49,994,239.02	-	-

Subtotal of cash outflows from financing activities	154,354,139.05	92,400,570.32	74,390,949.52
Net cash flows from financing activities	535,181,200.79	28,895,050.28	37,713,000.71
IV. Effect of foreign exchange rate changes on cash and cash equivalents	-143,319.80	-610,879.68	-1,152,691.04
V. Net increase in cash and cash equivalents	259,566,500.63	-14,289,128.74	22,140,040.47
Add: Cash and cash equivalents at beginning of period/year	27,215,160.52	41,504,289.26	19,364,248.79
VI. Cash and cash equivalents at end of period/year	286,781,661.15	27,215,160.52	41,504,289.26

II. Preparation Basis of Financial Statements and Scope of Consolidated Statements

(I) Preparation Basis of Financial Statements

1. Preparation Basis

The financial statements are prepared in accordance with the Accounting Standards for Business Enterprises – General Principles issued by the China Ministry of Finance (“MoF”), together with specific accounting standards, application guidance thereon, interpretations and other related regulations thereof, and in accordance with the disclosure provisions of Compilation Rule for Information Disclosure by Companies Offering Securities to the Public No. 15 - General Provisions on Financial Reports issued by China Securities Regulatory Commission, on the basis of a going concern and the actual transactions and events for the period of the financial statements.

2. Going Concern

There exist no events that affect its ability to continue as a going concern, and it is expected to have such ability in the next twelve months. The Company’s financial statements have been prepared on the basis of going concern assumption.

(II) Scope and Changes of Consolidated Financial Statements

1. Scope of Consolidated Financial Statements

The consolidation scope of the Company’s consolidated financial statements is determined on the basis of control, and all the subsidiaries (including the separable part of the investees under the control of the Company) are included in the consolidated financial statements.

During the Reporting Period, the subsidiaries within the scope of the Company’s consolidated financial statements are as follows:

Name of subsidiary	Shareholding ratio	Whether it is included in the scope of consolidated financial statements		
		December 31, 2019	December 31, 2018	December 31, 2017
ACM Wuxi	100%	Yes	Yes	Yes
Shengwei Shanghai	100%	Yes	Not applicable	Not applicable
CleanChip HK	100%	Yes	Yes	Yes
ACMKR	100%	Yes	Yes	Yes
ACM CA	100%	Yes	Not applicable	Not applicable

Note: 1. Shengwei Shanghai was established on March 25, 2019; 2. CleanChip HK was established on June 9, 2017; 3. ACM South Korea was established on December 5, 2017; 4. ACMR

CA was established on April 5, 2019.

2. Changes in the Consolidation Scope during the Reporting Period

(1) Changes in the scope of consolidated statements in 2017

In 2017, the scope of the Company's consolidated statements did not change.

(2) Changes in the scope of consolidated statements in 2018

In 2018, the scope of the Company's consolidated statements did not change.

(3) Changes in the scope of consolidated statements in 2019

The Company acquisition of 100% equity of CleanChip HK from ACMR, the controlling shareholder of the Company, which is a business combination involving entities under common control. CleanChip HK and its subsidiaries, ACM South Korea and ACMR CA, have been incorporated into the scope of the Company's consolidated statements from the date of establishment; Shengwei Shanghai, a wholly owned subsidiary of the Company, was incorporated on March 25, 2019. The Company has included Shengwei Shanghai into the scope of the consolidated statements since its incorporation.

III. Audit Opinion of Certified Public Accountant

Entrusted by the Company, BDO China has audited the Company's financial statements, including the consolidated and the parent company's balance sheets as of December 31, 2017, 2018 and 2019, the consolidated and the parent company's income statements, the consolidated and the parent company's cash flow statements, consolidated and the parent company's statements of changes in owner's equity and notes to financial statements of 2017, 2018 and 2019, and issued an unmodified audit opinion.

In the opinion of BDO China, the financial statements of the Company are prepared in accordance with the Accounting Standards for Business Enterprises in all major aspects, and fairly reflect the consolidated and the parent company's financial position of ACMSH as of December 31, 2017, 2018 and 2019, as well as the consolidated and the parent company's operating results and cash flows in 2017, 2018 and 2019.

IV. Key Audit Matters and Judgment Criteria for Materiality Related to Financial Accounting Information

(I) key audit matters

1. Recognition of operating income

(1) Details

In the opinion of BDO China,

"ACMSH is mainly engaged in the research and development, production and sales of special semiconductor equipment. The operating income of ACMSH in 2019, 2018 and 2017 are RMB 756.733 million Yuan, RMB 550.2691 million Yuan and RMB 253.5873 million Yuan respectively.

The large amount of operating income is one of the reporting indicators of ACMSH. Due to the high gross profit of ACMSH, the growth of operating income is the main reason for the increase in profit, for which there is an inherent risk that the management will manipulate operating income recognition in order to achieve specific goals or expectations, so we determine the recognition of operating income as a key audit matter."

(2) How our audit addressed the key audit matter

For the recognition of operating income, the audit procedures implemented by BDO China mainly include:

① Understand, evaluate and test the internal control system related to the recognition of operating income, and test the effectiveness of key internal control implementation;

② Check the sales contracts and orders between ACMSH and its main customers, including the main sales terms, and evaluate the relevant accounting policies for the recognition of operating income of ACMSH;

③ Select samples to check the supporting documents related to the recognition of operating income, such as sales contract, sales order, sales invoice, acceptance form and other information for verification;

④ Select samples to implement confirmation procedures for sales revenue and accounts receivable balance;

⑤ Implement the interview procedure, interview the main customers and some end customers of product sales to understand the authenticity of sales revenue;

⑥ Perform a cut-off test on operating income to determine whether revenue recognition is recorded in the correct accounting period.

(II) Judgment Criteria for Materiality Related to Financial Accounting Information

According to its industry and development stage, the Company judges the importance of financial information from the nature and amount of the event. When judging the importance of the nature of the event, the Company mainly considers whether the event is one of the daily activities in nature, whether it significantly affects the Company's financial position, operating results, cash flows and other factors; when judging the importance of the amount of the event, based on the consideration of the nature and size of the Company's business, the standards for major events related to financial accounting information disclosed by the Company in this Section are those events that account for 5% of consolidated operating income or consolidated net assets, with a significant change amount and over 30% of change proportion, or that have significant impact on the Company's future operating results, financial position, cash flow, liquidity and ability to continue as a going concern and may affect the investors' investment judgment.

V. Potential Specific Impacts on or Risks to Issuer's Future Profitability (Operation) or financial position

(I) Main Factors Affecting the Company's Future Profitability (Operation) or Financial Position and Changing Trend thereof

1. Product Features

The Company is mainly engaged in the research and development, production and sales of semiconductor equipment, with the main products including semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet processing equipment. The Company insists on the development strategy of differentiation competition and innovation. Through independent research and development of single-wafer megasonic cleaning technology, single wafer wet bench combined cleaning technology, electro-plating technology, stress-free polishing technology, vertical furnace tube technology etc., the Company provides customized equipment and process solutions to global customers in wafer manufacturing, advanced packaging and other fields, effectively improving the customer's production efficiency, product yield and reduce production costs.

Based on independent innovation and research and development as well as many years of professional technique and technology accumulation, the Company has successfully developed the world's first SAPS/TEBO megasonic cleaning technology and single wafer wet bench combined cleaning technology applied to the wafer cleaning area with technology nodes 45 nm and below, which can effectively solve the cleaning problem of organic contamination and particles after etching and greatly reduce the usage of the chemical reagents such as sulfuric acid, helping customers reduce production costs while meeting the requirements of China's energy conservation and emissions reduction at the same time.

With its advanced technology and abundant product lines, the Company has

developed into one of the few semiconductor equipment suppliers with certain international competitiveness in mainland China, whose products have been recognized by many domestic and foreign mainstream semiconductor manufacturers and have gained a good reputation in the market.

With the continuous evolution of global semiconductor manufacturing technology, the requirements for technical indicators of semiconductor specific equipment manufacturing are also increasing. The profitability and financial position of the Company, to some extent, will depend on the advanced manufacturing technology of semiconductor special equipment, which puts forward higher requirements for the Company to maintain sufficient R&D investment and continue technological innovation.

2. Business Model

Semiconductor special equipment enterprises focus on technology and process accumulation, have high requirements for raw material quality, strict customer verification process and highly customized products, and put forward higher requirements for business management capabilities such as R&D, sales, production, etc. In the R&D process, semiconductor special equipment enterprises need to increase R&D investment and continue technological innovation in order to have certain technical advantages in the industry competition; in the procurement process, semiconductor special equipment enterprises have strict requirements for the quality of raw materials and parts, and the raw materials and parts with high precision, quality and reliability are important guarantees of semiconductor special equipment's performance and stability; in the sales process, semiconductor special equipment enterprises need to continuously increase investment in product technical verification and after-sales service.

3. Industry Competition

The semiconductor special equipment industry of the company is a typical technology-intensive industry, involving microelectronics, electrical, mechanical, material, chemical engineering, fluid mechanics, automation, image recognition, communications, software system and many other disciplines, with a high threshold of technical R&D. Through years of technology accumulation and economies of scale, leading enterprises in the industry have established high barriers to entry. The global semiconductor cleaning equipment market is highly concentrated, especially in the field of single-wafer cleaning equipment, the total market share of the four companies, namely DNS, TEL, LAM and SEMES, has reached more than 90%, of which the market share of DNS is the highest and accounts for more than 40%.

Faced with the high concentration and economies of scale formed by leading companies in semiconductor special equipment industry, the Company needs to continuously strengthen its technical strength and expand the scale of production and marketing to enhance its competitiveness in the industry.

4. External Market Environment

The external market environment factors that affect the Company's future operating results and financial position are mainly the global economy and industry life cycle. Due to the changes in the global economic environment and industry life cycle, the demand for semiconductor products will fluctuate, which will affect the Company's operating results and financial position.

At present, the global semiconductor industry is on the road to its third regional industrial transition, that is, to shift production to mainland China. Looking back, the first industrial shift to Japan and the second industrial shift to South Korea and Taiwan both led to the development of local industries, the advancement of vertical division of labor and the optimization of resource allocation. For the target countries and regions of industrial shift, the semiconductor industry thereof tends to extend from packaging and testing to wafer manufacturing and chip design, to semiconductor materials and equipment, and ultimately to the overall development of the whole industrial chain. Compared with developed countries and regions, the division of labor in semiconductor industry chain in mainland China is still in the early stage, and the semiconductor special equipment

industry will become the focus of future growth.

Benefiting from the accelerated shift of semiconductor industry to mainland China, China's semiconductor industry has expanded its scale and demand, and the Company has made full use of its geographical characteristics, technological capabilities and market accumulation to sustain its sound development.

(II) Potential Specific Impacts on or Risks to the Company's Future Profitability (Operation) or Financial Position of the Said Main Factors

The potential specific impacts on or risks to the company's future profitability (operation) or financial position of the said main factors are as follows:

1. Operating Income

Recent years have witnessed the growing semiconductor industry on the whole, the increasing downstream emerging demand, the shift of semiconductor industry to mainland China, the increase in capital expenditure of customers and the constantly growing demand for semiconductor special equipment. Meanwhile, the trend of import substitution of China's semiconductor special equipment is becoming increasingly evident. With the advantages of technology and process accumulation, new product development capability, rich product lines, product quality, customer resources, etc., the Company's operating income has maintained rapid growth during the reporting period, with an average compound annual growth rate of 72.75%. In the future, the Company's operating income is expected to continue to grow.

2. Gross Margin

The semiconductor special equipment is typically one of the advanced, precise and cutting-edge products considering the semiconductor special equipment is highly customized and its downstream customers have high requirements on specifications, product standards, technical parameters, etc.. And further the industry has high technical barriers to entry, market barriers and customer verification barriers. The above products and industry characteristics determine that the Company has a relatively high gross margin.

During the reporting period, the comprehensive gross margin of the Company was 44.62%, 44.19% and 45.14% respectively, each of which can be considered as a high gross margin. The Company will further improve its market position and maintain a high gross margin through product upgrades, process improvement, increased product types, enhanced cost control, and better business negotiation.

3. R&D Investment

Since its establishment, the Company has been committed to providing innovation-driven, high-performance products and technical solutions for the semiconductor industry, and keeps a relatively high R&D investment. After years of accumulation, the Company has developed a large number of core technologies with independent intellectual property rights, and applied them to the main products, which has been recognized by its customers. During the reporting period, the amount of R&D expenses of the Company was RMB 52.1724 million Yuan, RMB 79.415 million Yuan and RMB 99.268 million Yuan respectively, accounting for 20.57%, 14.43% and 13.12% of the operating income respectively, each of which can be considered as a high R&D investment. In order to improve the market competitiveness of products, the Company will continue to attach importance to the R&D, and the proportion of R&D investment to operating income will remain at a relatively high level.

VI. Significant Accounting Policies and Accounting Estimates Adopted in the Reporting Period

(I) Accounting Treatment Method of Business Combination Involving Entities under Common Control and not Involving Entities under Common Control

Business combinations involving entities under common control: assets and

liabilities that are obtained by the Company in a business combination involving entities under common control (including the goodwill generated by the ultimate controlling party in the acquisition of the acquiree) shall be measured at the carrying amounts of the assets and liabilities of the Company being combined as recorded in the consolidated financial statements of the ultimate controlling company on the combination date. The difference between the carrying amount of the net assets obtained by the combination and the carrying amount of the consideration paid for the combination (or the aggregate face value of shares issued as consideration) shall be adjusted to share premium under capital surplus. If the capital surplus is not sufficient to decrease the difference, any excess shall be adjusted against retained earnings.

Business combinations not involving entities under common control: assets paid and liabilities incurred or undertaken by the Company as the consideration of business combinations are measured at fair value on the acquisition date, and the difference between fair value and carrying amount is recorded to profit or loss for the current period. Where the combination cost is more than the share of the fair value of the net identifiable assets of the acquiree acquired in the combination, the difference is recognized as goodwill. Where the combination cost is less than the share of the fair value of the net identifiable assets of the acquiree acquired in the combination, the difference is recognized in profit or loss of the current period.

The intermediary fees for audit, legal services, assessment, consultation, etc. and other direct fees incurred for the business combination shall be recognized as profit or loss of the current period upon incurrence; the transaction fees of issuing equity securities or debt securities for the business combination shall be recognized as the initial recognition amount of equity securities or debt securities.

(II) Preparation Method of Consolidated Financial Statements

1. Scope of consolidation

The consolidation scope of the Company's consolidated financial statements is determined on the basis of control, and all subsidiaries (including the separable part of the investee controlled by the Company) are included in the consolidated financial statements.

2. Consolidation procedure

Based on the financial statements of the Company and its subsidiaries, the Company prepares the consolidated financial statements according to other relevant information. In the preparation of the consolidated financial statements, the Company regards the entire company group as an accounting entity, and reflects the overall financial position, operating results and cash flows of the Company group in accordance with the recognition, measurement and presentation requirements of the relevant Accounting Standards for Business Enterprises and the unified accounting policies.

The accounting policies and accounting periods adopted by all subsidiaries included in the consolidation scope of the consolidated financial statements are consistent with those of the Company. In case of any inconsistency, necessary adjustments shall be made according to the accounting policies and accounting periods of the Company when the consolidated financial statements are being prepared. For subsidiaries acquired through business combination not involving entities under common control, their financial statements shall be adjusted on the basis of the fair value of the identifiable net assets on the acquisition date. For the subsidiaries acquired through business combination involving entities under common control, the financial statements of the subsidiaries shall be adjusted based on the carrying amount of their assets and liabilities (including the goodwill generated by the ultimate controlling party in the acquisition of the acquiree) in the financial statements of the ultimate controlling party.

The owner's equity, net profit or loss of the current period and the share of non-controlling interests in the current comprehensive income of the subsidiary are separately listed below the owner's equity line item in the consolidated balance sheet, the net profit line item in the consolidated income statement and the total

comprehensive income line item. If the current loss shared by the minority shareholders of the subsidiary exceeds the balance formed by the minority shareholders' share in the owner's equity at beginning of period of the subsidiary, the minority shareholders' equity shall be offset.

(1) Add subsidiary or business

During the Reporting Period, if subsidiaries or businesses are increased due to business combinations involving entities under common control, the opening balance of the consolidated balance sheet shall be adjusted; the incomes, expenses and profits of subsidiaries or businesses from the beginning of the current period to the end of the Reporting Period shall be included in the consolidated income statement; the cash flows of subsidiaries or businesses from the beginning of the current period to the end of the Reporting Period shall be included in the consolidated statement of cash flows, and the related items in the comparative statement shall be adjusted at the same time as if the consolidated reporting entity has been existing since the ultimate controlling party began to control.

If the investee under common control can be controlled due to additional investment or other reasons, the adjustment shall be deemed to be made by parties involved in the combination according to the current status when the ultimate controlling party begins to control. For the equity investment held prior to the acquisition of the control of the acquiree, the relevant profit or loss, other comprehensive income and other changes in net assets from the later of the date of acquiring the original equity and the date when the acquirer and the acquiree are under common control to the combination date have been determined to respectively decrease the retained earnings at the beginning of the period or the current profit or loss in the period of the comparative statement.

During the Reporting Period, if subsidiaries or businesses are increased due to business combination not involving entities under common control, the opening balance of the consolidated balance sheet will not be adjusted; the income, expenses and profits of subsidiaries or businesses from the acquisition date to the end of the Reporting Period will be included in the consolidated income statement; the cash flows of subsidiaries or businesses from the acquisition date to the end of the Reporting Period will be included in the consolidated statement of cash flows.

If the investee not under common control can be controlled due to additional investment or other reasons, the equity of the acquiree held before the acquisition date shall be re-measured by the Company according to the fair value of the equity on the acquisition date, and the difference between the fair value and the carrying amount shall be recognized as the current investment income. If the equity of the acquiree held before the acquisition date involves other comprehensive income under the equity method accounting and other changes in owner's equity other than net profit or loss, other comprehensive income and profit distribution, the changes in other comprehensive income and other owner's equity related to it will be converted into the current investment income on the acquisition date, except for other comprehensive income arising from the change in net liabilities or net assets of the defined benefit plan remeasured by the investee.

(2) Disposal of subsidiaries or businesses

① General treatment

During the Reporting Period, when the Company disposes of a subsidiary or business, the income, expenses and profits of the subsidiary or business from the beginning of the period to the disposal date shall be included in the consolidated income statement; the cash flows of the subsidiary or business from the beginning of the period to the disposal date shall be included in the consolidated statement of cash flows.

When the control of the investee is lost due to the disposal of part of the equity investment or other reasons, the remaining equity investment after disposal shall be re-measured by the Company at its fair value on the date when the control is lost. The difference between the sum of the consideration obtained from the disposal of equity and the fair value of the remaining equity, less the sum of the share of the net assets of

the original subsidiary calculated continuously from the acquisition date or the combination date calculated according to the original shareholding ratio and the goodwill, shall be recognized as the investment income in the period in which the control is lost. Other comprehensive income related to the equity investment of the original subsidiary or other changes in owner's equity other than net profit or loss, other comprehensive income and profit distribution shall be converted into current investment income in the period in which the control is lost, except for other comprehensive income arising from the change of net liabilities or net assets of the defined benefit plan remeasured by the investee.

Accounting treatment shall be carried out according to the above principles if the shareholding ratio of the Company decreases and the control is lost due to the capital increase of the subsidiary by other investors.

② Step-by-step disposal of subsidiaries

Where the Company loses control of a subsidiary through two or more arrangements (transactions) to dispose of the equity investments in the subsidiary step by step, if the terms and conditions of the arrangements (transactions) of the disposal of the equity investments in the subsidiary and the economic effects fall under one or more of the following circumstances, it usually indicates that the Company shall account for the multiple arrangements as a "package deal":

A. they are entered into at the same time or in contemplation of each other;

B. only taken as a whole can they achieve an overall commercial effect;

C. the occurrence of one transaction is dependent on the occurrence of at least one other transaction;

D. one single transaction seems not economically justified, but it is economically justified when considered together with other transactions.

Where the transactions of disposal of equity investments in a subsidiary until the loss of control are assessed as a package deal, these transactions are accounted for as one transaction of disposal of a subsidiary with loss of control. Before losing control, however, the difference of consideration received on disposal and the share of net assets of the subsidiary from the acquisition is recognized as other comprehensive income in the consolidated financial statements. When losing control, the cumulated other comprehensive income is transferred to profit or loss of the period of losing control.

If the transactions of disposal of equity investments in a subsidiary until the loss of control are not assessed as a package deal, these transactions are accounted for according to the relevant policies of partial disposal of equity investment in subsidiaries without loss of control; upon loss of control, accounting treatment shall be carried out according to the general treatment method of disposal of subsidiaries.

(3) Purchase of minority interests in subsidiaries

The difference between the long-term equity investment newly acquired by the Company due to purchase of minority interests and the share of net assets of subsidiaries continuously calculated according to the newly increased shareholding ratio from the acquisition date (or the combination date), shall be adjusted to share premium under capital surplus in the consolidated balance sheet. If the capital surplus is not sufficient to decrease the difference, any excess shall be adjusted against retained earnings.

(4) Partial disposal of equity investments in subsidiaries without loss of control

The difference between the disposal price obtained from the partial disposal of the long-term equity investment in subsidiaries and the share of the net assets of subsidiaries continuously calculated from the acquisition date or the combination date corresponding to the disposal of the long-term equity investment, without loss of control, shall be adjusted to share premium under capital surplus in the consolidated balance sheet. If the capital surplus is not sufficient to decrease the difference, any excess shall be adjusted against retained earnings.

(III) Financial Instruments

Financial instruments include financial assets, financial liabilities and equity instruments.

1. Classification of financial instruments

(1) Applicable accounting policies from January 1, 2019

According to the business model for the Company to manage financial assets and the contractual cash flows characteristics of financial assets, financial assets after the initial recognition are classified into: financial assets measured at amortized cost, financial assets (debt instruments) at fair value through other comprehensive income ("FVTOCI") and financial assets at fair value through profit or loss ("FVTPL").

If the business model is intended to collect the contract cash flows and the contract cash flows is only the payments of principal and accrued interest on the outstanding principal, such financial assets will be classified as the financial assets measured at amortized cost; if the business model is intended to both collect the contract cash flows and sell the financial assets, with the contract cash flows being only the payments of principal and accrued interest on the outstanding principal, such financial assets will be classified as financial assets (debt instruments) at FVTOCI; other financial assets are classified as the financial assets at FVTPL.

For non-held-for-trading equity instrument investment, the Company determines whether to designate it as financial asset (equity instrument) to FVTOCI at the time of initial recognition. Upon the initial recognition, in order to eliminate or significantly reduce accounting mismatches, financial assets can be designated as the financial assets at FVTPL.

Financial liabilities are classified at the time of initial recognition as the financial liabilities at FVTPL and the financial liabilities measured at amortized cost.

Financial liabilities meeting one of the following conditions can be designated as the financial liabilities at FVTPL at the time of initial measurement:

① Such designation can eliminate or significantly reduce accounting mismatches.

② According to the enterprise risk management or investment strategy stated in formal written documents, a portfolio of financial liabilities or a portfolio of financial assets and financial liabilities is managed and made performance evaluation on the basis of fair value, and the key management personnel in the Company shall be reported thereon.

③ The financial liabilities include embedded derivatives that need to be separately split.

(2) Applicable accounting policies before January 1, 2019

Financial assets and financial liabilities upon the initial recognition are classified into: financial assets or financial liabilities at FVTPL, including held-for-trading financial assets or financial liabilities and financial assets or financial liabilities directly designated as at FVTPL; held-to-maturity investments; receivables; available-for-sale financial assets; other financial liabilities, etc.

2. Recognition basis and measurement method of financial instruments

(1) Accounting policies applicable from January 1, 2019

① Financial assets measured at amortized cost

Financial assets measured at amortized cost include notes receivable, accounts receivables, other receivables, long-term receivables, debt investment, etc., which are initially measured at fair value, and relevant transaction expenses are recognized as the initially recognized amount; accounts receivables that do not contain significant financing components and that the Company decides not to consider financing components for no more than one year are initially measured at the contract transaction price.

The interest calculated by the effective interest method during the holding period

is recorded to profit or loss for the period.

At the time of recovery or disposal, the difference between the price obtained and the carrying amount of the financial asset shall be recorded to profit or loss for the period.

② Financial assets (debt instruments) at FVTOCI

Financial assets (debt instruments) at FVTOCI, including accounts receivables financing, other debt investment, etc., are initially measured at fair value, and relevant transaction costs are recognized as the initially recognized amount. The financial assets are subsequently measured at fair value and the changes in fair value are recognized as other comprehensive income except for interest, impairment loss or gain and exchange gain or loss calculated by the effective interest method.

At the time of derecognition, the cumulative profits or losses previously recognized in other comprehensive income are transferred and reclassified into profit or loss for the period.

③ Financial assets (equity instruments) at FVTOCI

Financial assets (equity instruments) at FVTOCI, including other equity instrument investments, are initially measured at fair value, and relevant transaction costs are recognized as the initially recognized amount. The financial assets are subsequently measured at fair value, and the changes in fair value are recognized as other comprehensive income. The dividends obtained shall be recorded to profit or loss for the period.

At the time of derecognition, the cumulative profits or losses previously recognized in other comprehensive income are transferred and reclassified into retained earnings.

④ Financial assets at FVTPL

Financial assets at FVTPL include trading financial assets, derivative financial assets and other non-current financial assets, which are initially measured at fair value, and relevant transaction costs are recorded to profit or loss for the period. The financial assets are subsequently measured at fair value, and the changes in fair value are recorded to profit or loss for the period.

⑤ Financial liabilities at FVTPL

Financial liabilities at FVTPL include trading financial liabilities, derivative financial liabilities, etc., which are initially measured at fair value, and relevant transaction costs are recorded to profit or loss for the period. The financial liabilities are subsequently measured at fair value, and the changes in fair value are recorded to profit or loss for the period.

At the time of derecognition, the difference between the carrying amount and the consideration paid shall be recorded to profit or loss for the period.

⑥ Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost include short-term borrowings, notes payable, accounts payable, other payables, long-term borrowings, bonds payable and long-term payables, which are initially measured at fair value, and relevant transaction costs are recorded to the initially recognized amount.

The interest calculated in accordance with the effective interest method during the holding period is recorded to profit or loss for the period.

At the time of derecognition, the difference between the consideration paid and the carrying amount of the financial liability shall be recorded to profit or loss for the period.

(2) Applicable accounting policies before January 1, 2019

① Financial assets (financial liabilities) at FVTPL

At the time of acquisition, fair value (deducting cash dividends that have been declared but not yet paid or bond interest that has reached the interest payment period

but not yet received) shall be taken as the initial recognition amount, and the relevant transaction costs shall be recorded to profit or loss for the period.

During the holding period, the interest or cash dividends obtained shall be recognized as investment income, and the changes in fair value shall be recorded to profit or loss for the period at the end of the period.

At the time of disposal, the difference between the fair value and the initial entry amount shall be recognized as investment income, and the profit or loss of changes in fair value shall be adjusted.

② Held-to-maturity investments

At the time of acquisition, the sum of the fair value (deducting the bond interest that has reached the interest payment period but has not been received) and related transaction costs shall be taken as the initial recognition amount.

During the holding period, the interest income shall be calculated and recognized according to the amortized cost and the actual interest rate, and recorded to the investment income. The effective interest rate shall be determined at the time of acquisition and shall remain unchanged during the expected duration or the applicable shorter period.

At the time of disposal, the difference between the price obtained and the carrying amount of the investment shall be recorded to the investment income.

③ Accounts receivables

The receivable creditor's rights formed by the Company's external sales of goods or provision of services, as well as the creditor's rights of other enterprises held by the Company that do not include debt instruments with quoted prices in the active market, including accounts receivables, other receivables, etc., shall take the contract or agreement price receivable from the buyer as the initial recognition amount; for those with financing nature, they shall be initially recognized according to their present value.

At the time of recovery or disposal, the difference between the price obtained and the carrying amount of the accounts receivables shall be recorded to profit or loss for the period.

④ Available-for-sale financial assets

At the time of acquisition, the sum of the fair value (deducting the cash dividends that have been declared but not yet paid or the bond interest that has reached the interest payment period but not yet received) and the relevant transaction expenses shall be taken as the initial recognition amount.

The interest or cash dividend obtained during the holding period shall be recognized as investment income. At the end of the period, it is measured at fair value and changes in fair value are recognized as other comprehensive income. However, the equity instrument investment that has no quotation in the active market and whose fair value cannot be reliably measured, and the derivative financial assets that are linked to the equity instrument and must be settled by delivering the equity instrument, shall be measured at cost.

At the time of disposal, the difference between the price obtained and the carrying amount of the financial asset shall be recognized as the investment profit or loss; at the same time, the amount corresponding to the disposal part of the accumulative amount of the fair value change originally directly recognized as other comprehensive income shall be transferred and recorded to profit or loss for the period.

⑤ Other financial liabilities

The sum of the fair value and related transaction costs shall be taken as the initial recognition amount. The financial liabilities are subsequently measured at amortized cost.

3. Recognition basis and measurement method for financial assets transfer

When the Company transfers the financial assets, if it has transferred almost all the risks and rewards of the ownership of the

financial assets to the transferee, the financial assets will be derecognized; if it has retained almost all the risks and rewards of the ownership of the financial assets, the financial assets will not be derecognized.

When judging whether the transfer of financial assets meets the above conditions for derecognition of financial assets, the principle of substance over form shall be adopted. The Company divides the transfer of financial assets into the entire transfer and partial transfer of financial assets. For a transfer of a financial asset in its entirety that satisfies the condition of derecognition, the difference between the following is recognized in profit or loss for the period.

(1) the carrying amount of the financial asset transferred; and

(2) the sum of the consideration received from the transfer and any accumulative amount of the changes in fair value originally recognized in the owner's equity (if the financial assets involved in the transfer are the financial assets (debt instruments) measured at FVTOCI, and available-for-sale financial assets)

If a part of the transferred financial asset qualifies for derecognition, the overall carrying amount of the financial asset prior to transfer is to be allocated between the part that continues to be recognized and the part that is derecognized, based on the respective fair values of those parts, and the difference between the following is to be recognized in profit or loss for the period:

(1) the carrying amount allocated to the part derecognized on the date of derecognition; and

(2) the sum of the consideration received for the part derecognized and any cumulative changes in the fair value allocated to the part derecognized which has been previously directly recognized in the owner's equity (if the financial assets involved in the transfer are the financial assets (debt instruments) measured at FVTOCI, and available-for-sale financial assets).

For a transfer of a financial asset that does not satisfy the derecognition criteria, the Company continues to recognize the transferred financial asset. The consideration received from transfer of assets is recognized as a financial liability.

4. Conditions for derecognition of financial liabilities

The Company derecognizes a financial liability (or part of it) only when the underlying present obligation (or part of it) thereof is discharged. An agreement between the Company and a creditor to replace the existing financial liability with a new financial liability with substantially different terms is accounted for as derecognition of the existing financial liability and recognition of a new financial liability.

If all or part of the contract terms of the existing financial liability are substantially modified, the existing financial liability or part of it shall be derecognized, and the financial liability after the modification of the terms shall be recognized as a new financial liability.

When the Company derecognizes a financial liability or a part of it, it recognizes the difference between the carrying amount of the financial liability (or part of the financial liability) derecognized and the consideration paid (including any non-cash assets transferred or new financial liabilities assumed) in profit or loss for the period.

If the Company repurchases part of the financial liability, the carrying amount of the financial liability as a whole shall be allocated on the repurchase date at the relative fair value of the continuously recognized part and the derecognized part. The difference between the carrying amount allocated to the derecognized part and the consideration paid (including any non-cash assets transferred or new financial liabilities assumed) shall be recorded to profit or loss for the period.

5. Determination method for fair value of financial assets and financial liabilities

For financial instruments with an active market, the fair value shall be determined by the quoted price in the active market. For financial instruments without an active market, the fair value shall be determined by valuation technology. In the valuation, the

Company adopts the valuation technology applicable in the current situation and supported by sufficient data and other information, selects the input values consistent with the characteristics of the assets or liabilities considered by the market participants in the transactions of the relevant assets or liabilities, and gives priority to the use of the relevant observable input values. The unobservable input value is used only when the relevant observable input value cannot be obtained or is not feasible.

6. Test method and accounting treatment method for financial assets impairment

(1) Applicable accounting policies from January 1, 2019

The Company takes account of all reasonable and supportable information, including forward-looking information, to estimate the expected credit loss of financial assets measured at amortized cost and financial assets (debt instruments) at FVTOCI in a single or combined way. The measurement of expected credit loss ("ECL") depends on whether there is a significant increase in credit risk of financial assets since the initial recognition.

If the credit risk of the above financial instruments has increased significantly since initial recognition, the Company measures loss allowance based on the amount of ECL in the full lifetime; if credit risk of the financial instrument has not increased significantly since initial recognition, the Company recognizes loss allowance based on the amount of ECL within the coming 12-month of the financial instrument. Increase in or reversal of loss allowance is included in profit or loss for the period as loss/gain on impairment.

Generally, if the overdue period is more than 30 days, the Company will consider that the credit risk of the financial instrument has increased significantly, unless there is conclusive evidence that the credit risk of the financial instrument has not increased significantly since the initial recognition.

If the credit risk of the financial instrument on the balance sheet date is low, the Company considers that the credit risk of the financial instrument has not increased significantly since the initial recognition.

If there is objective evidence that a financial asset has suffered credit impairment, the Company shall make provision for impairment of the financial asset on a single basis.

For accounts receivables, regardless of whether it contains significant financing components or not, the Company always measures its loss allowance based on the amount of ECL in the full lifetime, and increase in or reversal of loss allowance is included in profit or loss for the period as loss/gain on impairment.

The Company combines the accounts receivables according to similar credit risk characteristics (Aging), and makes the following estimates of the provision rate of bad debt allowances for the accounts receivables based on all reasonable and supportable information, including forward-looking information:

① Credit group of non-combined related parties

Aging	Provision rate for the accounts receivables (%)
Within 1 year (including 1 year)	1 or 5
Including: within 6 months	1
7-12 months	5
1-2 years (including 2 years)	10
2-3 years (including 3 years)	20
3-4 years (including 4 years)	25
4-5 years (including 5 years)	30
More than 5 years	100

②Credit group of combined related parties

The accounts receivables that final customers have paid to related parties at the end of the period and then related parties have paid to the Company after the period are not subject to bad debt allowances; the accounts receivables that the final customer has not paid to the related party at the end of the period are subject to bad debt allowances based on the credit group of non-combined related parties.

(2) Applicable accounting policies before January 1, 2019

In addition to the financial assets at FVTPL, the Company will check the carrying amount of financial assets on the balance sheet date. If there is objective evidence that a financial asset is impaired, the provision for impairment shall be made.

① Provision for impairment of available-for-sale financial assets:

At the end of the period, if the fair value of available-for-sale financial assets declines seriously, or it is expected that the decline is not temporary after considering various related factors, it is recognized that it has been impaired, and the accumulated loss caused by the decline of the fair value originally recognized as the owner's equity is transferred together to recognize the impairment loss.

If, in a subsequent accounting period, the fair value of available-for-sale debt instruments increases and the increase can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment losses are reversed. The reversal shall be recognized in profit or loss for the current period.

The impairment loss of available-for-sale equity instrument investment shall not be reversed through profit or loss.

② Bad debt allowances for accounts receivables:

A. Accounts receivables with individually significant amount and individual allowance for bad debts:

Judgment basis or amount standard of individually significant amount:

Individually significant amount of accounts receivables refers to an amount of more than RMB 8 million Yuan (inclusive).

Individually significant amount of other receivables refers to an amount of more than RMB 3 million Yuan (inclusive).

The provision method for receivables with individually significant amount and individual allowance for bad debts:

In case of individual impairment assessment of receivables, if there is objective evidence to prove that impairment has occurred, the allowances for bad debts shall be made according to the difference between the present value of estimated future cash flows and their carrying amount, and shall be recorded to profit or loss for the period. Receivables without impairment through individual assessment shall be classified into the corresponding group for allowances for bad debts.

B. Receivables with allowances for bad debts in the group with identical credit risk characteristics: 12,612.86

Basis for determining group	
Group by Aging	Divide the group based on Aging of receivables as credit risk characteristics
Other Group	Accounts receivables with very low credit risk, such as accounts receivables, export tax refund of value-added tax receivable, petty cash, deposit and margin, which final customers have paid to related parties at the end of the period and then related parties have paid to the Company after the period
Provision method for receivables with allowances for bad debts in the group with identical credit risk characteristics	
Group by Aging	Aging Analysis
Other Group	According to the actual loss rate of previous years and the current situation,

	there is generally no allowances for bad debts
--	--

In a group, allowances for bad debts are made by aging analysis:

Aging	Provision rate for the accounts receivables (%)	Provision rate for other receivables (%)
Within 1 year (inclusive)	1 or 5	5
Including: within 6 months	1	5
7-12 months	5	5
1-2 years (including 2 years)	10	10
2-3 years (including 3 years)	20	20
3-4 years (including 4 years)	25	25
4-5 years (including 5 years)	30	30
More than 5 years	100	100

C. Receivables without individually significant amount but with individual allowance for bad debts:

Reasons for individual allowance for bad debts: there is objective evidence that the Company will not be able to recover the amount according to the original terms of receivables.

Provision method for bad debts: the provision shall be made according to the difference between the present value of estimated future cash flows of receivables and their carrying amount.

(3) Provision for impairment of held-to-maturity investments:

The measurement of impairment loss of held-to-maturity investments shall be handled according to the measurement method for impairment loss of receivables.

(IV) Inventories

1. Classification of Inventories

Inventory classification: materials in transit, raw materials, finished goods, work in process, delivered goods, entrusted processing materials, etc.

2. Pricing for inventories transferred out

The actual cost of inventories transferred out is determined by using the weighted average method, and the cost of finished goods inventory and work in process inventory shall include the raw materials, direct labor and the manufacturing expenses allocated by the system method under the normal production capacity.

3. Basis for determining the net realizable value of different types of inventories

In the ordinary course of business, net realizable value of finished goods inventory, materials inventory for sale and other merchandise inventory directly available for sale is the estimated selling price of the said inventories less the estimated costs necessary to make the sale and relevant taxes. Net realizable value of material inventories to be processed is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale and relevant taxes. Net realizable value of inventories held for performing sales contracts or employment contracts is calculated on the basis of contract prices. If the quantity of inventories held is more than the quantity ordered in sales contracts, net realizable value of the excess part of the inventories shall be calculated based on the general sales price.

At the end of the period, provision for decline in value of inventories can be determined on the basis of an individual inventory item; however, for items of inventories with large quantity and low unit price, provision for decline in value of inventories are determined according to inventory types; for items of inventories that relate to a product line that is produced and marketed in the same geographical area, have the same or similar end uses or purposes, and cannot be practicably evaluated

separately from other items, provision for decline in value of inventories can be determined on an aggregate basis.

Unless there is conclusive evidence that the market price on the balance sheet date is abnormal, the net realizable value of inventories is measured at the market price on the balance sheet date.

The net realizable value of inventory items at the end of the period is determined based on the market price on the balance sheet date.

4. Inventory system of inventories

The Company adopts a perpetual inventory system.

5. Amortization method for low value consumables and packages

(1) Low value consumables use the immediate write-off method; and

(2) Packing materials use the immediate write-off method.

(V) Fixed Assets

1. Recognition of Fixed Assets

Fixed assets refer to tangible assets that are held for the purpose of producing goods, providing services, leasing or operating management, and whose useful life exceeds one accounting year. No fixed asset may be recognized unless it simultaneously meets the conditions as follows:

(1) The economic benefits pertinent to the fixed asset are likely to flow into the enterprise; and

(2) The cost of the fixed asset can be measured reliably.

2. Depreciation Method

The depreciation of fixed assets is calculated and withdrawn by using the straight-line method, and the depreciation rate is determined according to the category of fixed assets, expected useful life and expected net residual value rate. If the useful life of each component of the fixed assets is different or the economic benefits are generated for the enterprise in different ways, different depreciation rates or depreciation methods are selected to accrue depreciation respectively.

For the fixed assets acquired under finance leases, if it can be reasonably determined that the ownership of the leased assets will be acquired at the end of the lease term, depreciation shall be accrued within the remaining useful life of the leased assets; if it cannot be reasonably determined that the ownership of the leased assets can be acquired at the end of the lease term, depreciation shall be accrued within the shorter period between the lease term and the remaining useful life of the leased assets.

The depreciation method, depreciation life, residual value rate and annual depreciation rate of various fixed assets are as follows:

Category	Depreciation method	Depreciation life (year)	Residual value rate (%)	Annual depreciation rate (%)
Machinery equipment	Straight-line Method	5–10	5	9.50 ~ 19.00
Computer and electronic equipment	Straight-line Method	3–5	5	19.00 ~ 31.67
office equipment	Straight-line Method	5	5	19.00
Transportation equipment	Straight-line Method	4–5	5	19.00 ~ 23.75

(VI) Intangible Assets

1. Valuation method for intangible assets

(1) Intangible assets obtained by the Company are measured initially at cost;

The cost of the purchased intangible assets includes the purchase price, relevant taxes and other expenses directly attributable to the expected use of the assets. If the

purchase price of intangible assets is delayed beyond the normal credit conditions and has the nature of financing in essence, the cost of intangible assets shall be determined on the basis of the present value of the purchase price.

Intangible assets acquired by debt restructuring for debt repayment by the debtor shall be recorded at the fair value of the waived creditor's rights, and the taxes and other costs attributable to the expected use of the assets, and the difference between the fair value of the waived creditor's rights and the carrying amount shall be recorded to profit or loss for the period.

On the premise that the exchange of non-monetary assets has commercial substance and the fair value of the assets received and the assets transferred can be reliably measured, the received intangible assets in the exchange of non-monetary assets is recorded on the basis of the fair value of the assets transferred, unless there is conclusive evidence that the fair value of the assets received is more reliable; for the exchange of non-monetary assets that do not meet the above premise, the received intangible assets is at the cost of carrying amount of the assets transferred and the relevant taxes payable and no profit or loss is recorded.

(2) Subsequent measurement

Analyze and judge the useful life of intangible assets when acquiring them.

An intangible asset with a finite useful life is amortized by using the straight-line method over the period of bringing economic benefits to the Company; an intangible asset with an indefinite useful life when there is no foreseeable limit to the period over which the asset is expected to generate economic benefits for the Company, is not amortized.

2. Useful life estimation of intangible assets with finite useful life

Project	Expected useful life	Amortization method	Basis
Software	2-10 years	Straight-line method	Expected beneficial life
Patented technology	10 years	Straight-line method	Expected beneficial life

For an intangible asset with a finite useful life, the Company reviews the useful life and the amortization method at the end of each financial year.

After review, the useful life and the amortization method for intangible assets at the end of this year are not different from the previous estimates.

3. Judgment basis of intangible assets with indefinite useful life and the procedure of rechecking its useful life

As of the balance sheet date, the Company has not used intangible assets with indefinite useful life.

4. Specific criteria for dividing research stage and development stage

The internal R&D project expenditure of the Company is divided into expenditure in research stage and expenditure in development stage.

Research stage: refers to a stage carrying out original and planned investigation and research activities to acquire and understand new scientific or technological knowledge.

Development stage: refers to a stage applying research results or other knowledge to a plan or design to produce new or substantially improved materials, devices, products and engage in other activities before commercial production or use thereof.

5. Specific conditions for capitalization of expenditures in development stage

The intangible assets shall be recognized when the expenditures for internal R&D projects at the development stage meet the following conditions:

- (1) Development projects have been fully demonstrated by the technical team;
- (2) The management has approved budget for development projects;
- (3) The research and analysis of the earlier market research shows that products

produced by development projects are marketable;

(4) There is sufficient technical and financial support to carry out development activities of development projects and follow-up large-scale production; and

(5) The expenditure for development projects can be collected reliably.

Expenditures in the development stage that do not meet the above conditions shall be recorded to profit or loss for the period upon incurrence. The development expenditure recorded to the profit or loss in the previous period shall not be re-recognized as an asset in later period. The capitalized expenditures in the development stage are presented as development assets in the balance sheet, and are transferred to intangible assets from the date when the project meets the intended purpose. When the recoverable amount of intangible assets is lower than the carrying amount, the carrying amount is written down to the recoverable amount.

(VII) Provisions

1. Recognition standard of provisions

The Company recognizes an obligation related to litigation, debt guarantee, loss contract, reorganization or other contingency as a provision when all of the following conditions are satisfied:

- (1) The obligation is a present obligation of the Company;
- (2) It is probable that an outflow of economic benefits from the Company will be required to settle the obligation; and
- (3) The amount of the obligation can be measured reliably.

2. Measurement methods of various provisions

A provision is initially measured at the best estimate of the expenditure required to settle the related present obligation.

When determining the best estimate, the Company comprehensively takes account of the risks, uncertainty and time value of money relating to a contingency. If the time value of money has a significant impact, the best estimate is determined by discounting the relevant future cash outflow.

The best estimate is treated as follows:

If there is a continuous range (or interval) of the required expenditure and various results within the range have the same probability of occurring, the best estimate shall be determined according to the middle value of the range, i.e. the average of the upper and lower limit amounts.

If there is no continuous range (or interval) for the required expenditure, or if there is a continuous range but various results within the range have different probability of occurring, or if a contingency involves a single item, the best estimate shall be recognized as the most likely amount; or if a contingency involves multiple items, the best estimate shall be recognized in accordance with various possible results and relevant probability calculation.

If all or part of the expenditure required by the Company to pay off the provisions are expected to be compensated by a third party, the compensation amount shall be separately recognized as an asset when its receipt can be basically determined, and the recognized compensation amount shall not exceed the carrying amount of the provisions.

(VIII) Revenue

1. Principles for recognition of revenue from sales of goods

(1) General principles for recognition of revenue from sales of goods

① The Company has transferred the main risks and rewards of the ownership of the goods to the buyer;

② The Company has neither retained the right of continuous management associated with the ownership nor exercised effective control over the sold goods;

- ③ The amount of revenue can be measured reliably;
- ④ Relevant economic benefits are likely to flow into the Company;
- ⑤ Relevant, incurred or to-be-incurred costs can be reliably measured.

The Company determines the amount of revenue from sales of goods according to contract or agreement price received or receivable from the buyer, except for unfair contract or agreement price received or receivable.

(2) Specific principles for recognition of revenue from sales of goods

① With respect to products not required for commissioning, the Company will transport special equipment products to agreed delivery places in accordance with provisions of the agreement and contract, and recognize the revenue after a customer's commissioning and acceptance. After special equipment products are commissioned and accepted by customers, the customer has the right to use products at its discretion and bears the risk of price fluctuation or damage of products.

② With respect to products required for commissioning, the Company will transport special equipment products to agreed delivery places in accordance with provisions of the agreement and contract, and recognize the revenue after the installation and commissioning, a customer's acceptance and the expiration of trial operation. After special equipment products are commissioned and accepted by customers and the trial operation has expired, the customer has the right to use products at its discretion and bears the risk of price fluctuation or damage of products.

Spare parts of the Company shall be transported to agreed delivery places in accordance with provisions of the agreement and contract, and the revenue shall be recognized after a customer's confirmation of acceptance. After the delivery of spare parts, the customer has the right to use products at its discretion and bears the risk of price fluctuation or damage of products.

2. Impact of implementation of new standards of revenue recognition

According to the revised *Accounting Standards for Business Enterprises No. 14 - Revenues* (hereinafter referred to as the "New Standards for Revenues") issued by the Ministry of Finance in 2017, the Company will implement the New Standards for Revenues from January 1, 2020.

Combined with the specific situation of the Company's business model and contract terms, the Company's recognition time under the existing revenue recognition policy is also in line with the recognition of customers' acquisition of relevant commodity control rights under the New Standards for Revenues. After the implementation of the New Standards for Revenues, the specific method of revenue recognition has not changed, and the Company's business model, contract terms, revenue recognition, etc. have not been affected by the implementation of the New Standards for Revenues. The Company's implementation of the New Standards for Revenues has no impact on the main financial indicators of the consolidated financial statements of the years before the first implementation date.

(IX) Government Grants

1. Type

Government grants are monetary assets or non-monetary assets obtained by the Company from the government free of charge, comprised of government grants related to assets and government grants related to income.

A government grant related to assets refers to the government grant obtained by the Company for acquiring and constructing or forming long-term assets in other ways. A government grant related to income refers to the government grant other than those related to assets.

The specific criteria for the Company to classify a government grant as a government grant related to assets are the approval document of government grants clearly stating that the grant is used for acquiring and constructing or forming long-term assets in other ways.

The specific criteria for the Company to classify a government grant as a government grant related to income are the approval document of government grants clearly stating that the grant is used for any purpose other than acquiring and constructing or forming long-term assets.

If the government document does not clearly specify the grant object, the Company classifies a government grant as that related to assets or income based on whether it is used for acquiring and constructing or forming long-term assets in other ways.

2. Confirmation time

For general government grants, the Company will recognize the time when such government grant is received as confirmation time of the government grant; for government grants that can be accurately estimated according to relevant policies or regulations and can be obtained later with certainty, the Company will recognize the time when such government grant will be received according to the policies as confirmation time of the government grant.

3. Accounting treatment

A government grant related to an asset shall be: (a) deducted from the carrying amount of the asset; or (b) recognized as deferred income. In case of the latter, the grant will be amortized by the rational and systematic method within the useful life of the related asset and recognized in profit or loss over the useful life of the related asset (in case of a government grant related to the Company's daily activities, recognized in other income; as for a government grant not related to the Company's daily activities, recognized in non-operating income);

A government grant related to income is accounted as follows: (a) if the grant is a compensation for related costs or losses to be incurred in subsequent periods, the grant is recognized as deferred income, and recognized in profit or loss (in case of a government grant related to the Company's daily activities, recognized in other income; as for a government grant not related to the Company's daily activities, recognized in non-operating income) or reduced related costs or losses over the periods in which the related costs or losses are recognized; (b) if the grant is a compensation for related expenses or losses already incurred, it is recognized immediately in profit or loss of the current period (in case of a government grant related to the Company's daily activities, recognized in other income; as for a government grant not related to the Company's daily activities, recognized in non-operating income) or to decrease the related costs or losses.

The discount of government policy-related preferential loans obtained by the Company shall be accounted as follows:

(1) If the finance allocates the discount funds to a bank, and the bank provides the loan to the Company at the policy-related preferential interest rate, the Company takes the actual received loan amount as the entry value of the loan, and calculates the relevant borrowing costs according to the loan principal and the policy-related preferential interest rate.

(2) If the finance allocates the discount funds to the Company directly, the Company will offset the relevant borrowing costs with the corresponding discount.

(X) Share-based Payments

The Company's share-based payment refers to a transaction in which an enterprise grants equity instruments or undertakes equity-instrument-based liabilities in return for services from employee or other parties. The Company's share-based payments shall consist of equity-settled share-based payments and cash-settled share-based payments.

1. Equity-settled share-based payments and equity instruments

The equity-settled share-based payment in return for employee services shall be measured at the fair value of the equity instruments granted to the employees. If the Company makes share-based payment with restricted stocks and the employees subscribe for the stocks, the stocks shall not be available for sale or transferred until the

unlocking conditions are met; if the unlocking conditions specified in the final equity incentive plan are not met, the Company shall repurchase the stocks at the price agreed in advance. When the Company obtains the payment for employees' subscription for restricted stocks, it shall recognize the share capital and capital surplus (share premium) according to the acquired subscription, and at the same time, it shall fully recognize a liability for the repurchase obligation and confirm the treasury shares. On each balance sheet date within the vesting period, the services obtained in the current period shall, based on the best estimate of the number of vested equity instruments in accordance with the [change in the number of vesting employees], [whether to meet the specified performance conditions] and other most recent subsequent information, be included in the relevant costs or expenses at the fair value of the equities instruments on the date of the grant and the capital reserves shall be increased accordingly. After the vesting date, the relevant costs or expenses recognized and the total owner's equity will not be adjusted. If the restricted stocks may be exercised immediately after the grant, the fair value of the stocks shall, on the date of the grant, be included in the relevant costs or expenses and the capital reserves shall be increased accordingly.

No cost or expense shall be recognized for the share-based payment that fails to exercise finally, unless the vesting condition is the market condition or non-vesting condition. Under such condition, regardless of whether the market condition or non-vesting condition is satisfied or not, as long as the non-market condition of all vesting conditions is satisfied, it shall be deemed as exercisable.

If the terms of equity-settled share-based payment are modified, the services obtained shall be recognized at least according to the unmodified terms. In addition, any modification that increases the fair value of the granted equity instrument, or the change that is beneficial to the employees on the modification date, shall recognize the increase of the services obtained.

If the equity-settled share-based payment is cancelled, it shall be treated as accelerated vesting on the cancellation date, and the unrecognized amount shall be recognized immediately. If the employee or other parties can choose to meet the non-vesting conditions but fail to meet them within the vesting period, it shall be treated as the cancellation of equity-settled share-based payment. Provided, however, that, if a new equity instrument is granted and the new equity instrument granted is deemed to replace the cancelled equity instrument on the grant date of the new equity instrument, the new equity instrument granted shall be treated in the same way as the modification of the terms and conditions of the original equity instrument.

2. Cash-settled share-based payment and equity instruments

A cash-settled share-based payment shall be measured in accordance with the fair value of liability calculated and confirmed based on the shares or other equity instruments undertaken by the Company. As to a cash-settled share-based payment instruments, if the right may be exercised immediately after the grant, the fair value of the liability undertaken by the Company shall, on the date of the grant, be included in the relevant costs or expenses, and the liabilities shall be increased accordingly. As to a cash-settled share-based payment instruments, if the right may not be exercised until the vesting period comes to an end or until the specified performance conditions are met, within the vesting period, the services obtained in the current period shall, based on the best estimate of the information about the exercisable right, be included in the relevant costs or expenses at the fair value of the liability undertaken by the Company, and the liabilities shall be increased accordingly. The Company shall, on each balance sheet date and on each account date prior to the settlement of the relevant liabilities, re-measure the fair values of the liabilities and include the changes in the current profits and losses.

(XI) Foreign Currency Transactions and Foreign Currency Translation

1. Foreign currency transactions

Foreign currency transactions are recorded in RMB using the spot exchange rates prevailing at the transaction dates.

Foreign currency monetary items are translated using the spot exchange rate at the

end of each period. All the resulting exchange differences are taken to profit or loss for the period, except for those relating to foreign currency borrowings specifically for the construction and acquisition of qualifying assets, which are capitalized in accordance with the principle of capitalization of borrowing costs.

2. Foreign Currency Translation

Asset and liability items in the balance sheet are translated using the spot exchange rates at the end of each period; equity items other than “Retained earnings” are translated using the spot exchange rates at the dates of transactions. Revenue and expense items in the income statement are translated using the spot exchange rate for the period during which the transactions occur.

If the disposal only involves a portion of a particular foreign operation, the exchange difference resulted from the component of foreign currency income relating to that particular foreign operation is recognized in profit or loss of the current period from equity items.

(XII) Deferred income tax assets and liabilities

A deferred income tax asset is recognized for deductible temporary differences, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilized. A deferred income tax asset is recognized for carry forward of unused deductible tax losses and tax credits, to the extent that it is probable that taxable profit will be available against which the carry forward of deductible tax losses and tax credits can be utilized.

A deferred tax liability is recognized for all taxable temporary differences, except:

Where the taxable temporary differences arise from the initial recognition of goodwill, or the initial recognition of an asset or liability in a transaction or matter which contains both of the following characteristics: (i) the transaction or matter is not a business combination; and (ii) at the time of the transaction, it affects neither accounting profit nor taxable profit (or deductible loss).

When the Company has a legally enforceable right to set off and intends to settle off or acquire assets and pay off liabilities at the same time, the current income tax assets and current income tax liabilities shall be offset.

Deferred tax assets and deferred tax liabilities are offset if the Company has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

(XIII) Changes in Significant Accounting Policies and Accounting Estimates

1. On January 1, 2019, the new financial instrument standard was implemented for the first time. The implementation of the new financial instrument standard for the first time in the current year has no impact on the relevant items of the financial statements at the beginning of the year.

2. Changes in other significant accounting policies

(1) Implementation of *the Notice by the Ministry of Finance on Revising and Issuing the Format of Financial Statements of General Enterprises in 2019*

On April 30, 2019, the Ministry of Finance issued *the Notice on Revising and Issuing the Format of Financial Statements of General Enterprises in 2019* (Cai Kuai [2019] No. 6), which revised the format of financial statements of general enterprises. It shall be implemented on the issuance date. The Company’s implementation of the above standard has no significant impact during the Reporting Period.

(2) Implementation of *Accounting Standards for Business Enterprises No. 7 -*

Exchange of Non-monetary Assets (revised in 2019)

The Ministry of Finance issued the *Accounting Standards for Business Enterprises No. 7 - Exchange of Non-monetary Assets* (revised in 2019) (Cai Kuai [2019] No. 8) on May 9, 2019. The revised standards shall come into effect from June 10, 2019. The exchange of non-monetary assets between January 1, 2019 and the implementation date of the standards shall be adjusted in accordance with the standards. The exchange of non-monetary assets before January 1, 2019 does not need to be retroactively adjusted in accordance with the provisions of the standards. The Company's implementation of the above standards has no significant impact in the Reporting Period.

(3) *Implementation of Accounting Standards for Business Enterprises No. 12 - Debt Restructuring* (revised in 2019)

The Ministry of Finance issued the *Accounting Standards for Business Enterprises No. 12 - Debt Restructuring* (revised in 2019) (Cai Kuai [2019] No. 9) on May 16, 2019. The revised standards shall come into force on June 17, 2019. The debt restructuring between January 1, 2019 and the implementation date of the standards shall be adjusted in accordance with the standards. For debt restructuring before January 1, 2019, retroactive adjustment is not required in accordance with the provisions of the standards. The Company's implementation of the above standards has no significant impact during the Reporting Period.

3. Changes in significant accounting estimates

There is no significant change in accounting estimates during the Reporting Period.

VII. Applicable Tax Rate and Main Fiscal and Tax Preferential Policies**(I) Main Taxes and Tax Rates**

During the Reporting Period, the main taxes applicable to the Company and the tax rates are listed as follows: input vat incurred may be credited against output vat in computing the vat payable

Taxes	Base of Taxation	Tax Rates		
		2019	2018	2017
Value-added Tax	The difference between output VAT calculated on the basis of the income from sales of goods and taxable services calculated in accordance with the provisions of tax law in China and input Tax allowed to be credited in the current period	6% 13% 16%	6% 16% 17%	6% 17%
Urban Maintenance and Construction Tax	Amounts of actually paid value-added tax	1% 7%	1% 7%	1% 7%
Education surcharges	Amounts of actually paid value-added tax	3%	3%	3%
Local Education Surcharges	Amounts of actually paid value-added tax	1% 2%	1% 2%	2%
Corporate Income Tax	Taxable income	15% 10% 25% 16.5% 21%	15% 10% 25% 16.5%	15% 10% 25% 16.5%

1. Corporate Income Tax

During the Reporting Period, the applicable corporate income tax rates of the

Company and its controlled subsidiaries are listed as follows:

Name of Taxpayer	Place of Registration	2019	2018	2017
ACMSH	Mainland China	15%	15%	15%
ACM Wuxi	Mainland China	25%	25%	25%
CleanChip HK	Hong Kong, China	16.5%	16.5%	16.5%
ACMKR	The Republic of Korea	10%	10%	10%
ACM CA	U.S.A	21%	Not applicable	Not applicable
Shengwei Shanghai	Mainland China	25%	Not applicable	Not applicable

2. Value-added Tax

The applicable value-added tax rate for sales of goods by the Company and its domestic subsidiaries is 17% in 2017 and January to April 2018, 16% in May to December 2018 and January to March 2019, and 13% in April to December 2019, and the applicable value-added tax rate for providing services is 6%. The Company has been approved to engage in import and export business, and the export refund policy of Exempt, Credit, and Refund (ECR) method is implemented for the value-added tax of export products, among which the tax rebate rate of export products in 2017 and January to July 2018 was 13%, 15% or 17% (as the case may be subject to different product category and commodity code of export goods); from May 1, 2018, for exportation of goods and services subject to VAT at 17% with an applicable export refund at the same rate, the export refund rate was adjusted to 16%. (According to the *Notice regarding the adjustments of Value-added Tax (VAT) rates* (Cai Shui [2018] No. 32) jointly issued by the Ministry of Finance and the State Administration of Taxation, before July 31, 2018, for the production enterprises applicable to the Exempt, Credit, and Refund (ECR) method, the export refund rate before the adjustment shall prevail); from April 1, 2019, for exportation of goods and services subject to VAT at 16% with an applicable export refund at the same rate, the export refund rate was adjusted to 13%. (According to the *Announcement on Policies for Deepening the VAT Reform* jointly issued by the Ministry of finance, the State Administration of Taxation and the General Administration of Customs, before June 30, 2019 (including days before April 1, 2019), for enterprises applicable to the Exempt, Credit, and Refund (ECR) method, the export refund rate before the adjustment shall prevail. When calculating according to the Exempt, Credit, and Refund (ECR) method, if the applicable tax rate is lower than the export refund rate, the difference between the applicable tax rate and the export refund rate shall be regarded as zero in the calculation according to the Exempt, Credit, and Refund (ECR) method).

The value-added tax rate applicable to the overseas subsidiary of the Company, ACMKR, is 10% in South Korea. CleanChip HK and ACM CA do not need to pay value-added tax.

(II) Tax Preference

The Company passed the qualification review of high-tech enterprises on August 19, 2015, and obtained the High-Tech Enterprise Certificate with the number of GF201531000216 jointly issued by Shanghai Science and Technology Committee, Shanghai Municipal Finance Bureau, Shanghai State Tax Bureau and Shanghai Municipal Tax Bureau, which is valid for three years. The Company enjoys preferential corporate income tax from 2015 to 2017 according to the provisions, with the tax rate of 15%.

On November 2, 2018, the Company passed the qualification examination of high-tech enterprises again and obtained the High-Tech Enterprise Certificate (No. GR201831000195) jointly issued by Shanghai Science and Technology Committee, Shanghai Municipal Finance Bureau, Shanghai State Tax Bureau and Shanghai

Municipal Tax Bureau. The Certificate is valid for three years. The Company has enjoyed preferential corporate income tax for high-tech enterprises from 2018 to 2020 according to the provisions, with a tax rate of 15%.

VIII. Segment Information

The financial statements of the Company do not contain segment information.

IX. Non-recurring Profits or Losses

(I) Details and Amounts of Non-recurring Profits or Losses

During the Reporting Period, the non-recurring profits or losses statement verified by the accountant is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017	
Profits or losses on disposal of non-current assets	-202.85	-1.47	-0.33	
Government grants recorded to profit or loss for the period (closely related to the business of the enterprise, except for the government grants according to the unified national standard quota or quantitative)	2,666.69	2,082.34	1,590.97	
Fund occupation fee charged to non-financial enterprises recorded to the current profit or loss	53.87	44.54	-	
The net profit or loss for the period from the beginning of the period to the combination date of subsidiaries from companies under common control	-1,054.11	394.41	0.16	
Other non-operating income and expenditure other than the above items	2.39	-109.79	-49.23	
Other profit or loss items that meet the definition of non-recurring profits or losses	-647.47	5.30	5.54	
Subtotal	818.51	2,415.32	1,547.12	
Impact on the income tax	-377.28	-302.34	-231.22	
Impact on the minority interests (after tax)	-	-	-	
Net non-recurring profits or losses attributable to shareholders of the parent company	441.23	2,112.98	1,315.90	

Note: Other profits or losses items in 2019 falling within the definition of non-recurring profits or losses are mainly share-based payments composed of capital increase of ESOPs.

(II) Impact of Non-recurring profits or losses on Current Operating Results

During the Reporting Period, impact of non-recurring profits or losses on current operating results is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Net non-recurring profits or losses attributable to shareholders of the parent company	441.23	2,112.98	1,315.90
Net profits attributable to shareholders of the parent company	13,488.73	9,253.04	1,086.06
Net profits attributable to shareholders of the parent company	13,047.50	7,140.06	-229.84

after deduction of non-recurring profits or losses			
--	--	--	--

During the Reporting Period, the Company's net non-recurring profits or losses attributable to shareholders of the parent company are RMB 13.159 million Yuan, RMB 21.1298 million Yuan and RMB 4.4123 million Yuan respectively, and the main non-recurring profits or losses are mainly government grants, the current net profits or losses of subsidiaries from business combination involving entities under common control from the beginning of the period to the combination date, and the share-based payments; the Company's net profits attributable to shareholders of the parent company after deduction of non-recurring profits or losses increased significantly, which are RMB -2.2984 million Yuan, RMB 71.4006 million Yuan and RMB 130.475 million Yuan respectively.

X. Main Financial Indicators

(I) Main Financial Indicators

Main financial indicators	December 31, 2019	December 31, 2018	December 31, 2017
Current ratio (frequency)	2.93	1.34	1.49
Quick ratio (frequency)	2.18	0.71	0.79
Liabilities to assets (L/A) ratio (parent company)	32.56%	76.34%	84.86%
Net assets per share attributable to shareholders of the issuer (RMB 1 Yuan)	2.13	N/A	N/A
Main financial indicators	2019	2018	2017
Accounts receivables turnover ratio	3.80	3.91	4.29
(frequency)			
Inventory turnover rate (frequency)	1.44	1.51	1.09
EBITDA (RMB 10,000 Yuan)	16,654.67	11,063.48	1,794.26
Net profits attributable to shareholders of the issuer (RMB 10,000 Yuan)	13,488.73	9,253.04	1,086.06
Net profits attributable to shareholders of the issuer after deduction of non-recurring profits or losses (RMB 10,000 Yuan)	13,047.50	7,140.06	-229.84
Times interest earned (frequency)	21.54	21.37	7.41
Proportion of R&D investment in operating income	13.12%	14.43%	20.57%
Cash flows from operating activities per share (RMB 1 Yuan/share)	0.19	N/A	N/A
Net cash flows per share (RMB 1 Yuan/share)	0.88	N/A	N/A

Note: The Company is a limited liability company from 2017 to 2018, so the calculation of per share indicator is not applicable during the corresponding financial statement period.

The above financial indicators are calculated as follows:

1. Current ratio = current assets / current liabilities
2. Quick ratio = (current assets - inventories) / current liabilities
3. L/A ratio = (total liabilities / total assets) * 100%
4. Inventory turnover ratio = operating cost / average inventory
5. Accounts receivables turnover ratio = operating income / average accounts receivables
6. EBITDA = total profit + interest expenditures + depreciation of fixed assets + amortization

of long-term deferred expenses + amortization of intangible assets

7. Proportion of R&D investment in operating income = R&D expenses / operating income * 100%

8. Times interest earned = (total profit + interest expenditures) / interest expenditures

9. Cash flows from operating activities per share = net cash flows from operating activities / total share capital at the end of the period

10. Net cash flows per share = net increase in cash and cash equivalents / total share capital at the end of the period

11. Net assets per share attributable to shareholders of the issuer = net assets at the end of the period attributable to common shareholders of the Company / total share capital at the end of the period

(II) ROE and Earnings per Share

According to the *Compilation Rule for Information Disclosure by Companies Offering Securities to the Public No. 9 - Calculation and Disclosure of ROE and Earnings Per Share* issued by China Securities Regulatory Commission (revised in 2010), the ROE and earnings per share of the Company during the Reporting Period are as follows:

Profit in the Reporting Period	Reporting Period	Weighted average ROE (%)	Earnings per share (RMB 1 Yuan/share)	
			Basic earnings per share	Diluted earnings per share
	2019	34.22	0.36	0.36
	2018	137.72	N/A	N/A
Net profits attributable to common shareholders of the Company	2017	26.36	N/A	N/A
Net profits attributable to common shareholders after deduction of non-recurring profits or losses	2019	30.67	0.32	0.32
	2018	115.54	N/A	N/A
	2017	-5.58	N/A	N/A

Note: The Company is a limited liability company from 2017 to 2018, so the calculation of earnings per share is not applicable during the corresponding financial statement period.

The above financial indicators are calculated as follows:

1. Weighted average ROE:

$$\text{Weighted average ROE} = P_0 / (E_0 + NP / 2 + E_i * M_i / M_0 - E_j * M_j / M_0 \pm E_k * M_k / M_0)$$

Where: P₀ refers to the net profits attributable to the common shareholders of the Company and the net profits attributable to the common shareholders of the Company after deduction of non-recurring profits or losses; NP refers to the net profits attributable to the common shareholders of the Company; E₀ refers to the opening net assets attributable to the common shareholders of the Company; E_i refers to the newly increased net assets attributable to the common shareholders of the Company due to the issuance of additional shares or debt-to-equity swap in the Reporting Period; E_j refers to the reduced net assets attributable to the common shareholders of the Company due to repurchase or cash dividend in the Reporting Period; M₀ refers to the number of months in the Reporting Period; M_i refers to the cumulative number of months from the next month of newly increased net assets to the end of the Reporting Period; M_j refers to the cumulative number of months from the next month of reduced net assets to the end of the Reporting Period; E_k refers to the increase or decrease in net assets attributable to the common shareholders of the Company caused by other transactions or events; M_k refers to the cumulative number of months from the next month of increase or decrease in other net assets to the end of the Reporting Period.

2. Basic earnings per share:

Basic earnings per share = $P0 / S$

$S = S0 + S1 + Si * Mi / M0 - Sj * Mj / M0 - Sk$

Where: P0 refers to the net profits attributable to the common shareholders of the Company or the net profits attributable to the common shareholders after deduction of non-recurring profits or losses; S refers to the weighted average common shares outstanding; S0 refers to the total number of shares at the beginning of the year; S1 refers to quantity of additional shares due to the conversion of provident fund into share capital or stock dividend distribution during the Reporting Period; Si refers to quantity of additional shares due to the issuance of additional shares or debt-to-equity swap in the Reporting Period; Sj refers to decrease in shares due to repurchase in the Reporting Period; Sk refers to equity decrease in the Reporting Period; M0 refers to months in the Reporting Period; Mi refers to the cumulative number of months from the next month of additional shares to the end of the Reporting Period; Mj refers to the cumulative number of months from the next month of decrease in shares to the end of the Reporting Period.

3. Diluted earnings per share

Diluted earnings per share = $P1 / (S0 + S1 + Si * Mi / M0 - Sj * Mj / M0 - Sk + \text{weighted average common shares increased due to warrants, share options, convertible bonds, etc.})$

Where, P1 refers to the net profits attributable to the common shareholders of the Company or the net profits attributable to the common shareholders of the Company after deduction of non-recurring profits or losses, and considering the impact of diluted potential common shares, it shall be adjusted in accordance with the Accounting Standards for Business Enterprises and relevant provisions. When calculating diluted earnings per share, the Company shall consider the impact of all diluted potential common shares on the net profits attributable to the common shareholders of the Company or the net profits attributable to the common shareholders of the Company after deduction of non-recurring profits or losses and weighted average shares, and the diluted potential common shares shall be recorded to the diluted earnings per share based on the extent of dilution according to the sequential order from the big to the small, until the diluted earnings per share to be the minimum.

XI. Operating Results Analysis

(I) Changes in the Company's Main Operating Results during the Reporting Period

1. Overview of operation during the Reporting Period

During the Reporting Period, the specific operation of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Operating income	75,673.30	55,026.91	25,358.73
Operating profit	15,511.67	10,389.25	1,383.61
Total profit	15,311.91	10,283.17	1,334.06
Net profit	13,488.73	9,253.04	1,086.06
Net profits attributable to shareholders of the parent company	13,488.73	9,253.04	1,086.06
Net profits attributable to shareholders of the parent company after deduction of non-recurring profits or losses	13,047.50	7,140.06	-229.84

During the Reporting Period, the Company's operating income and net profit continued to increase, with the operating income of RMB 253.5873 million Yuan, RMB 550.2691 million Yuan and RMB 756.733 million Yuan, respectively. The operating income in 2018 and 2019 increased 116.99% and 37.52% year on year, with an average compound annual growth rate of 72.75% during the Reporting Period. The Company's net profits attributable to shareholders of the parent company were RMB 10.8606 million Yuan, RMB 92.5304 million Yuan and RMB 134.8873 million Yuan, respectively, and the net profits of 2018 and 2019 increased by 751.98% and 45.78%

year on year.

2. Logical analysis of operating results achieved in the Reporting Period

The main business of the Company is the R&D, production and sales of semiconductor special equipment. The main products include semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet process equipment, which are mainly used in wafer manufacturing, semiconductor packaging and testing and semiconductor wafer manufacturing.

During the Reporting Period, the Company's operating income was RMB 253.5873 million Yuan, RMB 550.2691 million Yuan and RMB 756.733 million Yuan, with a compound annual growth rate of 72.75%, and the operating income maintained a high growth trend; the Company's main business gross margin was 44.46%, 43.80% and 44.67% respectively, each of which can be considered as a high gross margin and equivalent to the industry average level.

During the Reporting Period, the main logic of the Company's operating results is as follows:

(1) Outstanding scientific and technological innovation ability, leading technology and high-quality products are the basis for the Company to obtain customer recognition

Since its establishment, the Company has persisted in the development strategy of differentiated competition and innovation. Through self-developed SAPS megasonic cleaning technology, TEBO megasonic cleaning technology, chip copper interconnection copper electroplating technology and other key technologies, the Company provides customized equipment and process solutions to global customers in wafer manufacturing, advanced packaging and other fields, effectively improving the production of customers efficiency, improve product yield and reduce production cost.

The company's technical level for the megasonic single-chip cleaning equipment, single-chip slot-type combined cleaning equipment and electroplating process equipment of copper interconnection, has reached international leading or international advanced level. As of December 31, 2019, the company and its holding subsidiaries has 232 main licensed patents, including 108 domestic patents and 124 overseas patents. Among them, there are 220 invention patents. The company also won the title of "Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits". It is the main subject unit of major scientific research projects in China such as "Research and development and application for 20-14nm copper plating equipment of copper interconnection" and "Research and development for 65-45nm stress-free polishing equipment of copper interconnection", and other ("02 Special Project") major scientific projects in China.

During the Reporting Period, the R&D expenses of the Company were RMB 52.1724 million Yuan, RMB 79.415 million Yuan and RMB 99.268 million Yuan respectively, accounting for 20.57%, 14.43% and 13.12% of the operating income respectively, with a compound annual growth rate of 37.94%. The Company continued to increase its R&D investment and kept at a high level.

As a scientific and technological innovation enterprise, the Company's sustained large amount of R&D investment has accelerated the pace of product upgrades and innovation, improved the Company's ability to develop new products and to meet new needs of customers, and ensured the Company's sustainable provision of competitive products to customers.

(2) The Company has established a good reputation among the international mainstream semiconductor manufacturers, which is conducive to the continuous development of high-quality customer resources

Semiconductor manufacturing industry, especially wafer manufacturing industry, often has a large scale of equipment investment. At present, the investment of 12 inch wafer manufacturing project is billions or even tens of billions of dollars. The kinds of equipment needed for production line thereof are in a big quantity, and the efficiency and reliability of single equipment will directly affect the working efficiency of the

whole production line and the yield of chip products, so the wafer manufacturing enterprises are very careful about the choice of new equipment, which first of all, ensure that the new equipment meets the requirements of the advanced technology and reliability, and then that, we will consider commercial conditions such as economy and decide whether to purchase.

In 2008, the Company succeeded in SAPS technology research and development. In 2009, SAPS cleaning equipment got access to one of the world's top ten semiconductor enterprise and the world's leading memory enterprise, Hynix, to carry out product verification. In 2011, the Company first obtained Hynix's official order for the SAPS cleaning equipment for 12 inch 45nm process, and in 2013, obtained multiple repeated orders from Hynix. As the Company's product has won the recognition of the international advanced customers, the Company has successfully obtained the orders of the mainland China's leading customers such as Yangtze Memory, SMIC and Huahong Group after 2015, thanks to the Company's achievements and reputation in the industry abroad.

The Company's products have passed the verification of the global first-line semiconductor enterprise Hynix, successfully entered its production line, formed a good market demonstration effect, and enhanced the confidence of the global semiconductor enterprises in the Company's technology and products and the willingness to provide opportunities to verify the Company's products. At the same time, through in-depth cooperation with the global first-line semiconductor enterprises, the Company also improved its understanding of market demand, targeted development of innovative solutions, and deepened its understanding of new products, new technologies and new markets, and its technology and product competitiveness.

(3) By continuously launching new products and entering new markets, the Company further increased its operation income

In 2017, the Company's revenue was generated from single-wafer cleaning equipment and advanced packaging wet process equipment; in 2018, the Company's first back-end advanced packaging electroplating equipment was sold; in 2019, the Company successfully realized the sales of three types of first equipment, including wet bench cleaning equipment, single wafer wet bench combined cleaning equipment and front-end copper interconnection electroplating equipment. In addition, the Company combined front-end scrubbing equipment, stress-free polishing equipment and vertical furnace tube equipment and researched and developed the first combined equipment and successfully entered the verification of customers.

During the Reporting Period, the Company continued to raise the sales volume of mature single-wafer cleaning equipment and advanced packaging wet process equipment; at the same time, during the Reporting Period, the Company continued to launch a number of new products, continuously entered new markets and new customers, and achieved rapid growth in operating income.

(4) The rapid development of the global semiconductor industry and its shift to mainland China accelerated the pace of development of the Company's business.

The semiconductor industry is the core of the information technology industry and a strategic, basic and leading industry that supports economic and social development. The rapid development of the global semiconductor industry and its shift to mainland China have become favorable factors for the Company's business development. In the future, with the steady growth of downstream 5G communications, computer, consumer electronics, network communications and other industries, as well as the rapid development of Internet of Things, artificial intelligence, automotive electronics, smart phones, smart wear, cloud computing, big data and security electronics and other emerging fields, the semiconducting industry is facing the demand for capacity expansion of new chips or advanced processes, which brings a broad market space for the semiconductor special equipment industry. As the largest consumer market of semiconductor end products in China, the scale of China's semiconductor industry has been expanding.

As the global semiconductor industry chain has begun to shift to mainland

China, semiconductor companies have invested and built factories in China. China's semiconductor industry has experienced an increasingly rapid growth. According to the statistics from Gartner, the equipment expenditure of chip manufacturers in mainland China reached USD 10.434 billion dollars in 2018 and USD 12.244 billion dollars in 2019. It is expected that such expenditure will be reduced to USD 9.628 billion dollars in 2020 considering the impact of the global semiconductor industry prospect, that, with the gradual recovery of the global semiconductor industry in 2021, such expenditure will increase to USD 12.842 billion dollars in 2024. The compound annual growth rate is expected to be 7.47% in 2020-2024.

Thanks to the rapid development of the semiconductor industry and its continuous shift to mainland China, downstream semiconductor enterprises' demand for semiconductor special equipment is constantly increasing.

(5) Semiconductor special equipment is a typical high-end, sophisticated equipment, and the Company's product gross margin remained at a high level during the Reporting Period

Semiconductor special equipment is the basic and supporting link of semiconductor industry chain. The production technology involves the comprehensive application of multi-disciplinary and multi field knowledge, such as microelectronics, electrical, mechanical, material, chemical engineering, fluid mechanics, automation, image recognition, communication, software system, etc. It is a typical high-end sophisticated equipment with high technical barriers, market barriers and customer verification barriers. The above products and industry characteristics determine the relatively high gross margin level of the Company's products.

(II) Operating Income Analysis

1. Composition of operating income

During the Reporting Period, the composition of the Company's operating income is as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Main business income	74,340.81	98.24%	53,961.17	98.06%	24,913.81	98.25%
Other operating income	1,332.48	1.76%	1,065.74	1.94%	444.91	1.75%
Total	75,673.30	100.00%	55,026.91	100.00%	25,358.73	100.00%

During the Reporting Period, the Company's main business is the R&D, production and sales of special semiconductor equipment, and the Company's products are mainly used in the integrated circuit industry. The Company's operating income mainly comes from the main business. During the Reporting Period, the Company's main business revenue accounted for 98.25%, 98.06% and 98.24% of the operating income respectively, with outstanding main business. The Company's other operating income mainly comes from the sales of spare parts and after-sales services, which accounts for a small proportion.

2. Composition and analysis of main business income products

The Company's products are mainly divided into three categories: semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet process equipment. The fluctuation of the main business income is mainly affected by the following factors: the prosperity of the downstream industry, the arrangement of customer capital expenditure, the market development and product verification of the Company's existing and potential customers.

During the Reporting Period, the Company's main business income is classified as follows by product:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Semiconductor cleaning equipment	62,522.30	84.10%	50,135.96	92.91%	21,492.48	86.27%
Including: single wafer cleaning equipment	55,099.52	74.12%	50,135.96	92.91%	21,492.48	86.27%
Wet bench cleaning equipment	4,801.36	6.46%	-	-	-	-
Single wafer wet bench combined cleaning equipment	2,621.43	3.53%	-	-	-	-
Semiconductor electroplating equipment	7,857.39	10.57%	1,191.13	2.21%	-	-
Advanced packaging wet process equipment	3,961.12	5.33%	2,634.07	4.88%	3,421.33	13.73%
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

During the Reporting Period, the Company's main business income was RMB 249.1381 million Yuan, RMB 539.6117 million Yuan and RMB 743.4081 million Yuan, respectively, with a rapidly increasing trend year by year.

In 2018, the Company's main business income increased by RMB 290.4735 million Yuan or 116.59% year-on-year, mainly due to a year-on-year increase of RMB 286.4348 million Yuan or 133.27% in semiconductor cleaning equipment income. In 2019, the Company's main business income increased by RMB 203.7965 million Yuan or 37.77% year-on-year, which was due to the growth of semiconductor cleaning equipment revenue, semiconductor electroplating equipment and advanced packaging wet process equipment revenue.

(1) Semiconductor cleaning equipment

During the Reporting Period, the sales volume and unit price changes of various semi-conductor cleaning equipment of the Company are as follows:

Item		2019	2018	2017
Single wafer cleaning equipment				
Sales volume	Quantity (set)	22	21	11
	Change ratio	4.76%	90.91%	-
Unit price	Average price (RMB 10'000 Yuan/set)	2,504.52	2,387.43	1,953.86
	Change ratio	4.90%	22.19%	-
Sales revenue	Amount (RMB 10'000 Yuan)	55,099.52	50,135.96	21,492.48
	Change ratio	9.90%	133.27%	-
Wet bench cleaning equipment				
Sales volume	Quantity (set)	3	-	-
	Change ratio	-	-	-

Unit price	Average price (RMB 10'000 Yuan/set)	1,600.45	-	-
	Change ratio	-	-	-
Sales revenue	Amount (RMB 10'000 Yuan)	4,801.36	-	-
	Change ratio	-	-	-
Single wafer wet bench combined cleaning equipment				
Sales volume	Quantity (set)	1	-	-
	Change ratio	-	-	-
Unit price	Average price (RMB 10'000 Yuan/set)	2,621.43	-	-
	Change ratio	-	-	-
Sales revenue	Amount (RMB 10'000 Yuan)	2,621.43	-	-
	Change ratio	-	-	-

In 2018, the Company's semiconductor cleaning equipment revenue increased due to the increase in single wafer cleaning equipment revenue.

In 2018, the revenue of the Company's single wafer cleaning equipment increased by RMB 286.4348 million Yuan or 133.27% from 2017, mainly due to the substantial increase in the number of product sales and the rise of sales unit price.

In 2018, the Company's single wafer cleaning equipment sales increased due to the following reasons: 1). The global semiconductor industry is in an upward cycle of demand growth. The demand for expansion of chip manufacturing companies has increased, capital expenditures have increased, and the demand for semiconductor special equipment has also increased; 2) As the leading enterprise of semiconductor cleaning equipment in China, the Company has obtained the verification of many customers in the early stage of its single wafer cleaning equipment by virtue of its technical advantages and innovative capabilities; 3) Global chip manufacturing capacity continues to shift to mainland China, and the domestic substitution process of the Chinese semiconductor industry has also accelerated; 4) Memory is one of the fastest-growing products in the global semiconductor market in 2018. The Company's main customers, Hynix and Yangtze Memory are large-scale memory manufacturing companies. In order to meet market demand, the investment scale of production lines has been increased; 5) The Company's single wafer cleaning equipment can be applied to a variety of advanced memory processes such as DRAM, 3D NAND, etc.; affected by the explosion of memory terminal demand, the Company's product demand has also increased.

In 2018, the reason for the rise in the unit price of the company's single wafer cleaning equipment is that the more chambers of single equipment of the same type uses, the higher the sales price is. In 2017, the Company mainly sold single wafer cleaning equipment of 8 chambers. In 2018, the proportion of single wafer cleaning equipment of 12 chambers increased, and the average sales unit price of single wafer cleaning equipment rose accordingly.

In 2019, the increase of the Company's semiconductor cleaning equipment revenue is mainly due to the successful sales of the Company's first wet bench cleaning equipment and single wafer wet bench combined cleaning equipment, and the continuous growth of the single wafer cleaning equipment revenue.

(2) Semiconductor electroplating equipment

During the Reporting Period, the sales volume and unit price change of semiconductor electroplating equipment of the Company are as follows:

Item		2019	2018	2017
Sales volume	Quantity (set)	4	1	-
	Change ratio	300.00%	-	-
Unit price	Average price (RMB 10'000 Yuan/set)	1,964.35	1,191.13	-
	Change ratio	64.91%		
Sales revenue	Amount (RMB 10'000 Yuan)	7,857.39	1,191.13	-
	Change ratio	559.66%	-	-

During the Reporting Period, the Company's semiconductor electroplating equipment revenue was RMB 0.00 Yuan, RMB 11.9113 million Yuan and RMB 78.5739 million Yuan respectively, mainly due to the substantial increase in the number of product sales and the rise of sales unit price.

During the Reporting Period, the reasons for the increase in the Company's semiconductor electroplating equipment sales are as follows: ① in 2018, the Company's first back-end advanced packaging semiconductor electroplating equipment successfully obtained customer verification and was sold for the first time; ② in 2019, the company's sales of back-end advanced packaging semiconductor electroplating equipment continued to increase and the Company's first front-end copper interconnection electroplating equipment was sold for the first time.

In 2019, the rise in the unit price of semiconductor electroplating equipment is due to the sales of the front-end copper interconnection electroplating equipment with higher unit price. The technical difficulty of the front-end copper interconnection electroplating equipment is higher than that of the back-end advanced packaging electroplating equipment. At the same time, only a few enterprises in the world have the ability to produce the front-end copper interconnection electroplating equipment, and the market competition is relatively low. Therefore, the sales unit price of the front-end copper interconnection electroplating equipment is higher than that of the back-end advanced packaging electroplating equipment.

(3) Advanced packaging wet process equipment

During the Reporting Period, the Company's advanced packaging wet process equipment sales and unit price changes are as follows:

Item		2019	2018	2017
Sales volume	Quantity (set)	7	6	7
	Change ratio	16.67%	-14.29%	-
Unit price	Average price (RMB 10'000 Yuan/set)	565.87	439.01	488.76
	Change ratio	28.90%	-10.18%	-
Sales revenue	Amount (RMB 10'000 Yuan)	3,961.12	2,634.07	3,421.33
	Change ratio	50.38%	-23.01%	-

During the Reporting Period, the Company's revenue from advanced packaging wet process equipment was RMB 34.2133 million Yuan, RMB 26.3407 million Yuan and RMB 39.6112 million Yuan respectively, and the sales unit price and the sales

revenue fluctuated to some extent. Such fluctuation is mainly affected by the different sales volumes, products structures, and configurations of the equipment itself (including the number of chambers, functional differences, customer customized requirements, etc.).

3. Main business revenue is divided by sales regions

During the Reporting Period, the regional composition of the Company's main business income is as follows:

Unit: RMB 10,000 Yuan

Regions	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Mainland China	71,727.12	96.48%	50,517.23	93.62%	24,913.81	100.00%
Taiwan	2,613.69	3.52%	496.31	0.92%	-	-
South Korea	-	-	2,494.67	4.62%	-	-
Philippines	-	-	452.97	0.84%	-	-
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

Note: According to the location of the ultimate customer.

During the Reporting Period, the Company's product sales were mainly concentrated in the mainland China. Sales revenue from mainland China accounted for 100.00%, 93.62%, and 96.48% of the main business revenue, respectively.

The semiconductor industry in mainland China has developed rapidly, and the investment scale of local semiconductor manufacturing companies has expanded. At the same time, overseas semiconductor manufacturing companies such as Hynix have also set up production bases in mainland China, and the demand for semiconductor special equipment has also increased significantly.

With the shift of global semiconductor capacity to mainland China, China's IC industry continues to develop rapidly. According to the statistics from Gartner, the equipment expenditure of chip manufacturers in mainland China reached USD 10.434 billion dollars in 2018, and USD 12.244 billion dollars in 2019. The compound growth rate is expected to be 7.47% in the 2020 -2024.

During the Reporting Period, the Company's income in other countries and regions accounted for a relatively low proportion, mainly concentrated in Taiwan, South Korea and the Philippines.

4. Seasonal fluctuation of main business income

During the Reporting Period, the Company's main business income is divided into the following quarterly categories:

Unit: RMB 10,000 Yuan

Quarters	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
1 st quarter	9,682.43	13.02%	3,721.39	6.90%	11,544.27	46.34%
2 nd quarter	19,613.53	26.38%	14,060.04	26.06%	2,813.79	11.29%
3 rd quarter	27,445.54	36.92%	11,587.61	21.47%	3,836.09	15.40%
4 th quarter	17,599.30	23.67%	24,592.12	45.57%	6,719.66	26.97%
Total	74,340.81	100.00%	53,961.17	100.00%	24,913.81	100.00%

During the Reporting Period, the Company's main business income was affected

by many factors such as the number of orders, product acceptance cycle, fluctuation of capital expenditure of customers in the downstream semiconductor manufacturing industry, etc., without obvious seasonal characteristics.

(III) Operating Cost Analysis

1. Composition of operating cost

During the Reporting Period, the composition of the Company's operating cost is as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Main business cost	41,134.20	99.08%	30,324.39	98.75%	13,837.66	98.54%
Other business costs	381.64	0.92%	385.22	1.25%	205.07	1.46%
Total	41,515.84	100.00%	30,709.61	100.00%	14,042.73	100.00%

During the Reporting Period, the operating cost of the Company increased with the expansion of the Company's business scale, matching the change of the Company's operation income scale. During the Reporting Period, the Company's main business costs were RMB 138.3766 million Yuan, RMB 303.2439 million Yuan and RMB 411.342 million Yuan, respectively, accounting for over 98.00% of the operating cost, which were the main components of the operating cost, while other business costs accounted for a relatively small proportion.

2. Analysis of product composition of main business cost

During the Reporting Period, the Company's main business costs by product composition are as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Semiconductor cleaning equipment	34,171.81	83.07%	27,823.44	91.75%	11,833.38	85.52%
Including: single wafer cleaning equipment	29,775.66	72.39%	27,823.44	91.75%	11,833.38	85.52%
Wet bench cleaning equipment	3,050.71	7.42%	-	-	-	-
Single wafer wet bench combined cleaning equipment	1,345.44	3.27%	-	-	-	-
Semiconductor electroplating equipment	4,773.22	11.60%	992.43	3.27%	-	-
Advanced packaging wet process equipment	2,189.17	5.32%	1,508.52	4.97%	2,004.28	14.48%
Total	41,134.20	100.00%	30,324.39	100.00%	13,837.66	100.00%

During the Reporting Period, the Company's main business cost was semiconductor cleaning equipment cost, which accounted for 85.52%, 91.75% and 83.07% of the main business cost respectively, matching with the proportion of

semiconductor cleaning equipment revenue in the main business revenue.

3. Analysis on the composition of main business cost

During the Reporting Period, the composition of the Company's main business cost is as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Direct materials	38,418.92	93.40%	28,595.15	94.30%	12,748.67	92.13%
Direct labor costs	905.50	2.20%	600.52	1.98%	338.04	2.44%
Manufacturing expenses	1,809.78	4.40%	1,128.72	3.72%	750.95	5.43%
Total	41,134.20	100.00%	30,324.39	100.00%	13,837.66	100.00%

The Company's main business cost consists of direct materials, direct labor and manufacturing costs. During the Reporting Period, with the expansion of the Company's business scale, the cost of various types increased year by year.

During the Reporting Period, the Company's direct materials were RMB 127.4867 million Yuan, RMB 285.9515 million Yuan and RMB 384.1892 million Yuan respectively, accounting for 92.13%, 94.30% and 93.40% of the main business costs in each period, which were the main components of the main business costs. During the Reporting Period, please refer to "IV. (I) Issuer's Procurement" in "Section VI Business and Technology" of this [***] for the Company's main raw material procurement and price changes.

During the Reporting Period, the Company's direct labor costs were RMB 3.3804 million Yuan, RMB 6.0052 million Yuan and RMB 9.055 million Yuan respectively, accounting for 2.44%, 1.98% and 2.20% of the main business costs in each period, mainly composed of the wages and salaries of production personnel.

During the Reporting Period, the Company's manufacturing costs were RMB 7.5095 million Yuan, RMB 11.2872 million Yuan and RMB 18.0978 million Yuan respectively, accounting for 5.43%, 3.72% and 4.40% of the main business costs in each period, mainly for factory rental, outsourcing processing, indirect labor cost, etc.

(IV) Gross Margin Analysis

1. Analysis of gross profit and gross margin

During the Reporting Period, the Company's gross profit and gross margin are as follows:

Unit: RMB 10,000 Yuan

Item	2019			2018			2017		
	Amount	contribution level	Gross profit margin	Amount	contribution level	Gross profit margin	Amount	contribution level	Gross profit margin
Main business	33,206.61	97.22%	44.67%	23,636.78	97.20%	43.80%	11,076.15	97.88%	44.46%
Other business	950.85	2.78%	71.36%	680.52	2.80%	63.85%	239.84	2.12%	53.91%
Total	34,157.46	100.00%	45.14%	24,317.29	100.00%	44.19%	11,316.00	100.00%	44.62%

During the Reporting Period, the gross profit of the Company was 113.16 million Yuan, 243.1729 million Yuan and 341.5746 million Yuan respectively, increasing year by year with the continuous expansion of the Company's income scale. The main

business of the Company is outstanding, and the gross profit mainly comes from the main business. The gross profit contribution of the main business in each period accounts for 97.88%, 97.20% and 97.22% respectively.

During the Reporting Period, the comprehensive gross margin of the Company was 44.62%, 44.19% and 45.14% respectively, which was relatively stable.

2. Analysis of gross profit and gross margin of main business

(1) General analysis

During the Reporting Period, the Company's main business gross profit and gross margin by product category are as follows:

Unit: RMB 10,000 Yuan

Item	2019			2018			2017		
	Gross profit amount	Gross Profit Margin	Proportion of income	Gross profit amount	Gross Profit Margin	Proportion of income	Gross profit amount	Gross Profit Margin	Proportion of income
Semiconductor cleaning equipment	28,350.49	45.34%	84.10%	22,312.53	44.50%	92.91%	9,659.11	44.94%	86.27%
Including: single wafer cleaning equipment	25,323.86	45.96%	74.12%	22,312.53	44.50%	92.91%	9,659.11	44.94%	86.27%
Wet bench cleaning equipment	1,750.64	36.46%	6.46%	-	-	-	-	-	-
Single wafer wet bench	1,275.99	48.68%	3.53%	-	-	-	-	-	-
combined cleaning equipment									
Semiconductor electroplating equipment	3,084.18	39.25%	10.57%	198.70	16.68%	2.21%	-	-	-
Advanced packaging wet process equipment	1,771.95	44.73%	5.33%	1,125.55	42.73%	4.88%	1,417.05	41.42%	13.73%
Total	33,206.61	44.67%	100.00%	23,636.78	43.80%	100.00%	11,076.15	44.46%	100.00%

During the Reporting Period, the gross margin of the Company's main business was 44.46%, 43.80% and 44.67% respectively, which was generally stable.

(2) Analysis of semiconductor cleaning equipment

During the Reporting Period, the gross margin of the Company's semiconductor cleaning equipment was 44.94%, 44.50% and 45.34% respectively, which was relatively stable and remained at a relatively high level. The main reasons were: ① The Company's semiconductor cleaning equipment is well-developed and its gross margin is relatively stable; ② The Company's semiconductor cleaning equipment has a high degree of customization, which is a typical high-end and sophisticated equipment as downstream customers have high requirements for specifications, product standards, technical parameters, etc. The industry had high market barriers and customer verification barriers. Therefore, the above products and industry characteristics determine its relatively high level of gross margin; ③ The Company has a strong competitive edge on the semiconductor cleaning equipment market of mainland China, considering that at present, China's semiconductor cleaning equipment market has fewer Chinese mainland competitors; ④ The Company has a strong competitive edge

on the world semiconductor cleaning equipment market. The Company’s semiconductor cleaning equipment has successfully entered the production line of Hynix, one of the top ten semiconductor enterprises in the world and constantly received Hynix’s orders; ⑤ The Company has applied for patent protection for core technology to form technical barriers, effectively ensuring the competitiveness of the company’s product technology..

(3) Analysis of semiconductor electroplating equipment

In 2018 and 2019, the gross margin of the Company’s semiconductor electroplating equipment was 16.68% and 39.25% respectively. The main reasons for the rise in gross margin are: ① in 2018, the Company’s back-end advanced packaging semiconductor electroplating equipment was in the early stage of market promotion, and the Company and customers jointly carried out verification work. Since customers need to invest corresponding resources for new product verification, the gross margin of the equipment is relatively low; ② in 2019, the Company sold the first front-end copper interconnection electroplating equipment, and considering the process difficulty and technical level of the front-end electroplating equipment are higher than that of the back-end advanced packaging electroplating equipment, the gross margin of the former is higher, and such first sale drove the rise in the gross margin of the Company’s semiconductor electroplating equipment.

(4) Analysis of advanced packaging wet process equipment

During the Reporting Period, the gross margin of the Company’s advanced packaging wet process equipment was 41.42%, 42.73% and 44.73% respectively. The Company’s advanced packaging wet process equipment is well-developed and its gross margin is stable.

3. Comparative analysis of gross margin with comparable companies in the same industry

The Company’s main business is the research and development, production and sales of semiconductor special equipment, the main products include semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet process equipment. The Company selects NAURA and KINGSEMI, which are listed in the domestic market as A-shares and form direct or potential competition relationship with the Company in the subdivision field, and also selects AMEC and HZCCTECH, which are listed in the domestic market as A-shares of semiconductor special equipment in China, as the comparable companies. During the Reporting Period, the comparison between the gross margin of the Company’s main business and that of comparable listed companies in the same industry is as follows:

Company name	2019	2018	2017
NAURA	40.53%	38.38%	36.59%
AMEC	34.93%	35.50%	38.59%
KINGSEMI	46.62%	46.49%	41.68%
HZCCTECH	51.15%	55.60%	57.10%
Average value	43.31%	43.99%	43.49%
The Company	44.67%	43.80%	44.46%

Note: the above indicators are calculated based on the data publicly disclosed by comparable listed companies.

During the Reporting Period, the Company’s gross margin level was similar to the average level of comparable listed companies in the same industry.

(V) Period Cost Analysis

During the Reporting Period, the Company’s period expenses are detailed as follows:

Item	2019	2018	2017
------	------	------	------

	Amount (RMB 10,000 Yuan)	Proportion in operating income	Amount (RMB 10,000 Yuan)	Proportion in operating income	Amount (RMB 10,000 Yuan)	Proportion in operating income
Selling expenses	8,475.49	11.20%	6,004.69	10.91%	4,349.33	17.15%
Administrative expenses	3,029.73	4.00%	2,040.41	3.71%	1,394.28	5.50%
Financial expenses	-357.79	-0.47%	-251.46	-0.46%	240.80	0.95%
R&D expenses	9,926.80	13.12%	7,941.50	14.43%	5,217.24	20.57%
Total	21,074.23	27.85%	15,735.13	28.60%	11,201.65	44.17%

During the Reporting Period, the total expenses of the Company were RMB 112.0165 million Yuan, RMB 157.3513 million Yuan and RMB 210.7423 million Yuan, accounting for 44.17%, 28.60% and 27.85% of the operating income respectively. With the expansion of the Company's production and operation scale and the growth of sales revenue, the total expenses during the Reporting Period accounted for a continuous decline in the proportion of operating income.

1. Selling expenses

(1) General analysis

During the Reporting Period, the details of the Company's sales expenses are as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion%	Amount	Proportion%	Amount	Proportion%
Sales	2,761.73	32.58%	1,931.14	32.16%	1,249.99	28.74%
commission						
Employee benefits	1,945.09	22.95%	1,036.01	17.25%	594.38	13.67%
After sales service fee	1,360.12	16.05%	1,174.57	19.56%	1,337.49	30.75%
Installation and service fee	820.50	9.68%	665.92	11.09%	322.82	7.42%
Travel expenses	436.99	5.16%	316.84	5.28%	123.17	2.83%
Logistics and package fee	380.01	4.48%	276.08	4.60%	317.63	7.30%
Share-based payment	219.09	2.58%	77.79	1.30%	34.10	0.78%
Business entertainment	204.99	2.42%	238.93	3.98%	108.78	2.50%
Exhibition advertising fee	112.78	1.33%	84.95	1.41%	49.33	1.13%
Office expenses	11.02	0.13%	42.38	0.71%	13.22	0.30%
Rental fee	96.91	1.14%	58.72	0.98%	95.87	2.20%
Depreciation charge	5.04	0.06%	3.16	0.05%	1.52	0.03%
Other	121.23	1.43%	98.18	1.64%	101.03	2.32%
Total	8,475.49	100.00%	6,004.69	100.00%	4,349.33	100.00%

During the Reporting Period, the Company's sales expenses were RMB 43.4933 million Yuan, RMB 60.0469 million Yuan and RMB 84.7549 million Yuan, the Company's sales expenses increase year by year; the Company's sales expenses account for 17.15%, 10.91% and 11.20% of the current year's operating income respectively. With the expansion of the Company's business scale, it shows a downward trend.

①Sales commission

The Company signs a product sales agency agreement with the agent, and the agent is responsible for the marketing of relevant products in a specific region. The Company directly signs a sales contract with relevant customers and delivers goods directly to customers, and pays the agent commission according to the type of products it sells as an agent and the commission rate agreed in advance.

There are a large number of potential customers in the semiconductor industry, with a long sales cycle and large sales uncertainty. The sales will fluctuate with the life cycle of the semiconductor industry. Through agent sales, the Company can further speed up its market development and improve its sales scale.

During the Reporting Period, the sales commissions in the sales expenses were RMB 12.4999 million Yuan, RMB 19.3114 million Yuan and RMB 27.6173 million Yuan respectively, accounting for 4.93%, 3.51% and 3.65% of the operating income. The Company's revenue scale grew rapidly, the operating income in 2018 increased by 116.99% and in 2019 by 37.52% year-on-year, and the Company's sales commission paid to agents for sales increased along with the increase in operating income. The change trend of the amount of sales commission of the Company is consistent with the operating income, and the proportion of the sales commission to the operating income generally shows a downward trend.

②Employee benefits

During the Reporting Period, the employee benefits in the sales expenses were RMB 5.9438 million Yuan, RMB 10.3601 million Yuan and RMB 19.4509 million Yuan respectively, accounting for 2.34%, 1.88% and 2.57% of the operating income. The Company has expanded its business scale and increased the number of sales personnel in each period, and has increased the salary and bonus of sales personnel due to the increase of performance.

③After-sales service fee

During the Reporting Period, the after-sales service fees in the sales expenses were RMB 13.3749 million Yuan, RMB 11.7457 million Yuan and RMB 13.6012 million Yuan respectively, accounting for 5.27%, 2.13% and 1.80% of the operating income. After sales service fee means that the Company has the warranty obligation for the sold semiconductor special equipment according to the contract, and the Company accrues the after-sales service fee for the maintenance fee that is expected to be borne in the future.

④ Installation and service fee

During the Reporting Period, the installation and service fees in the sales expenses were RMB 3.2282 million Yuan, RMB 6.6592 million Yuan and RMB 8.205 million Yuan respectively, accounting for 1.27%, 1.21% and 1.08% of the operating income. The sales volume of the Company's equipment increased year by year, and an increase in the number of equipment to be installed in each period will bring about a rise in the installation and service fees.

(2) Comparison with comparable companies in the same industry

During the Reporting Period, the comparison of the sales expense rate between the Company and the listed companies in the same industry is as follows:

Unit: RMB 10,000 Yuan

Company name	2019		2018		2017	
	Operating income	Sales expense rate	Operating income	Sales expense rate	Operating income	Sales expense rate
NAURA	405,831.29	5.87%	332,385.10	5.08%	222,281.85	5.63%
AMEC	194,694.93	10.12%	163,928.83	13.21%	97,192.06	16.66%
KINGSEMI	21,315.67	9.67%	20,999.05	8.24%	18,988.50	10.56%
HZCCTECH	39,883.41	13.59%	21,612.15	14.40%	17,979.45	10.25%
Average value	165,431.32	9.81%	134,731.28	10.23%	89,110.46	10.77%
The Company	75,673.30	11.20%	55,026.91	11.24%	25,358.73	17.15%

In 2017, the Company's sales expense rate was higher than that of comparable companies in the same industry, mainly because the Company's business was in a rapid development period and the revenue scale was small. In order to actively expand market share, the Company increased its market development investment. In 2018 and 2019, the Company's sales expense rate was close to the average value of comparable companies in the same industry and within a reasonable range.

2. Administrative expenses

(1) General introduction

During the Reporting Period, the details of the Company's administrative expenses are as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Employee benefits	1,219.20	40.24%	840.52	41.19%	485.21	34.80%
Intermediary fee	374.17	12.35%	189.65	9.29%	29.19	2.09%
Consulting service fee	371.33	12.26%	213.08	10.44%	140.01	10.04%
Rental fee	294.72	9.73%	301.11	14.76%	261.83	18.78%
Share-based payment	248.18	8.19%	106.27	5.21%	94.45	6.77%
Business entertainment	121.17	4.00%	59.16	2.90%	87.30	6.26%
Travel expenses	127.28	4.20%	126.15	6.18%	112.69	8.08%
Office expenses	91.07	3.01%	81.55	4.00%	77.65	5.57%
Depreciation and amortization	24.24	0.80%	20.71	1.02%	21.32	1.53%
Other	158.37	5.23%	102.21	5.01%	84.64	6.07%
Total	3,029.73	100.00%	2,040.41	100.00%	1,394.28	100.00%

During the Reporting Period, the amount of the Company's administrative expenses was RMB 13.9428 million Yuan, RMB 20.4041 million Yuan and RMB 30.2973 million Yuan, accounting for 5.50%, 3.71% and 4.00% of the operating income, respectively, each of which was relatively stable.

① Employee benefits

During the Reporting Period, the employee benefits in the administrative expenses were RMB 4.8521 million Yuan, RMB 8.4052 million Yuan and RMB 12.192 million Yuan, accounting for 1.91%, 1.53% and 1.61% of the operating income. Considering the Company's operating performance has been greatly improved, in order to motivate the management personnel and further improve the management efficiency and meet the management needs arising from the expansion of business scale, the Company has increased the employee benefits paid to the management personnel and the number of management personnel employed.

② Intermediary fee

During the Reporting Period, the intermediary fees in the administrative expenses were RMB 291,900 Yuan, RMB 1.8965 million Yuan and RMB 3.7417 million Yuan respectively, accounting for 0.12%, 0.34% and 0.49% of the operating income. The Company hired intermediary agencies due to audit, legal counsel, asset assessment and other work, as a result of which the intermediary fees increased.

③ Consulting service fee

During the Reporting Period, the consulting service fees in the administrative expenses were RMB 1.4001 million Yuan, RMB 2.1308 million Yuan and RMB 3.7133 million Yuan respectively, accounting for 0.55%, 0.39% and 0.49% of the operating income, mainly including human resource service fees, investment and media consulting service fees and translation fees.

(2) Share-based payment expenses

During the Reporting Period, the share based payment expenses confirmed by the Company includes: 1) the share-based payment expenses incurred by the issuer's employees when they obtain the options of the controlling shareholder ACMR, 2) the share-based payment expenses incurred by the employee stock holding platforms Xinshi Consulting and Xingang Consulting increase capital of ACMSH in 2019.

During the Reporting Period, the share-based payment expenses confirmed by the Company are as follows:

Category	2019	2018	2017
Sales expenses	219.09	77.79	34.10
Administrative expenses	248.18	106.27	94.45
R&D expenses	752.70	168.81	33.44
Operation cost	172.28	46.90	10.48
Total	1,392.25	399.78	172.47

During the Reporting Period, the share-based payments confirmed by the Company were RMB 1.7247 million, RMB 3.9978 million and RMB 13.9225 million respectively. In 2019, the substantial increase in share-based payments is due to the increase in share-based payment expenses caused by the capital increase of ACMSH by the employee stock holding platforms Xinshi Consulting and Xingang Consulting, as well as the increase in the number of options acquired by the employees of the issuer from ACMR, the controlling shareholder.

(3) Comparison with comparable companies in the same industry

During the Reporting Period, the comparison of the administrative expenses ratio between the Company and listed companies in the same industry is as follows:

Unit: RMB 10,000 Yuan

Company name	2019	2018	2017
NAURA	13.75%	15.14%	19.73%
AMEC	5.59%	7.96%	8.75%
KINGSEMI	15.96%	13.61%	14.18%
HZCCTECH	14.06%	9.43%	9.18%

Average value	12.34%	11.54%	12.96%
The Company	4.00%	3.71%	5.50%

Note: The above indicators are calculated based on the data publicly disclosed by comparable listed companies.

During the Reporting Period, the Company's administrative expenses rate was lower than the average level of comparable listed companies, mainly because: ① the Company's management was flat, it focused on the main business, and the number of subsidiaries was small, as a result of which the management personnel were relatively less and the amount and rate of administrative expenses were lower than the average amount and rate of comparable companies; ② during the Reporting Period, the main production and operation sites of the Company were obtained through leasing, and the corresponding amount of depreciation and amortization was relatively small

3. R&D expenses

(1) General analysis

During the Reporting Period, the R&D expenses of the Company are detailed as follows:

Unit: RMB 10,000 Yuan

Item	2019		2018		2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Employee benefits	4,731.41	47.66%	3,020.84	38.04%	1,633.14	31.30%
Material consumption	2,664.11	26.84%	2,007.19	25.27%	2,063.33	39.55%
Share-based payment	752.70	7.58%	168.81	2.13%	33.44	0.64%
Travel expenses	582.91	5.87%	420.73	5.30%	289.27	5.54%
Depreciation and amortization	267.96	2.70%	216.89	2.73%	201.08	3.85%
Rental expenses	236.03	2.38%	224.50	2.83%	149.53	2.87%
Service charge	215.74	2.17%	106.33	1.34%	112.04	2.15%
Test and development expenses	50.93	0.51%	1,566.36	19.72%	435.24	8.34%
other expenses	425.01	4.28%	209.84	2.64%	300.17	5.75%
Total	9,926.80	100.00%	7,941.50	100.00%	5,217.24	100.00%

During the Reporting Period, the amount of R&D expenses of the Company was RMB 52.1724 million Yuan, RMB 79.415 million Yuan and RMB 99.268 million Yuan respectively, accounting for 20.57%, 14.43% and 13.12% of the operating income.

The Company has always attached great importance to the research and development of new products and technologies. During the Reporting Period, the Company has successfully developed new products such as single wafer wet bench combined cleaning equipment, wet bench cleaning equipment, back-end advanced packaging electroplating equipment, front-end copper interconnection electroplating equipment in the front channel, front-end scrubbing equipment, vertical furnace tube equipment, etc. During the Reporting Period, the Company invested a lot in early stage

R&D and later stage continuous improvement of its products, and the R&D expenses increased year by year.

① Employee benefits

During the Reporting Period, the employee benefits in the R&D expenses was RMB 16.3314 million Yuan, RMB 30.2084 million Yuan and RMB 47.3141 million Yuan respectively, accounting for 6.44%, 5.49% and 6.25% of the operating income. During the Reporting Period, the increase of employee benefits in R&D expenses is mainly due to the increase of R&D personnel and average compensation with the expansion of the Company's business scale and performance.

② Material consumption

During the Reporting Period, the amount of material consumption in the Company's R&D expenses was RMB 20.6333 million Yuan, RMB 20.0719 million Yuan and RMB 26.6411 million Yuan respectively, accounting for 8.14%, 3.65% and 3.52% of the operating income, respectively. With the expansion of the Company's business scale, the proportion decreased year by year.

③ Test and development expenses

During the Reporting Period, the test and development expenses in the R&D expenses were RMB 4.3524 million Yuan, RMB 15.6636 million Yuan and RMB 509,300 Yuan respectively, accounting for 1.72%, 2.85% and 0.07% of the operating income. For some new equipment, the Company hopes to know the specifications, performance indicators and operation stability of the equipment in wafer manufacturing or advanced packaging production line, so as to ensure that the equipment can reach the best operation state after being sold to customers. In this case, the Company will entrust the downstream semiconductor manufacturing enterprise to use its site, personnel, materials, etc. to test and evaluate the new equipment, and the downstream semiconductor manufacturing enterprise will require the Company to pay the corresponding test and development expenses.

(2) R&D projects

During the Reporting Period, the corresponding R&D projects of the Company's R&D expenses are as follows:

Unit: RMB 10,000 Yuan

Projects	2019	2018	2017
SAPS cleaning technology	4,215.52	3,482.72	1,509.02
ECP electrochemistry electroplating technology	2,144.10	2,187.17	2,526.12
WET bench cleaning technology	927.15	208.06	-
Backside cleaning technology	688.98	325.06	76.50
Tahoe technology	449.17	253.52	4.61
Furnace vertical furnace tube technology	422.41	201.38	-
Backend Tools advanced packaging wet process technology	395.58	647.67	443.25
SFP stress-free polishing technology	265.23	270.08	561.36
TEBO cleaning technology	259.69	329.10	96.39
Development and industrialization of polytetrafluoroethylene cavity manufacturing process for semiconductor equipment	28.13	13.94	-
Other	130.83	22.79	-
Total	9,926.80	7,941.50	5,217.24

(3) Comparison with comparable companies in the same industry

During the Reporting Period, the comparison of R&D expense rate between the Company and listed companies in the same industry is as follows:

Unit: RMB 10,000 Yuan

Company name	2019	2018	2017
NAURA	12.93%	10.57%	16.05%
AMEC	12.00%	7.21%	5.84%
KINGSEMI	16.45%	16.29%	10.41%
HZCCTECH	26.82%	28.55%	20.51%
Average value	17.05%	15.66%	13.20%
The Company	13.12%	14.43%	20.57%

Note: The above indicators are calculated on the basis of the data publicly disclosed by comparable listed companies.

There are some differences between the Company and the comparable listed companies in the specific business, the specific stages of R&D projects and the operating income scale, as well as in the R&D expense rate. In 2017, the Company's R&D expense rate was higher than the average level of comparable companies in the same industry, mainly due to the Company's low scale of operating income in 2017; in 2018 and 2019, the Company's R&D expense rate accounted for the same proportion of operating income as the average level of comparable companies in the same industry, but was lower than that of HZCCTECH with a lower scale of operating income.

4. Financial expenses

During the Reporting Period, the details of the Company's financial expenses are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Interest expenses	745.61	504.78	208.25
Less: interest income	204.64	63.84	5.85
Exchange gains/losses	-924.65	-716.95	26.60
Bank charges	25.89	24.54	11.79
Total	-357.79	-251.46	240.80

During the Reporting Period, the financial expenses of the Company were RMB 2.408 million Yuan, RMB -2.5146 million Yuan and RMB -3.5779 million Yuan respectively, accounting for 0.95%, -0.46% and -0.47% of the operating income, and the main components included interest expense, interest income and exchange gains/losses, etc., the amounts and proportions of which in each period were relatively small. Among them, exchange gains/losses mainly refer to gains or losses of accounts receivables, accounts payables and cash and bank balances due to exchange fluctuations caused by the Company through transactions dominated in USD and KRW.

(VI) Analysis of Other Profit or Loss Items

1. Other income

During the Reporting Period, the composition of other income of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Government grants	2,666.69	2,082.34	1,590.97
Commission for withholding individual income tax	4.88	5.30	5.54
Total	2,671.56	2,087.63	1,596.52

During the Reporting Period, the Company's other income amounts to RMB

15.9652 million Yuan, RMB 20.8763 million Yuan and RMB 26.7156 Yuan respectively, mainly referring to government grants.

During the Reporting Period, the government grants included in other income of the Company is as follows:

Unit: RMB 10,000 Yuan

Grant project	2019	2018	2017	Asset related /income related
65-45nm Copper Interconnection Stress Free Polishing Equipment R&D	138.70	199.83	124.43	Comprehensive subsidy
20-14nm Copper Interconnection Copper Plating Equipment R&D and Application	2,088.34	1,802.77	1,313.97	Comprehensive subsidy
Patent Pilot Funding	31.36	12.14	12.51	Income related
R&D and Industrialization of Polytetrafluoroethylene Cavity Manufacturing Process for Semiconductor Equipment	28.13	13.94	-	Income related
2019 Technology Giant Subsidy	300.00	-	-	Income related
2019 Shanghai Patent Funding	45.77	-	-	Income related
2019 Zhangjiang Science City Intellectual Property Support Fund	20.00	-	-	Income related
Grants for Chinese patent applications and licensing fees in Pudong New Area in 2019	14.40	-	-	Income related
2018 Shanghai Patent Grant	-	18.89	-	Income related
Grants for Chinese patent applications and licensing fees in Pudong New Area in 2018	-	4.40	-	Income related
2018 Stability Grants	-	8.17	-	Income related
2017 Shanghai Patent Funding	-	-	44.71	Income related
Grants for Chinese patent applications and licensing fees in Pudong New Area in 2017	-	-	3.60	Income related
Science and Technology Development Fund Key Enterprise R&D Institution Grants	-	-	80.00	Income related
Other	-	22.20	11.75	Income related
Total	2,666.69	2,082.34	1,590.97	

2. Investment income

During the Reporting Period, the details of the Company's investment income are as follows:

Unit: RMB 10,000 Yuan

Project	2019	2018	2017
Long-term equity investment income	-2.07	-1.02	-

accounted by equity method			
Investment income of wealth management products	126.10	-	-
Total	124.03	-1.02	-

During the Reporting Period, the Company's investment income was mainly composed of investment income from wealth management products, mainly due to the interest income obtained by the Company from the bank's wealth management purchased with idle bank book funds in order to improve the efficiency of capital use.

3. Credit impairment loss / asset impairment loss

During the Reporting Period, the composition of credit impairment loss of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	Category	2019	2018	2017
Credit impairment loss	Bad debts loss of accounts receivables	-221.58	-	-
	Bad debts loss of other receivables	-1.93	-	-
Assets impairment loss	Bad debts losses	-	-267.47	-277.03
	Losses from decline in value of inventories	-78.88	30.10	-21.63
Total		-302.39	-237.37	-298.66

In 2019, the Company implemented the new financial instrument standard, and the bad debts losses were transferred from the asset impairment loss to the credit impairment loss for presentation. During the Reporting Period, the Company's credit impairment loss/asset impairment loss is mainly composed of allowances for bad debts of accounts receivables.

4. Non-operating expenses

During the Reporting Period, the composition of non-operating expenses of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Non-recurring losses	-	108.36	-
Losses from damage and retirement of non-current assets	202.85	1.47	0.33
Penalties and overdue fines	0.11	1.52	66.38
Others	0.17	0.18	4.64
Total	203.13	111.52	71.35

During the Reporting Period, the Company's non-operating expenses were RMB 7,135,000 Yuan, RMB 1.1152 million Yuan and RMB 2.0313 million Yuan respectively, mainly composed of non-recurring loss, losses from damage and retirement of non-current assets, and penalties and overdue fines. In 2017, the penalties and overdue fines in the Company's non-operating expenses were RMB 663,800 Yuan, composed of the follows: in December 2017, as the Company disposed the tax-free equipment or used it for other purposes without the consent of the customs, Shanghai Pudong Customs issued the *Decision on Administrative Penalty* to the Company, stipulated that the Company should pay a penalty of RMB 582,000 Yuan with overdue fines of RMB 78,200 Yuan. In 2018, the non-recurring loss in the Company's non-operating expenses was RMB 1,083,600 Yuan, which was caused by the accidental damage of equipment parts during the transportation to customers.

(VII) Tax Payment

During the Reporting Period, the details of income tax of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Current income tax expenses	2,722.98	893.05	-
Deferred income tax expenses	-899.81	137.08	248.00
Total	1,823.17	1,030.13	248.00

During the Reporting Period, with the growth of the Company's income and profit scale, the Company's income tax expenses increased accordingly.

XII. Asset Quality and Solvency Analysis

(I) Asset Structure and Change Analysis

At the end of each Reporting Period, the composition of the Company's assets by liquidity is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Current assets	120,865.05	92.40%	56,783.25	89.28%	28,965.87	90.26%
Non-current assets	9,935.10	7.60%	6,819.00	10.72%	3,126.11	9.74%
Total Assets	130,800.15	100.00%	63,602.25	100.00%	32,091.98	100.00%

At the end of each Reporting Period, the total assets of the Company were RMB 320.9198 million Yuan, RMB 636.0225 million Yuan and RMB 1,308.0015 million Yuan, respectively. The asset scale increased year by year, mainly due to the corresponding increase of cash and bank balances, accounts receivables, inventory and other assets with the expansion of the Company's business scale.

At the end of each Reporting Period, the Company's current assets accounted for 90.26%, 89.28% and 92.40% of the total assets, with a relatively high proportion of current assets. The spare parts needed for the Company's production are mainly purchased and outsourced, and the Company carries out pre-assembly, general assembly and testing, with a small quantity and amount of production equipment; meanwhile, the Company's office building, plant and land are obtained through leasing, so the Company's non-current assets account for a relatively low proportion.

1. Current assets analysis

At the end of each Reporting Period, the composition of the Company's current assets is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Cash and bank balances	44,002.91	36.41%	9,582.86	16.88%	4,515.32	15.59%
Accounts receivables	20,989.64	17.37%	17,360.55	30.57%	9,770.49	33.73%

Prepayments	1,124.46	0.93%	1,336.05	2.35%	390.58	1.35%
Other receivables	4,763.85	3.94%	1,716.08	3.02%	637.33	2.20%
Inventory	30,727.41	25.42%	26,415.99	46.52%	13,553.19	46.79%
Other current assets	19,256.78	15.93%	371.71	0.65%	98.96	0.34%
Total current assets	120,865.05	100.00%	56,783.25	100.00%	28,965.87	100.00%

At the end of each Reporting Period, the Company's current assets were RMB 289.6587 million Yuan, RMB 567.8325 million Yuan and RMB 1,208.6505 million Yuan respectively, showing a rapid upward trend. On the one hand, continuous expansion of the Company's business scale enables an increase in the accounts receivable and inventory year by year, on the other hand, ACMR increased the Company's capital and the Company implemented equity financing in 2019, for which there was a significant increase in cash and bank balances and other current assets of the Company. At the end of each Reporting Period, the Company's current assets structure is relatively stable, mainly composed of cash and bank balances, accounts receivables, inventory and other current assets.

(1) Cash and bank balances

At the end of each Reporting Period, the details of the Company's cash and bank balances are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Cash on hand	3.05	4.70	2.10
Bank deposit	43,999.86	9,578.16	4,513.22
Other cash and bank balances	-	-	-
Total	44,002.91	9,582.86	4,515.32
Including: total amount deposited overseas	15,259.82	6,832.42	327.18

At the end of each Reporting Period, the Company's cash and bank balances were RMB 45.1532 million Yuan, RMB 95.8286 million Yuan and RMB 440.0291 million Yuan respectively, accounting for 15.59%, 16.88% and 36.41% of the current assets at the end of each Reporting Period, which are important components of the Company's current assets. During the Reporting Period, the Company's cash and bank balances showed a rapid growth trend, which was due to the continuous growth of the Company's business scale, the capital increase of the Company by ACMR, the implementation of equity financing, etc., and the Company's capital strength continued to increase.

At the end of each Reporting Period, the use of some cash and bank balances of the Company is limited, as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Amounts deposited overseas and restricted in repatriation	83.21	23.47	
Voluntary committed restricted funds	22,817.00	-	
Total	22,900.21	23.47	

Amounts deposited overseas and restricted in repatriation are the Pension Reserve

Account Fund set up by Sumer Korea, the Company's subsidiary, according to the local regulations of South Korea, which can only be used to pay the employee's pension when the employee retires.

In 2019, the Company carried out equity financing, and the Company voluntarily made a commitment to limit the use of the corresponding raised funds. In June 2019, ACMSH made the fifth capital increase, and the Company voluntarily made the following commitments: before the Company completed the listing on the STAR Market or used such capital increase funds to repurchase new investors' shares, such capital increase funds were only used for reserves; in November 2019, ACMSH made the first capital increase, and the Company voluntarily made the following commitments: before the Company submitted to Shanghai Stock Exchange the listing documents with respect to the listing on STAR Market or used such capital increase funds to repurchase new investors' shares, such capital increase funds were only used for reserves. The Company plans to terminate the above voluntary commitment after submitting the IPO application in the STAR Market, and the restrictions on the use of corresponding funds will be released.

As of December 31, 2019, the Company's use and deposit of the above equity financing funds are as follows:

Financing	Currency	Amount	Use and deposit	Currency	Amount
The fifth capital increase of ACMSH (before restructuring)	RMB	16,792.40	Other current assets	RMB	16,792.40
	USD	283.73		USD	283.73
The first capital increase of ACMSH	RMB	22,817.00	Cash and bank balances	RMB	22,817.00

Note: The Company uses the fifth capital increase of ACMSH (before restructuring) to purchase time deposits, which are included in other current assets.

(2) Accounts receivables

At the end of each Reporting Period, the Company has no notes receivable, and the Company's accounts receivables are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Balance of accounts receivables	21,845.46	17,987.45	10,136.80
Less: allowances for bad debts	855.82	626.89	366.31
Net accounts receivables	20,989.64	17,360.55	9,770.49

At the end of each Reporting Period, the net accounts receivables of the Company were RMB 97.7049 Yuan, RMB 173.6055 Yuan and RMB 209.8964 Yuan respectively, accounting for 33.73%, 30.57% and 17.37% of the current assets at the end of each Reporting Period, which were important components of the current assets of the Company.

① Analysis of changes in balance of accounts receivables

During the Reporting Period, the balance of accounts receivables and changes in operating income of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Balance of accounts receivables	21,845.46	17,987.45	10,136.80
Growth rate of balance of accounts receivables at the	21.45%	77.45%	-

end of the period			
Growth rate of operating income	37.52%	116.99%	-

During the Reporting Period, the balance of accounts receivables of the Company increased significantly, mainly due to the rapid growth of the Company's operating income. In 2018 and 2019, the growth rate of the Company's accounts receivables balance is lower than the growth rate of operating income, and the Company's accounts receivables collection is in good condition.

②Aging analysis and provisions of allowances for bad debts of accounts receivables

A. Aging analysis of accounts receivables

Unit: RMB 10,000 Yuan

aging	December 31, 2019	December 31, 2018	December 31, 2017
Within 1year (inclusive)	16,651.68	15,203.01	9,436.40
Including: within 6 months	12,612.86	10,556.63	4,876.18
within 7-12 months	4,038.82	4,646.39	4,560.22
1-2 years (including 2 years)	5,110.07	2,698.68	570.44
2-3 years (including 3 years)	83.71	45.98	-
3-4 years (including 4 years)	-	39.77	129.97
4-5 years (including 5 years)	-	-	-
Over 5 years	-	-	-
Subtotal	21,845.46	17,987.45	10,136.80
Less: allowances for bad debts	855.82	626.89	366.31
Total	20,989.64	17,360.55	9,770.49

At the end of each Reporting Period, the aging of accounts receivables of the Company is mainly within one year, accounting for 96.58%, 87.57% and 79.33% respectively. During the Reporting Period, the proportion of the aging over one year has increased. The main reasons are as follows: a. during the Reporting Period, some of the Company's products were sold to customers through ACMR, and at the end of 2018, ACMR failed to pay to the company in time after receiving the customer's payments, resulting in the corresponding accounts receivables with the aging over one year; b. during the Reporting Period, the number of customers and products has increased, and the long payment cycle of some customers led to the increase in the aging of some accounts receivables.

B. Allowances for bad debts of accounts receivables

a. From January 1, 2019

For accounts receivables, regardless of whether it contains significant financing, the Company always measures its loss allowance based on the amount of lifetime ECL, and increase in or reversal of loss allowance is included in profit or loss for the period as loss/gain on impairment.

In 2019, the Company made provision for bad debts according to single item and group. The Company combines the accounts receivables according to similar credit risk characteristics (aging), and makes the estimates of the provision rate of bad debt allowances for the accounts receivables based on all reasonable and supportable information, including forward-looking information. On December 31, 2019, the Company reviewed the appropriateness of the allowances for bad debts of accounts receivables in previous years according to the historical bad debt loss, and believed that the probability of default is strongly related to the aging of accounts, and aging is still a sign of whether the credit risk of accounts receivables of the Company has

significantly increased. Therefore, the Company's credit risk loss on December 31, 2019 is estimated on the basis of aging according to the original loss ratio of the credit group of non-combined related parties.

In 2019, the Company's allowances for bad debts by groups is as follows:

Name	December 31, 2019		
	Accounts receivables	Allowances for bad debts	Proportion (%)
Within 6 months	12,612.86	126.13	1.00
Within 7-12 months	4,038.82	201.94	5.00
1-2 years (including 2 years)	5,110.07	511.01	10.00
2-3 years (including 3 years)	83.71	16.74	20.00
3-4 years (including 4 years)	-	-	25.00
4-5 years (including 5 years)	-	-	30.00
Over 5 years	-	-	100.00
Total	21,845.46	855.82	-

In 2019, the Company did not make bad debt allowances by single item.

b. Before January 1, 2019

Before January 1, 2019, the Company accrued bad debt allowances for accounts receivables in three categories: accounts receivables with individually significant amount and individual allowance for bad debts, receivables with allowances for bad debts in the group with identical credit risk characteristics and receivables without individually significant amount but with individual allowance for bad debts. In 2017 and 2018, the Company did not have accounts receivables with individually significant amount and individual allowance for bad debts, and receivables without individually significant amount but with individual allowance for bad debts. The provision for receivables with allowances for bad debts in the group with identical credit risk characteristics (aging analysis method) is as follows:

aging	December 31, 2018			December 31, 2017		
	Accounts receivables	Allowances for bad debts	Proportion (%)	Accounts receivables	Allowances for bad debts	Proportion (%)
Within 1year (inclusive)	15,203.01	337.89	2.22	9,436.40	276.77	2.93
Including: within 6 months	10,556.63	105.57	1.00	4,876.18	48.76	1.00
within 7-12 months	4,646.39	232.32	5.00	4,560.22	228.01	5.00
1-2 years (including 2 years)	2,698.68	269.87	10.00	570.44	57.04	10.00
2-3 years (including 3 years)	45.98	9.20	20.00	-	-	-

3-4 years (including 4 years)	39.77	9.94	25.00	129.97	32.49	25.00
4-5 years (including 5 years)	-	-	-	-	-	-
Over 5 years	-	-	-	-	-	-
Total	17,987.45	626.89	-	10,136.80	366.31	-

The comparison between the Company's bad debt provision policy based on aging group and comparable listed companies in the same industry during the Reporting Period is as follows:

Listed companies	Within 6 months	7-12 months	1-2 years	2-3 years	3-4 years	4-5 years	Over 5 years
NAURA	5.00%	5.00%	10.00%	20.00%	30.00%	30.00%	100.00%
AMEC	1.00%	5.00%	15.00%	20.00%	30.00%	50.00%	100.00%
KINGSEMI	5.00%	5.00%	10.00%	30.00%	50.00%	80.00%	100.00%
HZCCTECH	5.00%	5.00%	10.00%	20.00%	40.00%	80.00%	100.00%
Issuer	1.00%	5.00%	10.00%	20.00%	25.00%	30.00%	100.00%

It can be seen from the above table that the proportion of allowances for bad debts of the Company (aging within 6 months) is 1%, which is the same as that of AMEC, lower than 5% of KINGSEMI, NAURA and HZCCTECH. In addition, except that the proportion (aging 3-4 years) of allowances for bad debts is slightly lower than that of comparable listed companies, the proportion of allowances for bad debts for each aging period of the Company is within the corresponding proportion range of comparable listed companies and in the Reporting Period, the balance of accounts receivables aging over 3 years of the Company is relatively small. There is no significant difference between the proportion of allowances for bad debts of accounts receivables of the Company and that of comparable listed companies in the same industry, and the policy of allowances for bad debts is cautious.

③Top five accounts receivables customers

At the end of 2019, the top five accounts receivables are as follows:

Unit: RMB 10,000 Yuan

Customer name	Closing balance of accounts receivables	Proportion in accounts receivables
Huahong Group	11,825.01	54.13
Chater Base International	3,676.46	16.83
Yangtze Memory	2,328.52	10.66
JCET	1,512.24	6.92
Taiwan Phoenix Silicon	908.38	4.16
Total	20,250.60	92.70

Note: 1. Huahong Group includes Huahong Semiconductor (Wuxi) Co., Ltd., Shanghai Huahong Hongli Semiconductor Manufacturing Co., Ltd., Shanghai Huali IC Manufacturing Co., Ltd., Shanghai Huali Microelectronics Corporation, and Shanghai IC R&D Center, the same below; 2. Yangtze Memory includes Yangtze Memory Technologies Co., Ltd. and Wuhan Xinxin Semiconductor Manufacturing Co., Ltd., the same below.

At the end of 2018, the top five accounts receivables are as follows:

Unit: RMB 10,000 Yuan

Customer name	Closing balance of accounts receivables	Proportion in accounts receivables
Huahong Group	5,475.96	30.44
Chater Base International	4,251.72	23.64
ACMR	3,257.34	18.11
Hynix	3,098.92	17.23
Yangtze Memory	1,317.03	7.32
Total	17,400.96	96.74

At the end of 2017, the top five accounts receivables are as follows:

Unit: RMB 10,000 Yuan

Customer name	Closing balance of accounts receivables	Proportion in accounts receivables
Chater Base International	5,653.98	55.78
ACMR	4,307.41	42.49
Hynix	94.80	0.94
SMIC	44.00	0.43
JCET	24.39	0.24
Total	10,124.58	99.88

At the end of each period of the Reporting Period, the Company's total of the top five accounts receivables balances were respectively RMB101.2458 million Yuan, RMB 174.0096 million Yuan and RMB 202.506 million Yuan, accounting for 99.88%, 96.74% and 92.70% of the account receivable balance at the end of each period.

During the Reporting Period, in 2017 and 2018, part of the Company's export business was carried out through Chater Base International, an import and export service provider. The specific way was to sell the products to Chater Base International first, and then it would go through the formalities of customs declaration. Chater Base International sold the products to the end customers at the same price. At the same time, the Company paid Chater Base International the agency fee for export customs declaration. Therefore, the top five accounts receivable accounted for a higher proportion of each closing balance of accounts receivables. After June 2018, the Company's export business was carried out through CleanChip HK, a wholly-owned subsidiary in Hong Kong. The Company no longer engages in business with Chater Base International.

In 2017 and 2018, some customers of the Company placed orders with ACMR, the Company sold the products to ACMR, and then ACMR sold such products to the end customers. In 2019, the Company did not sell to the end customers through ACMR.

(3) Prepayments

At the end of each Reporting Period, the Company's prepayments are as follows:

Unit: RMB 10,000 Yuan

aging	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Within 1 year (inclusive)	1,124.46	100%	1,336.05	100%	390.58	100%
1-2 years (including 2 years)	-	-	-	-	-	-

2-3 years (including 3 years)	-	-	-	-	-	-
Over 3 years	-	-	-	-	-	-
Total	1,124.46	100%	1,336.05	100%	390.58	100%

The Company's advance payment is mainly the advance payment to the supplier. At the end of each Reporting Period, the Company's prepayment balance was RMB 3.9058 million Yuan, RMB 13.3605 million Yuan and RMB 11.2446 million Yuan respectively, accounting for 1.35%, 2.35% and 0.93% of current assets. At the end of each Reporting Period, with the expansion of the Company's business scale, the Company's prepayment amount scale has expanded, but the proportion of current assets is relatively low, and the aging is within 1 year.

(4) Other receivables

At the end of each Reporting Period, other receivables of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Balance of other receivables	4,772.91	1,723.22	642.22
Less: allowances for bad debts	9.06	7.14	4.89
Net amount of other receivables	4,763.85	1,716.08	637.33

At the end of each Reporting Period, balance of other receivables is classified as follows according to their nature:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Related party accounts	3,696.06	143.53	135.32
Export tax refund receivable	613.58	1,288.70	306.22
Deposit	148.05	180.30	134.75
Intermediary prepayment fee	125.00	-	-
Staff reserve	78.05	30.14	23.74
Other	112.17	80.55	42.18
Total	4,772.91	1,723.22	642.22

At the end of each Reporting Period, the book value of other receivables of the Company was RMB 6.3733 million Yuan, RMB 17.1608 million Yuan and RMB 47.6385 million Yuan respectively, accounting for 2.20%, 3.02% and 3.94% of current assets, mainly including related party accounts, export tax refund, deposit, staff reserve and others. During the Reporting Period, the Company's other receivables increased year by year; in 2018, the main reason is the expansion of business scale and the increase of export tax refund; in 2019, the main reason is the increase of related party amounts.

At the end of each Reporting Period, the amounts of related parties in other receivables were RMB 1.3532 million Yuan, RMB 1.4353 million Yuan and RMB 36.9606 million Yuan respectively. At the end of 2019, the amount of the Company's related parties increased a lot, mainly because ACMR borrowed money from CleanChip

HK to raise the capital increase of the Company. After the Company acquired CleanChip HK, ACMR's loan from CleanChip HK became a related party loan. Please refer to "X. (II) Non-recurrent Related Transactions" in "Section X Related Transactions" of the [***] for details of the related party loan. As of the date of signing this [***], ACMR has returned such amount.

(5) Inventory

①Inventory Composition

At the end of each Reporting Period, the Company's inventory mainly includes raw materials, finished goods, work in process, and delivered goods. The Company's inventory composition is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Book Value	Proportion %	Book Value	Proportion %	Book Value	Proportion %
Raw material	9,139.20	29.74%	7,873.60	29.81%	3,328.05	24.56%
Work in process	7,524.25	24.49%	6,067.57	22.97%	2,517.43	18.57%
Finished goods	301.50	0.98%	-	0.00%	-	0.00%
Delivered goods	13,762.46	44.79%	12,474.82	47.22%	7,707.71	56.87%
Total	30,727.41	100.00%	26,415.99	100.00%	13,553.19	100.00%

During the Reporting Period, the inventory increased year by year with the expansion of the Company's business scale. At the end of each Reporting Period, the book value of the Company's inventory was RMB 135.5319 million Yuan, RMB 264.1599 million Yuan and RMB 307.2741 million Yuan respectively, accounting for 46.79%, 46.52% and 25.42% of the current assets at the end of each Reporting Period.

The Company mainly conducts customized production based on customer orders. At the end of each Reporting Period, the Company's inventory mainly consists of delivered goods, raw materials and work in process. Under customized production, the Company has no finished goods stock, and the products will be delivered after acceptance by the Company. The amount of goods in stock is small. During the Reporting Period, the Company's inventory structure was relatively stable.

The Company's raw materials mainly include gas circuit, material transmission, mechanical, electrical and other materials. At the end of each Reporting Period, the book value of the Company's raw materials was RMB33.2855 million Yuan, RMB78.736 million Yuan and RMB91.392 million Yuan respectively, accounting for 24.56%, 29.81% and 29.74% of the book value of the inventory at the end of each period.

The Company's work in progress and delivered goods are mainly various kinds of semiconductor special equipment products that have been produced and delivered but not yet accepted. The Company will transport the special equipment products to the agreed delivery place according to the provisions of the agreement and contract, and confirm the revenue only after the customer's commissioning and acceptance by the customer. At the end of each Reporting Period, the book value of goods issued by the Company was RMB77.0771 million Yuan, RMB 124.7482 million Yuan and RMB 137.6246 million Yuan respectively, accounting for 56.87%, 47.22% and 44.79% of the book value of inventories at the end of each Reporting Period.

②Provision for decline in value of inventories

In each Reporting Period, the provision for decline in value of inventories of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		
	Carrying amount	Provision for decline in value of inventories	Book value
Raw material	9,469.01	329.82	9,139.20
Work in process	7,524.25	-	7,524.25
Finished goods	362.27	60.76	301.50
Delivered goods	13,762.46	-	13,762.46
Total	31,117.99	390.58	30,727.41
Item	December 31, 2018		
	Carrying amount	Provision for decline in value of inventories	Book value
Raw material	8,185.30	311.70	7,873.60
Work in process	6,067.57	-	6,067.57
Finished goods	-	-	-
Delivered goods	12,474.82	-	12,474.82
Total	26,727.69	311.70	26,415.99
Item	December 31, 2017		
	Carrying amount	Provision for decline in value of inventories	Book value
Raw material	3,669.86	341.80	3,328.05
Work in process	2,517.43	-	2,517.43
Finished goods	-	-	-
Delivered goods	7,707.71	-	7,707.71
Total	13,894.99	341.80	13,553.19

At the end of each Reporting Period, the Company checks all kinds of inventories, and makes provision for falling prices of inventories whose cost is greater than the net realizable value. The Company carries out customized production, most of the inventories are held in accordance with the sales contract, and the net realizable value is the amount of the estimated selling price of the finished products minus the estimated cost to be incurred, estimated selling expenses and related taxes until completion. At the end of each Reporting Period, the provision for the Company's inventory impairment were RMB 3.418 million Yuan, RMB 3.117 million Yuan, and RMB 3.9058 million Yuan respectively.

(6) Other current assets

At the end of each Reporting Period, other current assets of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Fixed deposit	19,011.36	-	-
Input tax to be deducted	159.40	274.71	42.30
Input tax to be certified	60.12	77.61	29.94
Prepaid expenses	25.90	19.39	26.71
Total	19,256.78	371.71	98.96

At the end of each Reporting Period, the balance of other current assets of the Company was RMB 989,600 Yuan, RMB3.7171 million Yuan and RMB192.5678

million Yuan respectively, accounting for 0.34%, 0.65% and 15.93% of the current assets at the end of each Reporting Period, mainly including fixed deposit, input tax to be deducted and input tax to be certified.

At the end of 2019, the Company's other current assets increased significantly mainly due to the Company's use of equity financing funds to purchase one-year term deposits.

2. Analysis of non-current assets

At the end of each Reporting Period, the composition of non-current assets of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Long-term receivables	1,484.18	14.94%	2,470.45	36.23%	69.69	2.23%
Long term equity investment	3,071.90	30.92%	73.98	1.08%	-	-
Fixed assets	1,396.30	14.05%	1,638.48	24.03%	1,416.90	45.32%
Construction in progress	370.21	3.73%	-	-	-	-
Intangible assets	240.08	2.42%	188.19	2.76%	69.37	2.22%
Long-term deferred expenses	829.53	8.35%	868.99	12.74%	112.21	3.59%
Deferred tax assets	2,012.08	20.25%	1,108.64	16.26%	1,245.72	39.85%
Other non-current assets	530.82	5.34%	470.27	6.90%	212.21	6.79%
Total non-current assets	9,935.10	100.00%	6,819.00	100.00%	3,126.11	100.00%

During the Reporting Period, with the expansion of the Company's business scale, the Company's non-current assets increased year by year. At the end of each Reporting Period, the Company's non-current assets were RMB 31.2611 million Yuan, RMB 68.19 million Yuan and RMB 99.351 million Yuan respectively. The Company's non-current assets mainly include long-term receivables, long term equity investment, fixed assets, long-term deferred expenses and deferred income tax assets.

(1) Long-term receivables

At the end of each Reporting Period, the details of long-term receivables of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Shengxin Shanghai	1,371.16	2,092.29	-
Product sales receivables	113.01	378.16	69.69
Total	1,484.18	2,470.45	69.69

Note: Product sales receivables refer to sales of product receivables with a collection period of

more than one year as agreed in the contract.

At the end of each Reporting Period, the balance of book value of long-term receivables of the Company was RMB 696,900 Yuan, RMB 24.7045 million Yuan and RMB 14.8418 million Yuan respectively. The Company's long-term receivables are the balance of senior secured promissory notes issued by Shengxin Shanghai to ACMSH. In August 2019, ACMR repurchased 154,821 Series A common shares from Shengxin Shanghai at a total consideration of USD 2,042,863.10 dollars, of which USD 1,161,157.50 dollars was deducted by ACMR. As a result, the loan principal under senior secured promissory notes of Shengxin Shanghai and ACMSH, commercial promissory notes of ACMSH and ACMR were reduced to USD 1,820,101.76 dollars (RMB 7.837 million Yuan).

(2) Long term equity investment

At the end of each Reporting Period, the details of the Company's long-term equity investment are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Shixi Chanheng	2,993.19	-	-
Shengyi Semiconductor	78.72	73.98	-
Total	3,071.90	73.98	-

The Company's main foreign investment project is the long-term equity investment in Shixi Chanheng, as follows:

Company name	Duration of investment	Investment amount (10,000 Yuan)	Shareholding ratio	Change in value during the Reporting Period (10,000 Yuan)
Shixi Chanheng	Long term	3,000.00	10.00%	-6.81

In 2019, Shixi Chanheng's net profit was RMB -681,400 Yuan, and the Company's long-term equity investment accounted by equity method decreased RMB 68,100 Yuan.

(3) Fixed assets

①Composition of fixed assets

At the end of each Reporting Period, the specific classification of the Company's fixed assets is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Book value	Proportion %	Book value	Proportion %	Book value	Proportion %
Machinery equipment	1,196.90	85.72%	1,488.79	90.86%	1,314.39	92.76%
Computer and electronic equipment	148.48	10.63%	83.96	5.12%	53.99	3.81%
Office equipment	19.38	1.39%	21.08	1.29%	16.72	1.18%
Transportation	31.55	2.26%	44.66	2.73%	31.81	2.24%
Total	1,396.30	100.00%	1,638.48	100.00%	1,416.90	100.00%

The spare parts needed for the Company's production are mainly purchased and outsourced, and the Company carries out pre assembly, general assembly and testing, with less production equipment and amount; meanwhile, the Company's office building, plant and land are obtained through leasing, with less fixed assets. At the end of each

Reporting Period, the Company's fixed assets were RMB 14.169 million Yuan, RMB 16.3848 million Yuan and RMB 13.963 million Yuan, accounting for 45.32%, 24.03% and 14.05% of non-current assets respectively. During the Reporting Period, with the increase of long-term receivables and long-term equity investment, the proportion of fixed assets to non-current assets decreased year by year.

②Transfer of large amounts of construction in progress

During the Reporting Period, the Company transferred large amount of construction in progress to fixed assets as follows:

Year of fixed assets transfer	Project name	Amount (10,000 Yuan)	Basis for transferring to fixed assets
2017	Equipment to be installed - wafer surface particle scanning equipment	300.53	Fixed assets acceptance form

③Depreciation life and newness rate of fixed assets

By the end of December 2019, the original carrying amount of the Company's fixed assets was RMB 32.5812 million Yuan, the accumulated depreciation balance was RMB 18.6182 million Yuan, and the net value of fixed assets was RMB 13.963 million Yuan with a residue ratio of 42.86%, as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
I. Original carrying amount			
Office equipment	71.43	67.06	57.46
Computer and electronic equipment	312.83	223.35	181.99
Transportation	86.70	126.12	132.73
Machinery equipment	2,787.16	6,688.51	6,353.61
II. Accumulated depreciation			
Office equipment	52.06	45.98	40.74
Computer and electronic equipment	164.35	139.39	127.99
Transportation	55.15	81.46	100.92
Machinery equipment	1,590.26	5,199.72	5,039.22
III. Book value			
Office equipment	19.38	21.08	16.72
Computer and electronic equipment	148.48	83.96	53.99
Transportation	31.55	44.66	31.81
Machinery equipment	1,196.90	1,488.79	1,314.39

During the Reporting Period, the Company's fixed assets were in good condition, and there were no large fixed assets that were damaged and no longer had the use value and transfer value, or could not be used due to technological progress or other reasons, or could not bring economic benefits to the Company in essence.

(4) Construction in progress

①Composition of construction in progress

At the end of each Reporting Period, the construction in progress of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Construction in progress	370.21	-	-
Total	370.21	-	-

At the end of each Reporting Period, the book value of the Company's construction in progress is RMB 0 Yuan, RMB 0 Yuan and RMB 3,702,100 Yuan respectively, accounting for 0%, 0% and 3.73% of the non-current assets in each period, which is relatively low, mainly including the plant purification room reconstruction project and other decoration projects.

At the end of each Reporting Period, there is no sign of impairment in the Company's construction in progress, and no provision for impairment is required.

②Changes of important projects under construction

In 2019, the Company's major construction in progress change is as follows:

Unit: RMB 10,000 Yuan

Item	Balance at the beginning of the year	Current year increase	Amount of fixed assets transferred in current year	Other decrease	Year-end balance
Clean room reconstruction project of Zhangjiang plant	-	360.54	-	-	360.54
Total	-	360.54	-	-	360.54

In 2018, the Company has no significant changes in construction in progress.

In 2017, the changes of important projects under construction of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	Balance at the beginning of the year	Current year increase	Amount of fixed assets transferred in current year	Other decrease	Year-end balance
Equipment to be installed - wafer surface particle scanning equipment	300.53	-	300.53	-	-
Total	300.53	-	300.53	-	-

(5) Intangible assets

At the end of each Reporting Period, the net intangible assets of the Company were RMB 693,700 Yuan, RMB 1,881,900 Yuan and RMB 2,400,800 Yuan respectively, accounting for 2.22%, 2.76% and 2.42% of the total non-current assets respectively. Intangible assets of the Company are mainly composed of software use right and patent right.

At the end of each Reporting Period, the Company's intangible assets are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
I. Original carrying amount of intangible assets	8,770.73	8,662.39	8,499.03
Software use right	216.37	108.04	47.87
Patent right	8,554.35	8,554.35	8,451.17
II. Accumulated amortization	8,530.65	8,474.20	8,429.66
Software use right	96.94	55.93	29.66
Patent right	8,433.70	8,418.27	8,400.00
III. Provision for impairment of intangible assets	-	-	-
IV. Book value of intangible assets	240.08	188.19	69.37
Software use right	119.43	52.11	18.21
Patent right	120.65	136.08	51.17

At the end of each Reporting Period, the Company's software use right and patent right showed no sign of impairment, so no provision for impairment was made.

(6) Long-term deferred expenses

The long-term deferred expenses of the Company are mainly the decoration and renovation works of factory buildings and offices. At the end of each Reporting Period, the long-term deferred expenses of the Company were RMB 1,122,100 Yuan, RMB 8,689,900 Yuan and RMB 8,295,300 Yuan respectively, accounting for 3.59%, 12.74% and 8.35% of the non-current assets at the end of each Reporting Period. In 2018, the Company's long-term deferred expenses increased by RMB 7,567,800 Yuan, mainly due to the decoration and reconstruction of Chuansha plant.

(7) Deferred tax assets

① Non-offset deferred income tax assets

During the Reporting Period, the Company's deferred income tax assets mainly come from the asset impairment provision, accrued expenses and the differences between the revenue recognition accounting and tax law. At the end of each Reporting Period, the Company's non-offset deferred income tax assets are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Deductible temporary differences	Deferred tax assets	Deductible temporary differences	Deferred tax assets	Deductible temporary differences	Deferred tax assets
Provision for impairment of assets	1,268.02	197.15	965.63	146.22	724.96	108.74
Deductible loss	1,370.64	242.25	-	-	641.16	96.16
Accrued expenses	2,603.41	390.51	2,533.54	380.03	1,429.14	214.37
Difference between revenue recognition accounting and	8,085.85	1,212.88	4,110.75	616.61	5,509.60	826.44

tax law						
Total	13,327.92	2,042.80	7,609.93	1,142.86	8,304.86	1,245.72

②Non-offset deferred income tax liabilities

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Taxable temporary difference	Deferred Tax Liability	Taxable temporary difference	Deferred Tax Liability	Taxable temporary difference	Deferred Tax Liability
Differences between fixed assets accounting and tax law	204.77	30.72	228.11	34.22	-	-
Total	204.77	30.72	228.11	34.22	-	-

During the Reporting Period, the Company's deferred income tax liabilities mainly come from the differences between fixed assets accounting and tax law.

③Deferred income tax assets or liabilities presented in net amount after offset

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Offset amount of deferred income tax assets and	Balance of deferred income tax assets or liabilities	Offset amount of deferred income tax assets and	Balance of deferred income tax assets or liabilities	Offset amount of deferred income tax assets and	Balance of deferred income tax assets or liabilities
	liabilities	after offset	liabilities	after offset	liabilities	after offset
Deferred income tax assets	30.72	2,012.08	34.22	1,108.64	-	1,245.72
Deferred income tax liabilities	30.72	-	34.22	-	-	-

(8) Other non-current assets

At the end of each Reporting Period, the composition of other non-current assets of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Patent application fee	162.94	156.62	104.53
Advance project payment	90.00	18.83	-
Advance equipment payment	27.69	92.62	-
Lease deposit	250.19	202.21	107.68
Total	530.82	470.27	212.21

At the end of each Reporting Period, the balance of other current assets of the Company was RMB 2.1221 million Yuan, RMB 4.7027 million Yuan and RMB 5.3082 million Yuan respectively, accounting for 6.79%, 6.90% and 5.34% of the current assets at the end of each Reporting Period, mainly including patent application fee and lease

deposit.

During the Reporting Period, with the expansion of the Company's business, other non-current assets of the Company increased year by year.

(II) Analysis of Debt Structure and Changes

At the end of each Reporting Period, the composition of the Company's liabilities is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Current liabilities	41,257.79	86.30%	42,533.61	86.63%	19,390.77	71.14%
Non-current liabilities	6,549.46	13.70%	6,563.89	13.37%	7,865.35	28.86%
Total liabilities	47,807.25	100.00%	49,097.50	100.00%	27,256.12	100.00%

At the end of each Reporting Period, the total liabilities of the Company were RMB 272,561,200 Yuan, RMB 490,975,000 Yuan and RMB 478,072,500 Yuan, mainly current liabilities, accounting for 71.14%, 86.63% and 86.30% respectively.

1. Analysis of current liabilities

At the end of each Reporting Period, the composition of current liabilities of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Short-term borrowings	9,695.86	23.50%	6,483.56	15.24%	3,330.00	17.17%
Accounts payable	14,317.44	34.70%	18,821.12	44.25%	8,813.02	45.45%
Deposit received	6,802.21	16.49%	6,825.86	16.05%	860.32	4.44%
Employee benefits payable	1,347.89	3.27%	341.62	0.80%	64.96	0.34%
Taxes payable	2,903.82	7.04%	924.17	2.17%	7.00	0.04%
Other payables	6,190.57	15.00%	9,137.28	21.48%	6,315.46	32.57%
Total Current Liabilities	41,257.79	100.00%	42,533.61	100.00%	19,390.77	100.00%

At the end of each Reporting Period, the total current liabilities of the Company were RMB 193,907,700 Yuan, RMB 425,336,100 Yuan and RMB 412,577,900 Yuan respectively. The structure of current liabilities was relatively stable, mainly composed of short-term borrowings, accounts payable, deposit received and other accounts payable.

(1) Short-term borrowings

At the end of each Reporting Period, the details of the Company's short-term borrowings are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Credit loan	2,000.00	-	-

Guaranteed loan	6,597.41	2,483.56	1,380.00
Pledged loan	-	-	-
Borrowing (Guarantee + pledge)	1,000.00	4,000.00	500.00
Accrued interest	98.45	-	-
Total	9,695.86	6,483.56	3,330.00

Note: As of the end of 2019, the Company's borrowing (guarantee + pledge) balance is RMB 10 million Yuan, and the pledge is USD 2.6125 million dollars accounts receivables.

At the end of each Reporting Period, the Company's short-term borrowings balance was RMB 33,300,000 Yuan, RMB 64,835,600 Yuan and RMB 96,958,600 Yuan respectively, accounting for 17.17%, 15.24% and 23.50% of the total liabilities. During the Reporting Period, with the increase of the Company's business and capital demand, the Company's short-term loan balance increased year by year.

(2) Accounts payable

At the end of each Reporting Period, the balance of accounts payable of the Company was RMB 88.1302 million Yuan, RMB188.2112 million Yuan and RMB 143.1744 million Yuan respectively, accounting for 45.45%, 44.25%, and 34.70% of the current liabilities at the end of each Reporting Period, which is an important part of the current liabilities of the Company. During the Reporting Period, the Company's accounts payable are mainly the accounts payable to suppliers. In 2018, with the expansion of the Company's business scale, in order to meet the production demand, the Company made more procurements, and the balance of accounts payable increased accordingly. At the end of 2019, when the total purchase amount of the Company slightly increased year-on-year, the accounts payable decreased. The main reasons were as follows: ①the Company arranged production and purchase according to the order, and the monthly purchase amount fluctuated. The purchase amount of the Company was higher in the fourth quarter of 2018, while it was relatively lower in the fourth quarter of 2019; ②in order to reduce related transactions, the Company established a subsidiary, ACM CA, to purchase raw materials. It was expected that the Company's accounts payable to ACMR decreased more, while the increase of accounts payable in ACM CA was smaller.

At the end of each Reporting Period, the Company's accounts payable aging more than 1 year was RMB 999,500 Yuan, RMB 7,208,600 Yuan and RMB 15,946,200 Yuan respectively. At the end of 2018 and 2019, the Company's important accounts payable with an aging of more than one year had a large balance, mainly including the payable test and development expenses to SMIC and the commission to LIDA Technology Co., LTD.

(3) Deposit received

At the end of each Reporting Period, the balance of the Company's deposit received was RMB 8,603,200 Yuan, RMB 68,258,600 Yuan and RMB 68,022,100 Yuan respectively, accounting for 4.44%, 16.05% and 16.49% of the current liabilities at the end of each Reporting Period, which is an important part of the Company's current liabilities. The Company's deposit received mainly refers to the goods payment received from the customers. At the end of each Reporting Period, the Company's deposit received was on the rise, mainly due to the Company's increasing business size and the increase in goods payment received from the customers. At the end of each Reporting Period, the account aging of the Company's most deposit received is within 1 year.

(4) Employee benefits payable

At the end of each Reporting Period, the employee benefits payable of the Company was RMB 649,600 Yuan, RMB 3,416,200 Yuan and RMB 13,478,900 Yuan respectively, accounting for 0.34%, 0.80% and 3.27% of current liabilities at the end of each Reporting Period. The employee benefits payable of the Company mainly includes the salary, bonus, allowance and subsidy payable to the employees. At the end of each Reporting Period, the employee benefits payable increased year by year, mainly due to the

increase in the number of employees.

(5) Taxes payable

At the end of each Reporting Period, the details of taxes payable by the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Corporate income tax	2,822.47	896.03	-
Individual income tax	57.90	5.97	-
Stamp duty	23.45	19.68	7.00
Auto-purchase tax	-	2.50	-
Total	2,903.82	924.17	7.00

At the end of each Reporting Period, the taxes payable by the Company were RMB 70,000 Yuan, RMB 9,241,700 Yuan and RMB 29,038,200 Yuan respectively, accounting for 0.04%, 2.17% and 7.04% of the current liabilities at the end of each Reporting Period. At the end of each Reporting Period, the taxes payable by the Company increased year by year, mainly due to the expansion of the Company's business scale and the growth of profits. The corporate income tax payable increased accordingly.

(6) Other payables

At the end of each Reporting Period, details of other payables of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Interest payable	-	67.66	5.66
Other payables	6,190.57	9,069.62	6,309.80
Total	6,190.57	9,137.28	6,315.46

Other payables of the Company mainly consist of other payables. Details of other payables of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Current accounts of related parties	4,784.23	7,958.38	5,043.00
Deposit	565.22	21.35	21.35
Rental fee payable	113.34	164.08	888.36
Intermediary fee payable	114.24	25.11	-
Accrued installation cost	65.00	167.08	35.26
Other accrued expenses	175.32	167.68	64.71
Employee reimbursement and subsidies	105.77	77.96	163.87
Other	267.45	487.98	93.25
Total	6,190.57	9,069.62	6,309.80

Please refer to "X. (III) Related Receivables and Payables of the Company during the Reporting Period" in "Section VII Corporate Governance and Independence" of the [***] for the specific situation of related party's current accounts.

2. Analysis of non-current liabilities

At the end of each Reporting Period, the composition of the Company's non-current liabilities is as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019		December 31, 2018		December 31, 2017	
	Amount	Proportion %	Amount	Proportion %	Amount	Proportion %
Long term accounts payable	1,371.16	20.94%	2,092.29	31.88%	2,452.96	31.19%
Long-term employee benefits payable	111.43	1.70%	21.26	0.32%	-	-
Estimated liabilities	2,205.36	33.67%	1,316.39	20.05%	385.92	4.91%
Deferred income	2,861.50	43.69%	3,133.95	47.75%	5,026.47	63.91%
Total	6,549.46	100.00%	6,563.89	100.00%	7,865.35	100.00%

At the end of each Reporting Period, the Company's non-current assets balance was RMB 78.6535 million Yuan, RMB 65.6389 million Yuan and RMB 65.4946 million Yuan respectively. The Company's non-current liabilities mainly consist of long-term payables, estimated liabilities and deferred income.

(1) Long term accounts payable

At the end of each Reporting Period, the Company's long-term payables were RMB 24,529,600 Yuan, RMB 20,922,900 Yuan and RMB 13,711,600 Yuan, respectively. The Company's long-term payables are mainly composed of the following:

Item	December 31, 2019	December 31, 2018	December 31, 2017
ACMR	1,371.16	2,092.29	-
Shengxin Shanghai	-	-	2,033.72
Zhang Jiang Group			419.24
Total	1,371.16	2,092.29	2,452.96

The Company's long-term payables with the related party are mainly composed of the balance of commercial promissory notes issued by ACMSH to ACMR and the loan balance payable to Shengxin Shanghai. For details, please refer to "X. (III) Related Receivables and Payables of the Company during the Reporting Period" in "Section VII Corporate Governance and Independence" of the [***]. At the end of 2017, the Company's long-term accounts payable balance to Zhangjiang Group was RMB 4.1924 million Yuan, mainly due to decoration support fund payable to Zhangjiang Group.

(2) Long-term employee benefits payable

At the end of each Reporting Period, the Company's long-term payable employee benefits balance is respectively RMB 0 Yuan, RMB 212,600 Yuan and RMB 1,114,300 Yuan. The long-term employee benefits payable by the Company mainly refers to the employee's severance pay accrued by the Company in accordance with the laws of South Korea.

(4) Estimated liabilities

At the end of each Reporting Period, the Company's estimated liabilities are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017
Product quality warranty	2,205.36	1,316.39	385.92
Estimated liabilities	2,205.36	1,316.39	385.92

At the end of each Reporting Period, the Company's product quality warranty increased year by year, mainly due to the expansion of the Company's sales scale. During the Reporting Period, there was no major quality dispute over the Company's products, and the above-mentioned product quality warranty will not have a significant adverse impact on the Company's normal production and operation.

(4) Deferred income

At the end of each Reporting Period, the details of the Company's deferred income are as follows:

Unit: RMB 10,000 Yuan

Item	December 31, 2019	December 31, 2018	December 31, 2017	Asset related / income related
65-45nm Copper Interconnection Stress Free Polishing Equipment R&D	906.82	1,045.52	1,245.35	Comprehensive subsidy
20-14nm Copper Interconnection Copper Plating Equipment R&D and Application	1,860.60	1,934.86	3,737.63	Comprehensive subsidy
Patent Pilot Funding	-	31.36	43.49	Income related
R&D and	94.09	122.22	-	Income related
Industrialization of Polytetrafluoroethylene Cavity Manufacturing Process for Semiconductor Equipment				
Total	2,861.50	3,133.95	5,026.47	

At the end of each Reporting Period, the balance of the Company's deferred income was RMB 50,264,700 Yuan, RMB 31,339,500 Yuan and RMB 28,615,000 Yuan respectively, and the Company's deferred income was all government grants.

(III) Liquidity Analysis

1. Analysis of current ratio and quick ratio

During the Reporting Period, the Company's current ratio and quick ratio are as follows:

Main financial indicators	December 31, 2019	December 31, 2018	December 31, 2017
Current ratio (frequency)	2.93	1.34	1.49
Quick ratio (frequency)	2.18	0.71	0.79

During the Reporting Period, the comparison of current ratio and quick ratio between the Company and comparable listed companies in the same industry is as follows:

Company name	December 31, 2019		December 31, 2018		December 31, 2017	
	Current ratio	Quick ratio	Current ratio	Quick ratio	Current ratio	Quick ratio

NAURA	1.77	1.01	1.27	0.59	1.50	0.81
AMEC	4.29	3.08	2.12	1.19	1.04	0.51
KINGSEMI	5.84	4.69	2.35	1.19	2.40	1.52
HZCCTECH	2.65	1.62	2.30	1.80	4.07	3.61
Average value	3.64	2.60	2.01	1.19	2.25	1.61
The Company	2.93	2.18	1.34	0.71	1.49	0.79

During the Reporting Period, the Company's current ratio and quick ratio are similar to those of NAURA, but lower than the average value of comparable listed companies in the industry. The main reasons are as follows: (1) the Company's R&D investment in the early stage is large, and before equity financing in 2019, the Company's capital scale is smaller than that of comparable listed companies; (2) the Company has a well-developed supply chain management system, the Company's prepayment amount is small, and accounts payable is relatively large; (3) in 2017 and 2018, the Company's other payables to related parties were large. In 2019, the Company's current ratio and quick ratio increased significantly, mainly because the Company's equity financing and profitability continued to improve, and the increase of the Company's current assets was greater than the increase of current liabilities.

(IV) Solvency Analysis

During the Reporting Period, the Company's main debt service indicators are as follows:

Main financial indicators	December 31, 2019/ FY 2019	December 31, 2018/ FY 2018	December 31, 2017/ FY 2017
Asset liability ratio (parent	32.56%	76.34%	84.86%
Main financial indicators	December 31, 2019/ FY 2019	December 31, 2018/ FY 2018	December 31, 2017/ FY 2017
company)			
Asset liability ratio (consolidated)	36.55%	77.19%	84.93%
EBITDA (RMB 10,000 Yuan)	16,654.67	11,063.48	1,794.26
Interest protection multiples	21.54	21.37	7.41

At the end of each Reporting Period, the Company's asset liability ratio decreased year by year, mainly due to the Company's equity financing during the Reporting Period. The Company's capital strength has been constantly increasing; with the expansion of the Company's business scale and the improvement of its profitability, the structure of assets and liabilities has been constantly improving.

In 2017 and 2018, the Company's asset liability ratio was relatively high, mainly due to the large investment in research and development in the early stage of the Company. At the end of 2017 and 2018, the Company still had outstanding losses and small net assets. In 2019, the Company conducted equity financing, with a significant increase in owner's equity and a significant decrease in the Company's asset liability ratio.

During the Reporting Period, with the expansion of the Company's business scale and the improvement of its profitability, the Company's EBITDA increased year by year, which were RMB17.9426 million Yuan, RMB110.6348 million Yuan and RMB166.5467 million Yuan, respectively. During the Reporting Period, the Company's interest protection multiples was 7.41, 21.37 and 21.54, respectively, and the debt paying ability was improved.

During the Reporting Period, the comparison of asset liability ratio (consolidated)

indicators between the Company and comparable listed companies in the same industry is as follows:

Company name	December 31, 2019	December 31, 2018	December 31, 2017
NAURA	55.59%	62.49%	57.27%
AMEC	21.43%	40.09%	88.30%
KINGSEMI	18.93%	42.09%	42.36%
HZCCTECH	24.57%	30.63%	22.28%
Average value	30.13%	43.83%	52.55%
The Company	36.55%	77.19%	84.93%

In 2017 and 2018, the Company's asset liability ratio was higher than the average value of comparable listed companies in the industry, mainly due to the following reasons: 1. The Company still had uncovered losses at the end of 2017 and 2018, and its net assets were small; 2. In 2019, the IPO of AMEC and KINGSEMI was launched successfully and the funds were raised, and the then asset liability ratio dropped significantly. In 2019, the Company's asset liability ratio is close to the average value of comparable listed companies in the industry after the significant drop of the asset liability ratio.

(V) Assets Turnover Capacity Analysis

The main indicators of the Company's assets turnover capacity during the Reporting Period are as follows:

Financial indicators	2019	2018	2017
Turnover rate of accounts receivables (frequency)	3.80	3.91	4.29
Inventory turnover rate (frequency)	1.44	1.51	1.09

During the Reporting Period, the turnover rate of the Company's accounts receivables showed a downward trend. The main reason was that the operating income scale of 2018 and 2019 increased faster than that of 2017, resulting in the large balance of accounts receivable at the end of 2018 and 2019. During the Reporting Period, the Company's customers are mainly leading enterprises in the semiconductor industry, with good business reputation, strong payment ability and small risk of receivables.

During the Reporting Period, the Company's inventory turnover rate showed an upward trend on a whole. The main reason was that the operating income scale of 2018 and 2019 increased faster than that of 2017 and a fast inventory turnover rate.

During the Reporting Period, the comparison of accounts receivables turnover rate and inventory turnover rate between the Company and comparable listed companies in the same industry is as follows:

Company name	Turnover rate of accounts receivables			Inventory turnover		
	2019	2018	2017	2019	2018	2017
NAURA	4.56	4.21	3.11	0.73	0.81	0.88
AMEC	5.21	3.56	2.90	1.08	0.99	0.98
KINGSEMI	3.93	5.39	6.71	0.74	0.97	1.19
HZCCTECH	2.05	1.79	1.58	0.89	1.20	1.66
Average value	3.94	3.74	3.58	0.86	0.99	1.18
The Company	3.80	3.91	4.29	1.44	1.51	1.09

During the Reporting Period, generally, the turnover rate of accounts receivables and inventory of the Company was higher than the average turnover rate of accounts receivables and inventory of listed companies in the same industry, and the turnover of accounts receivable and inventory of the Company was faster and the operation capacity was better.

XIII. Dividend Distribution Policy

(I) Dividend Distribution during the Reporting Period

During the Reporting Period, the Company did not make dividend distribution.

(II) Dividend Policy in Recent Three Years

For details of the Company's dividend distribution policy, please refer to "II. Dividend Distribution Policy of the Issuer" in "Section X Investor Protection" of this [***].

XIV. Cash Flow Analysis

During the Reporting Period, the cash flow of the Company is as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Net cash flow from operating activities	7,270.65	3,881.03	-899.23
Net cash flow from investment activities	-26,425.86	-1,472.30	-205.23
Net cash flow from financing activities	53,419.46	2,889.51	3,771.30
Effect of exchange rate changes on cash and cash equivalents	155.80	-230.70	-131.09
Net increase in cash and cash equivalents	34,420.05	5,067.54	2,535.75
Balance of cash and cash equivalents at the beginning of the period	9,582.86	4,515.32	1,979.57
Balance of cash and cash equivalents at the end of the period	44,002.91	9,582.86	4,515.32

(I) Cash Flow Analysis of Operating Activities

During the Reporting Period, the details of cash flow from operating activities of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Cash received from sales of goods or rendering of services	73,063.06	54,089.25	17,987.13
Refunds of taxes	5,141.52	3,161.69	2,294.49
Cash received from other operating activities	3,212.40	426.64	2,307.99
Subtotal of cash inflow from operating activities	81,416.97	57,677.58	22,589.60
Cash paid for goods and services	53,888.11	40,071.65	13,875.28
Cash paid to and on behalf of employees	8,437.93	5,837.84	3,503.58
Taxes paid	857.52	26.50	21.59
Other cash paid related to operating activities	10,962.76	7,860.56	6,088.38
Subtotal of cash outflow from operating activities	74,146.33	53,796.55	23,488.83

Net cash flow from operating activities	7,270.65	3,881.03	-899.23
Net profit	13,488.73	9,253.04	1,086.06
Net cash flow/net profit from operating activities	53.90%	41.94%	-82.80%

During the Reporting Period, the cash received by the Company from selling goods and providing labor services was RMB 179,871,300 Yuan, RMB 540,892,500 Yuan and RMB 730,630,600 Yuan, respectively, accounting for 70.93%, 98.30% and 96.55% of the operating income in the same period. The cash received from selling goods and providing labor services matched the operating income and the collection was in good condition.

During the Reporting Period, the adjustment relationship and difference between the net cash flow generated by the Company's operating activities and the net profit are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Net profit	13,488.73	9,253.04	1,086.06
Add: credit impairment loss	223.51	-	-
Provision for impairment of assets	78.88	237.37	298.66
Depreciation of fixed assets	253.72	201.07	137.43
Amortization of intangible assets	56.30	44.50	87.94
Amortization of long-term deferred expenses	287.13	29.96	26.58
Losses on scrapping of fixed assets ("-" for gains)	202.85	1.47	0.33
Financial expenses ("-" for gains)	531.55	751.55	339.63
Investment loss ("-" for gains)	-170.78	1.02	-
Decrease of deferred income tax assets ("-" for increase)	-903.44	137.07	248.00
Decrease of inventory ("-" for increase)	-4,390.30	-12,832.70	-2,089.98
Decrease of operating receivables ("-" for increase)	-2,849.30	-10,560.81	-7,784.80
Increase in operating payables ("-" for decrease)	-1,379.44	18,106.79	8,029.37
Others	1,841.24	-1,489.31	-1,278.44
Net cash flow from operating activities	7,270.65	3,881.03	-899.23

During the Reporting Period, the difference between the net cash flow and net profit generated by the Company's operating activities is mainly affected by inventory, operating receivables and payables, financial expenses and asset depreciation.

(II) Cash Flow Analysis of Investment Activities

During the Reporting Period, the details of cash flow from investment activities of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Net cash received from disposal of fixed assets	0.24	0.82	-

Subtotal of cash inflow from investment activities	0.24	0.82	-
Cash paid for acquisition and construction of fixed assets, intangible assets and other long-term assets	1,016.59	1,473.12	205.23
Cash paid for investment	18,885.26	-	-
Net cash paid by subsidiaries and other business units	3,075.00	-	-
Other cash paid related to investment activities	3,449.25	-	-
Subtotal of cash outflow from investment activities	26,426.10	1,473.12	205.23
Net cash flow used in investment activities	-26,425.86	-1,472.30	-205.23

During the Reporting Period, the net cash flow from the Company's investment activities was RMB-2,052,300 Yuan, RMB-14,723,000 Yuan and RMB-264,258,600 Yuan respectively.

In 2017 and 2018, the Company's cash outflow from investment activities was mainly the cash paid for the acquisition and construction of fixed assets, intangible assets and other long-term assets. In 2019, the Company's cash outflow from investment activities increased significantly, mainly due to the acquisition of CleanChip HK, borrowing from CleanChip HK to ACMR and the use of equity investment funds to purchase fixed deposits.

(III) Cash Flow Analysis of Financing Activities

During the Reporting Period, the details of cash flow from financing activities of the Company are as follows:

Unit: RMB 10,000 Yuan

Item	2019	2018	2017
Cash received from investment absorption	56,066.14	-	-
Cash received from borrowings	12,887.40	12,129.56	7,289.88
Cash received from other financing activities	-	-	3,920.52
Subtotal of cash inflows from financing activities	68,953.53	12,129.56	11,210.40
Cash paid for debt repayment	9,773.55	8,976.00	7,261.52
Cash paid for distribution of dividends or profits and for interest expenses	761.10	264.06	177.57
Cash paid relating to other financing activities	4,999.42	-	-
Subtotal of cash outflows from financing activities	15,534.08	9,240.06	7,439.09
Net cash flows from financing activities	53,419.46	2,889.51	3,771.30

During the Reporting Period, the net cash flows from the Company's financing activities were RMB 37,713,000 Yuan, RMB 28,895,100 Yuan and RMB 534,194,600 Yuan respectively.

During the Reporting Period, the cash inflow from financing activities of the Company mainly included the cash input from investors and the cash received from borrowings; the cash outflow from financing activities of the Company mainly included the cash to repay the principal of liabilities, pay the interest and pay cash related to other financing activities. In 2019, the Company paid other cash related to financing activities

mainly for the repayment of borrowings to shareholders and related parties

XV. Capital Expenditure Analysis

(I) Expenditure of Major Assets during the Reporting Period

During the Reporting Period, major capital expenditures of the Company are mainly used for the acquisition and construction of fixed assets, intangible assets and other long-term assets. In each Reporting Period, the cash paid by the Company for the construction of fixed assets, intangible assets and other long-term assets was RMB 2.0523 million Yuan, RMB 14.7312 million Yuan and RMB 10.1659 million Yuan respectively.

(II) Foreseeable Expenditure of Major Assets in the Future

As of the signing date of this [***], the Company has no foreseeable major capital expenditure plan except for the investment project of the raised capital of this issuance. For the investment plan of the raised funds of this offering, please refer to “II. Utilization of Raised Funds” in “Section IX Utilization of Raised Funds and Future Development Plan” of this [***].

XVI. Analysis of Going Concern Capability

The Company is mainly engaged in the research and development, production and sales of semiconductor special equipment, and its main products include semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet process equipment. Adhering to the development strategy of differentiated competition and innovation, the Company provides customized equipment and solutions to customers in the semiconductor industry through independently developed single wafer megasonic cleaning technology, single wafer wet bench combined cleaning technology, electroplating technology, stress-free polishing technology, vertical furnace tube technology, etc., effectively improving the production efficiency of customers, improving product yield and reducing production cost.

Due to advanced technology and rich product lines, the Company has developed into one of the few semiconductor equipment providers with certain international competitiveness in mainland China, and its products have been recognized by many mainstream semiconductor manufacturers at home and abroad and the Company has earned a good market reputation.

As of December 31, 2019, the Company’s current assets are RMB1,208,650,500 Yuan, including RMB 440,029,100 Yuan of cash and bank balances, RMB 412,577,900 Yuan of current liabilities, and RMB 829,929,000 Yuan of total owner’s equity. During the Reporting Period, the Company’s net profit after deducting non-recurring gains or losses has been greatly improved, and the Company’s profitability has continued to improve. The Company’s asset liquidity is good, the profitability is rapidly improved. There is no situation that seriously affects the Company’s ability to continue to operate, such as debt breach, inability to continue to perform the relevant terms of the major loan contract, inability to obtain the funds needed for R&D, etc.

To sum up, the Company has the ability of continuous operation. For the risk factors that may directly or indirectly have a significant adverse impact on the Company’s ability to continue as a going concern, please refer to “Section IV Risk Factors” of this [***].

XVII. Major Equity Acquisition and Merger

In 2019, based on the principles of asset integrity, business integrity and personnel integrity, the Company carried out restructuring and merger under the same control of CleanChip HK. For details of the Company’s acquisition of CleanChip HK, please refer to “IX. (I). 1. CleanChip HK” in “Section V Overview of the Issuer” of the [***].

XVIII. Subsequent Matters, Contingencies, Other Important Matters, Major Guarantees and Litigation Matters

(I) Events after the Balance Sheet Date

The COVID-19 broke out in the early 2020 (the “Pandemic”), and the relevant protection and control work continued across the China. The Company will pay close attention to the development of the Pandemic and assess its impact on the Company’s financial position, operating results and other aspects. As of the signing date of this [***], the Company has not found any significant adverse impact of the Pandemic.

(II) Contingencies

As of the date of this [***], the Company has no significant contingencies to be disclosed.

(III) Other Important Matters

1. Operating lease commitments

According to the signed irrevocable operating lease contract, the Company shall pay a minimum rent of 23,858,700 Yuan in the future.

Unit: RMB 10,000 Yuan

Remaining lease term	Minimum lease payment
Within a year	1,042.00
1-2 years	968.11
2-3 years	564.50
Over 3 years	44.42
Total	2,619.03

2. Capital expenditure commitment

In May 2020, Shengwei Shanghai, a wholly-owned subsidiary of the issuer, signed a land transfer contract with China (Shanghai) Pilot Free Trade Zone Lingang New Area Management Committee. The land use right is located in Plot C02-05c of Lingang heavy equipment park, with an area of 42,786.30 square meters and a transfer amount of RMB 61.68 million Yuan.

(IV) Major Guarantee and Litigation Matters

As of the signing date of this [***], the Company has no major guarantee and litigation matters.

XIX. Profit Forecast

The Company has not prepared profit forecast report.

Section IX Utilization of Raised Funds and Future Development Plan

I. Overview of Investment Projects with Raised Funds

(I) Investment Direction of Raised Funds

The funds raised by the IPO will be invested in the projects after deducting the issuance expenses, as follows:

Unit: RMB10,000 Yuan

S/N	Investment direction of raised funds	Total Investment	Amount of raised funds to be used
1	ACMSH Equipment R&D and Manufacturing Center	88,245.00	70,000.00
2	ACMSH High-end Semiconductor Equipment R&D Project	45,000.00	45,000.00
3	Supplementary working capital	65,000.00	65,000.00
Total		198,245.00	180,000.00

(II) Arrangement for Investment and Use of Raised Funds

If the actual raised fund amount (after the issuance fee is deducted) is lower than the fund demand of the projects to be invested, the Company will arrange the raised funds according to the investment proportion of the above-mentioned investment projects with raised fund, the gap shall be solved with self-raised fund; if the actual raised fund amount (after the issuance fee is deducted) exceeds the above-mentioned fund demand, the remaining part will be used for the development of the Company's main business according to the actual operation needs of the Company as well as relevant provisions of the CSRC and Shanghai Stock Exchange. The funds raised by the proposed public offering will be invested according to the proportion and priorities of the projects. Before the raised funds are in place, the Company may use the self-raised funds to invest in the above-mentioned planned investment projects first, and replace the above-mentioned self-raised funds with the raised funds after the raised funds are ready.

(III) Impact of Raised Fund Investment Projects on Horizontal Competition and Independence

The implementation of the fund-raising investment project will not lead to horizontal competition between the Company and the controlling shareholders, de facto controllers and their subordinate enterprises, nor will it adversely affect the independence of the Company.

(IV) The Management System for the Use of Raised Funds and Specific Arrangements for the Raised Funds Invested in the Key Scientific and Technological Innovation Projects

In order to regulate the management of raised funds and improve the use efficiency of raised funds, the Company has formulated the *Management System for Raised Funds*, which specifies the storage, use, change of investment direction, management and supervision of the raised funds account, in accordance with the *Company Law*, the *Securities Law*, the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*, the *Management Measures for the Raised Funds of the Shanghai Stock Exchange* and other laws, regulations, normative documents and provisions of the *Articles of Association*. The raised funds will be stored in the special account designated by the Board of Directors in strict accordance with the provisions for centralized management, and will be used normatively for the expected purpose.

Please refer to "II. Utilization of Raised Funds" in this Section for specific arrangements for the raised funds invested in the key scientific and technological innovation projects.

(V) Analysis of Necessity and Feasibility of Implementation of Investment Projects with Raised Funds

1. Necessity of implementation of investment projects with raised funds

(1) China's integrated circuit industry has a vast market demand, providing a huge growth space for Chinese semiconductor special equipment manufacturers

In recent years, as China attaches great importance to the semiconductor industry, some semiconductor special equipment enterprises in China have made breakthroughs in some technical fields after more than 10 years of technical research & development and accumulation, and have successfully passed through the verification of domestic and international mainstream wafer manufacturing, advanced packaging enterprise, and semiconductor equipment and products have entered into the production lines of such enterprises.

Although the sales scale of China's semiconductor special equipment enterprises continues to grow, the overall market share is still at a low level, and China's semiconductor special equipment is still mainly dependent on imports. According to the statistics of China Electronic Production Equipment Industry Association, the sales volume of domestic semiconductor special equipment in 2018 is RMB10.9 billion, the self-sufficiency rate is about 13%, and the self-sufficiency rate in the field of integrated circuit manufacturing equipment is even lower, so domestic semiconductor equipment companies have great potential for development.

(2) The technical threshold of the integrated circuit equipment industry is high. There is still a gap between the technical level of the Company and the international giants, and the process of technology R&D and industrialization needs to be accelerated.

The current international advanced level of integrated circuit equipment involves multi-disciplinary, multi-domain knowledge comprehensive application like micro-electronics, electrical, mechanical, material, chemical engineering, fluid mechanics, automation, pattern recognition, communication, software system etc. and several advanced manufacturing technologies like dynamic sealing technology, ultra clean room technology, particle and pollutant analysis technology etc. Therefore, the integrated circuit equipment has the characteristics of high technology content, high manufacturing difficulty, high equipment value and high industry threshold, and is recognized as one of the representatives of the highest level of precision manufacturing in industry.

At present, the market concentration of the major semiconductor special equipment industry in the world is relatively high, and the Company still lags far behind the international giants in terms of business scale, technology level and market share.

(3) The implementation of the investment projects with raised fund will help rapidly improve the R&D capability and comprehensive competitiveness of the Company, accelerate the process of building the Company into a international leading comprehensive integrated circuit equipment group, and form an industrial driving effect.

Semiconductor integrated circuit industry is a high technology barrier industry, the leading enterprises invest a large amount of research and development costs for new technology research and development in industry, which will widen the gap with the pursuers, resulting in the market pattern of stronger keep constantly stronger. And when a new round of market opportunities comes, the pursuer company will be more likely to rise, catch up, or even surpass. Looking back at the global semiconductor development history, every shift in the industry has created a number of leading semiconductor special equipment suppliers. At present, the global semiconductor industry is in the process of the third industry migration, benefiting from the strong market demand in consumer electronics and other fields in the mainland China, so that the mainland China has the specific conditions of industry growth, which is expected to become the biggest beneficiary of the third industrial shift, which will also bring new development opportunities to the Company.

The funded investment project will revolve around the Company's strategic goal of getting the company into one of the first tier of comprehensive international

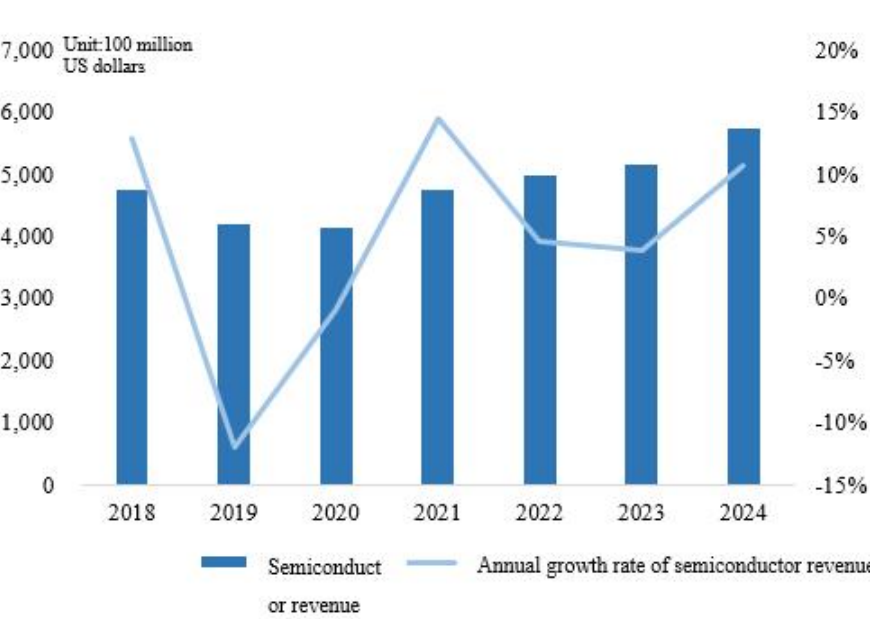
integrated circuit equipment enterprises. On the one hand, the technical accumulation advantages of the Company in the early stage, as well as the policy advantages such as convenient investment and operation, free entry and exit of goods, convenient fund flow, highly open transportation, free practice of personnel and quick communication of information will be made full use, to build advanced and intelligent demonstration manufacturing base and R & D center in the Lin-gang Special Area, and realize intelligent management in manufacturing, testing and automatic three-dimensional storage; on the other hand, aiming at more advanced technological node, upgrading iteration and product expansion of various high-end process equipment such as cleaning equipment, electroplating equipment, polishing equipment and furnace tube equipment will be carried out using the existing R&D system, and the product lines combining wet and dry process equipment in all categories will be established and expanded, so as to rapidly improve the R&D capacity and production capacity of the Company, help build the Company into a comprehensive internationally integrated circuit equipment group, and improve the Company’s comprehensive competitiveness for continuous development.

2. Feasibility of implementation of investment projects with raised funds

(1) The broad market prospect provides market guarantee for the implementation and benefit of the project

With the rapid development of global informatization, networking and knowledge economy, in particular, driven by strong demand in emerging application such as Internet of Things, artificial intelligence, automotive electronics, smartphones, smart wear, cloud computing, big data and security electronics, the global semiconductor industry has been on a large income scale. The global income of the semiconductor industry is USD 476,151 million in 2018. Due to the global macroeconomic downturn, the prosperity of the semiconductor industry declined by 11.97% year on year to USD 419,148 million in 2019. It is expected that the semiconductor industry will start to recover in 2021. In 2024, global semiconductor industry revenue is expected to reach USD572,788 million. According to Gartner’s statistics and projections, the income and annual growth rate of the global semiconductor industry from 2018 to 2024 are as follows:

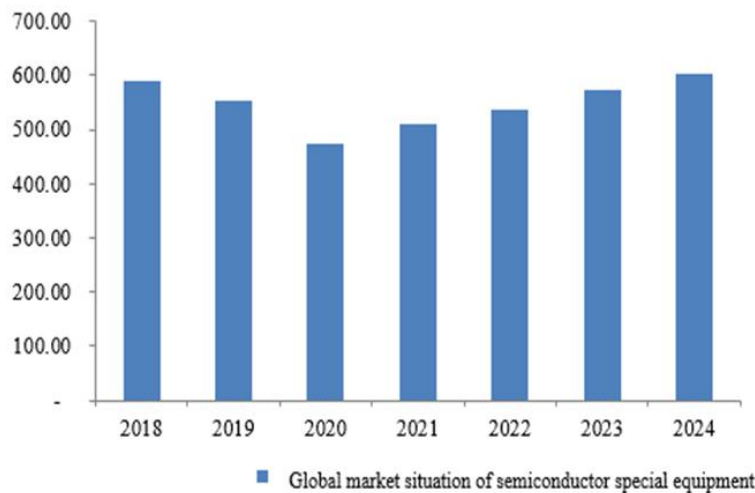
Global Semiconductor Industry Revenue and Annual Growth in 2018-2024



Source: Gartner

The market of semiconductor special equipment is closely related to the prosperity of semiconductor industry, in which chip manufacturing equipment is the most demanding field in semiconductor special equipment industry. According to Gartner’s statistics, global chip manufacturers’ equipment expenditure reached USD58,944 million in 2018, a slight drop of USD55,480 million in 2019 due to the global macroeconomic downturn, and the semiconductor industry is expected to start to recover in 2021. 2024 will grow to \$60,214 million. The composite annual growth rate is expected to be 6.27% from 2020 to 2024.

Global Market Situation of Semiconductor Special Equipment in 2018-2024 (USD100 million)



Source: Gartner

In the future, with the steady growth of downstream 5G communication, computer, consumer electronics, network communication and other industries, And rapid development in emerging areas such as the Internet of Things, artificial intelligence, automotive electronics, smartphones, smart wear, cloud computing, big data, security electronics, etc.. The integrated circuit industry is facing the demand of capacity expansion of new type chip or advanced technology, which brings wide market space for semiconductor special equipment industry.

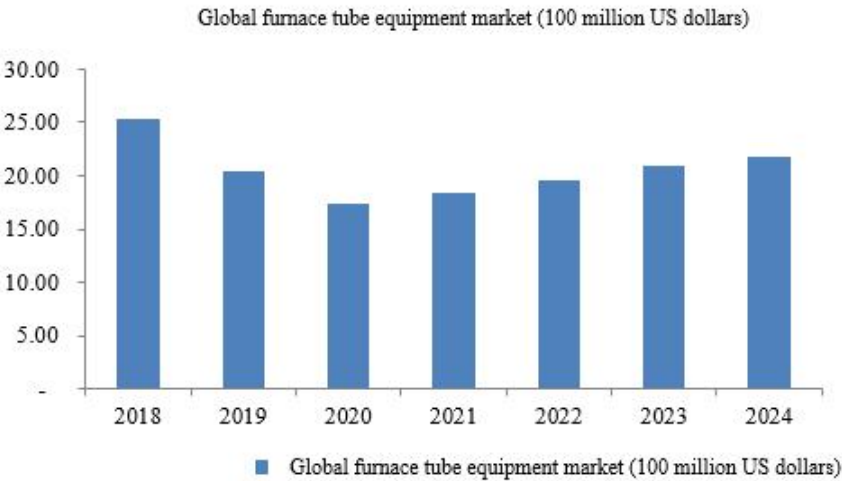
(2) The rich customer resources provide the customer base for the market benefit of the project

The manufacturing technology of integrated circuit is complicated with perplexing steps, the kinds of equipment needed for production are in a big quantity, the efficiency and reliability of single equipment will directly affect the working efficiency of the whole production line and the yield of chip products, so the integrated circuit manufacturing enterprises are very careful about the choice of new equipment, which requires a long period of verification. The Company has been focused on the integrated circuit special equipment R&D and manufacturing field for more than 10 years, and by relying on independent R&D to form the core technology, reliable quality and high-quality service continuously expand the customer resources reserve. The company products have obtained the certification of high-quality customers including Yangtze Memory, Hynix, SMIC, Huahong Group, JCET, TFME, SJsemi, Wafer Works, JRH, ZING SEMI, Institute of Microelectronics of Chinese Academy of Sciences, Shanghai IC, NCAP, etc.. The majority of the Company’s customers are leading enterprises in the industry, in the long run, with strong demand for expansion of production and equipment procurement, among which the demand for semiconductor special equipment is relatively high.

Through abundant customer resources and mature service experience in past, the Company has laid a solid foundation for the smooth implementation of the raised fund investment project, and will provide in-depth market support. At the same time, a brand demonstration effect of high-quality customer groups and strong procurement demand will provide sufficient guarantee for product conversion efficiency and benefit of R&D achievement of investment projects with the raised funds.

(3) The profound technical accumulation provides technical support for the implementation of the project

After more than ten years of development, the Company has established a strong intellectual property system, and has been committed to providing advanced wafer cleaning and wet processing equipment for the wafer manufacturing industry, forming product lines including semiconductor cleaning equipment, semiconductor electroplating equipment, advanced packaging wet process equipment as well as SFP equipment, vertical furnace tube equipment, and has a mature supply chain management and manufacturing system. According to Gartner statistics, the global furnace tube equipment market for 2018-2024 is as follows:



The company’s technical level for the megasonic single-chip cleaning equipment, single-chip slot-type combined cleaning equipment and electroplating process equipment of copper interconnection, has reached international leading or international advanced level. As of December 31, 2019, the company and its holding subsidiaries has 232 main licensed patents, including 108 domestic patents and 124 overseas patents. Among them, there are 227 invention patents. The company also won the title of “Shanghai Key Laboratory of Advanced Wet Process Equipment for Integrated Circuits”. It is the main subject unit of major scientific research projects in China such as “Research and development and application for 20-14nm copper plating equipment of copper interconnection” and “Research and development for 65-45nm stress-free polishing equipment of copper interconnection”, and other (“02 Special Project”) major scientific projects in China.

By virtue of the integrated application experience accumulated in the integrated circuit equipment industry over many years, the Company has mastered the mature core key technology and R&D capability. At the same time, by meeting the needs of the application market in the middle and lower reaches of the integrated circuit industry chain, the accumulation of existing technology and industrial experience of the Company will provide a strong guarantee for the smooth implementation of the raised fund investment project.

(4) The Company’s management team and talent team provide talent support for project implementation

The Company attaches great importance to the construction and cultivation of technical research and development team, and encourages self-innovation and independent research and development. Since its establishment, the Company has continuously trained and introduced professionals in the global industry, and after years of accumulation, the Company has had an international and professional technical research and development team. The company’s technical R & D team takes Dr. HUI WANG as the core. Most of the key technical personnel have overseas study or practice experience, have international vision and thinking, and are conducive to learning and mastering international advanced technologies. In addition, the company has set up a professional R & D team in South Korea, relying on South Korea’s technical talents in the field of machinery and electronics, and complement each other with R & D team in China mainland. By establishing an international and professional technical R & D team and adhering to the differential technological innovation and competition strategy, which has ensured that the Company can continuously launch new products and continuously improve existing products, consolidate and enhance the technical research and development capability of the Company.

The Company attaches great importance to the construction of talent echelons, and, according to the development strategy of the Company, defines the duties, conditions, development space and professional treatment of the post. The Company has reserved a large number of excellent talents, and has cultivated lots of middle and senior management talents with management and technical ability who will play an important role in the implementation of each project.

Therefore, the rich, mature experience and excellent technical ability of Company’s core management personnel and R&D team will provide technical guarantee and management ability for the smooth implementation of the raised fund investment project.

II. Utilization of Raised Funds

(I) ACMSH Equipment R&D and Manufacturing Center

1. Basic information of the project

The project is planned to build a semiconductor integrated circuit equipment R&D and manufacturing center in Shanghai Lin-gang Special Area, and the implementation body of the project is Shengwei Shanghai, a wholly-owned subsidiary of the Company. The project will be put into operation in 2023, and all the production capacity of the Company will be transferred to this new R&D and manufacturing center, laying a solid foundation for the Company's rapid development in the future.

This project focuses on the global development strategy of ACMSH. On the one hand, based on the core electronic control and software module technology of wet-process equipment such as advanced megasonic single wafer cleaning machine which have been mastered by the Issuer, and introduction of first-class advanced process hardware module and process technology from abroad, the integrated development and production of related process equipment, such as wet bench cleaning equipment, vertical furnace tube equipment (annealing furnace, oxidation furnace, LPCVD, ALD), and so on will be rapidly realized, thereby expanding and establishing the product lines with a complete variety of wet and dry process equipment to cope with the continuous growth of orders across the world; on the other hand, the equipment and related technologies developed by the Issuer will be introduced to the ACMSH Lin-gang R&D and Manufacturing Center for production, building it into a demonstration base of advanced manufacturing and intelligent manufacturing.

This project plans to build 2 production workshops, 1 auxiliary workshop, 2 R&D buildings, chemical warehouse and other related supporting facilities.

The construction land for this project is located in the Lin-gang heavy equipment industrial area, with a total land area of 42,786.30 square meters and a total floor area of 125,977.50 square meters.

2. Project construction contents and investment budget estimates

This project plans to build 2 production workshops, 1 auxiliary workshop, 2 R&D buildings and relevant supporting facilities such as chemical warehouse.

The total investment amount of this project is RMB 882.45 million Yuan, and it is planned to use the raised fund of RMB 700 million Yuan for civil engineering, decoration, equipment and software investment. The investment estimates of the project are as follows:

Unit: RMB10,000 Yuan

S/N	Project name	Amount	Proportion
1	Civil work and decoration	30,337.28	34.38%
2	Equipment and software investment	9,662.72	10.95%
3	Development or design costs	6,292.36	7.13%
4	Cost of raw materials for trial production	27,266.87	30.90%
5	Fuel power cost for trial production	1,993.43	2.26%
6	Fees for testing (or detection)	2,097.45	2.38%
7	Reserve fund	4,194.89	4.75%
8	Land acquisition	6,400.00	7.25%
Total		88,245.00	100.00%

3. Time period and schedule required for the specific project with raised funds

The construction period of this project is 36 months, and is divided into the following two stages: The first stage is the building construction, decoration and equipment procurement stage, which lasts for 30 months, with the main work being the construction, decoration, equipment procurement, construction and installation as well as software procurement, installation and commissioning of production facilities and

supporting production facilities of production workshop, etc.; the second stage is the equipment commissioning and trial production stage, which lasts for 6 months, mainly for production preparation and trial operation, etc..

4. Performance of the procedures for filing raised funds

The construction content of this project has obtained the *Shanghai Enterprise Investment Project Record Certificate* of China (Shanghai) Pilot Free Trade Zone Lin-Gang Special Area Development and Construction Management Committee in May 2020.

5. Environmental protection of the project

Noise, small amount of waste gas, waste water and solid waste will be generated in the production process of this project; domestic sewage will also be generated in the life of employees. Various preventive measures will be taken to reduce the emission of pollutants and minimize the impact on the environment during the implementation of the project. Up to the signing date of this prospectus, the project is under approval of environmental impact assessment.

The Company will take corresponding measures to ensure no obvious influence on acoustic environment and atmospheric environment of the area in the construction period and operation period of the project, and ensure the water quality of the sewage body controlled at the original level. During the construction period and operation period of the project, low-noise equipment and noise reduction measures such as vibration reduction, sound attenuation and sound insulation will be adopted to keep the boundary noise value of the project up to Class 2 criterion of the *Emission Standard for Environmental Noise at the Boundary of Industrial Enterprises* (GB12348-2008); The waste water discharge will be subject to the level I standard in the period II of DB4426-2001 *Water Pollutant Discharge Limit* so as to ensure that the waste water reaches the discharge standard after being treated.

6. Relationship between existing major businesses and core technologies of the Issuer

As one of few semiconductor special equipment providers with certain international competitiveness, the Company is in a technically intensive industry, its performance growth being driven by technology R&D efficiency and industrial chain integration capability. This project is dedicated to applying the core key technologies of integrated circuit manufacturing equipment, making full use of Lin-gang Special Area's advantages of investment and operation convenience, free entry and exit of goods, convenient fund flow, highly opened transportation, free practice of personnel and fast communication of information to build advanced R&D laboratories for the enhancement of the Company's ability of sustainable innovation and R&D; at the same time, a demonstration base for advanced manufacturing and intelligent manufacturing will be built to realize intelligent management in manufacturing, testing and automatic three-dimensional storage.

The construction of this project will enable the Company to expand and establish a complete product line of wet and dry equipment, accelerate the industrialization of R&D achievement, and meet the Company's strategic objective of becoming one of comprehensive international first tier integrated circuit equipment enterprises. In addition, it will be helpful for the Company to quickly respond to the demands of the integrated circuit manufacturing and advanced packaging industry for continuous iterative upgrading of equipment, and will lay a solid foundation for the Company to enhance its market share and expand its leading edge.

(II) Research and Development Project of ACMSH High-end Semiconductor Equipment

1. Basic information of the project

This project revolves around the Company's strategic goal of developing into one of the world's comprehensive first-class integrated circuit equipment enterprises,

aiming at more advanced process nodes, using the existing R&D system to conduct upgrading iteration and product expansion of high-end process equipment such as semiconductor cleaning equipment, semiconductor electroplating equipment, advanced packaging wet-process equipment, SFP equipment and vertical furnace tube equipment to expand and establish a product line with wet and dry processes in all categories. By configuring advanced equipment, introducing high-end talents, making full use of the integrated production capacity and technical resources of the industrial chain, the Company improves its independent innovation ability and R&D level in relevant fields, consolidates its leading position in technology and makes the company a comprehensive international integrated circuit equipment.

This project is to further develop, upgrade and innovate the existing or future major products and core technologies of the Company, and the specific R&D directions are arranged as follows:

(1) Technical improvement and Research & development of TEBO megasonic cleaning equipment

As the technical node of chip technology is developing to a small dimension and the aspect ratio is further increased, the difficulty of pattern wafer cleaning becomes greater. When the chip technology node extends to below 50nm and the pattern structure develops to multi-layer 3D, the traditional megasonic cleaning technology is difficult to control the bubbles for the stable acoustic cavitation effect, which causes the bubble to break, thus producing the high-energy microstream to damage wafer surface pattern structure.

The TEBO cleaning equipment independently developed by the company can be used for pattern wafer cleaning at 28 nm and below through a series of rapid (frequency up to one million times per second) pressure changes. The bubble is kept oscillating in size and shape at a controlled temperature, and the bubble is controlled in a stable oscillating state without imploding, thereby protecting the wafer microstructure from being destroyed and performing non-damage cleaning on the wafer surface pattern structure. In that technology transition of the device structure from 2D to 3D, the TEBO cleaning equipment of the company can be applied to more fine product such as FinFET, DRAM and emerging 3D NAND with 3D structure, as well as new nano-devices and quantum devices in the future, it plays an increasingly important role in improving the yield of customers' products.

As the further development of the chip manufacture, wafer structure is getting more complex, and the requirements for cleaning will be further improved. For example, when the logic integrated circuit manufacturing process enters the 14nm era, the 3D FinFET structure appears, and when the DRAM technology node enters the 1xnm era, the STI with higher and higher aspect ratio and Storage Node appear; high aspect ratio structure channel holes appear when the number of layer of 3D NAND stacked cells exceeds 64 or even 128. The conventional cleaning technology can not effectively clean the new 3D fragile structure. The main challenges of future cleaning technologies include fine fragile structure cleaning, high aspect ratio structure cleaning, fine particle removal and material loss control.

In light of that development of node clean technology in the future at 14 nm and below, TEBO megasonic wave cleaning equipment is focus on expanding its application to structures of smaller size and higher aspect ratio, and the main research contents of this project include:

①Acoustic wave control models for different wafer sizes and different structures;

② The chemical liquid easily causes material loss to the micro-pattern structure, TEBO cleaning process, combined with extremely dilute chemical solution to achieve less material loss.

③ In that ultra-small pattern structure, because the surface tension and capillary force are increased, water or chemical solution is difficult to enter into the micro structure, and effective clean of the inside of the pattern becomes more difficult, However, the problems such as adhesion caused by the drying process after wet cleaning in the pattern structure of small size become more severe, and the project will

develop a drying technology that is compatible with the TEBO cleaning process, such as high-temperature IPA drying technology, special solvent drying technology and so on.

(2) Technical improvement and Research & development of Tahoe single wafer wet bench combined cleaning equipment

With the continuous improvement of chip manufacturing process, the wet bench cleaning equipment could not meet the requirements of 28nm and below technology nodes, and the cleaning technology gradually changed from wet bench cleaning to single wafer cleaning. This change has greatly increased the consumption of sulfuric acid, resulting in a series of safety and environmental problems arising from the treatment of sulfuric acid waste liquid at present.

The cleaning effect and technology of Tahoe cleaning equipment is comparable to that of single wafer cleaning equipment, and at the same time, the amount of sulfuric acid used can be greatly reduced compared with single wafer cleaning equipment, help customers reduce the cost of production and can better comply with the Chinese government's energy conservation and environmental protection policy.

In that light of the future development of the technology node cleaning technology of 14 nm and below, the Tahoe single wafer wet bench combined cleaning equipment extends the advantages of low sulfuric acid usage of the wet bench cleaning to a lower technology node, and ensure the process performance comparable to that of single wafer cleaning. the main research contents of this project include:

① It is more suitable for optimization of bench structure and cleaning sequence of small particle control. Including the optimization of the conveying speed between the benches, the design and optimization of the flow velocity and flow direction of the liquid in the benches, the design and optimization of the pre-wetting system between the benches and the cavity modules, the design and optimization of the gas flow distribution in the cavities, high temperature operation of cavity, etc.

② Aiming at the development of photoresist removal technology of high-energy and high-dose ion implantation technology, the application of Tahoe technology is extended to a wide range of applications by introducing a new degluing solution and adopting a new degluing process combined with SPM degluing process.

③ Technical improvement and R & D of backside cleaning equipment

Along with the development of semiconductor technology, the interconnect wire in the wafer starts to turn from the traditional aluminum wire to the copper wire, which has the advantages of lower resistivity and less electron migration defects than aluminum interconnects. But because copper migrates faster in silicon and silicon dioxide layers, if the copper atom concentration on the surface of wafer is high, copper atoms will rapidly diffuse to the inside, thereby causing copper contamination and degrading the performance of the chip. If the concentration of copper ions on the backside of the wafer is not removed or reduced timely, the wafer fixture and transfer mechanisms will be contaminated by copper, thereby affecting all wafers using these devices and ultimately affecting product yield rate.

For the future cleaning technology development of node at 14nm and below, the main research contents of this project include:

① Smaller particle control: For the 14nm technology node, the key process parts, including the rotary bearing, the processing accuracy and quality inspection of the Bernoulli clamp, etc. are deeply researched and developed to achieve more stable particle control.

② Steady and balanced gas flow field control in the cavity: research and develop the control technology for stable and uniform gas flow field distribution in the cavity and reduce the retention of acid gas in the process cavity.

③ The challenge of the backside etching process: research the control technology of the chemical reflow of the wafer front surface and the etching uniformity of the edge and sidewall of the wafer in the etching process.

(4) Technical improvement and R & D of front end brush scrubber

The front end brushing equipment is one of the most frequently used process equipment in the wafer cleaning process, of which main process purpose is to remove wafer surface particles, The most commonly used cleaning media for such equipment include deionized water and SC-1 solution. The front brushing equipment of the Company uses a single wafer cavity to clean the front and back sides of the wafer according to the process, which can carry out cleaning processes including wafer back side brushing, wafer edge brushing, front and back side two-fluid cleaning and the like; the equipment occupies a small area, has advantages like high production capacity, strong stability and flexible selection of various cleaning methods.

For the future cleaning technology development of node at 14nm and below, the main research contents of this project include:

① Optimize the structure and cleaning technology of the gas-liquid two-fluid nozzle to further improve the cleaning efficiency of the two fluids, and the research directions include the striking force of the ejection liquid, the angle of the ejection liquid, and the size of the liquid column, relationship between key parameters such as gas and liquid flow rate and particle removal efficiency, wafer pattern non-destructive cleaning, etc.

② In that process of brushing machine, a functional water cleaning process is introduced to enhance the removal effect of particles, and a chemical oxide layer is not easy to grow on the surface of the cleaned wafer, and the pollution to the environment is small, and the loss of materials is also small.

(5) Technical improvement and R&D of front end process electroplating equipment

As the semiconductor technological node is further advanced and the aspect ratio is further increased, especially when the technology node is going below 45nm, and the pattern structure is developed to multi-layer 3D, the process requirements on trench filling effect, plating uniformity and the plating quality pose great challenges to the copper interconnection electroplating equipment. On this basis, the Company has adopted multi-anode local electroplating and pulse electroplating technology to cope with this challenge.

In view of the future electroplating technology development of technology node at 14nm and below, the main research contents of this project include:

① As that technical node become smaller and the thickness of the cop seed layer is thinner, higher requirement are put forward for electroplating water current and motion control, How to avoid the corrosion of the seed layer by the electroplating solution while ensuring the uniformity of deposition in the whole wafer scale is a major technical difficulty.

② With the increase of chip density in the wafer, in order to place more chips in the same wafer, the limited plating range of the wafer is expanded, and the edge width will gradually develop from 2.5 mm to 1.5 mm. Therefore, the fixture of the plating process chamber also needs to develop a device and process corresponding to the width of 1.5 mm to ensure the width trimming while ensuring the conductivity of the fixture and the wafer.

③ The new seed layer material cobalt will be introduced into the 7nm technology node to replace the existing copper seed layer, so how to electroplate cobalt or copper on the cobalt seed layer under 7nm technology node, it will also be a technical difficulty that needs to be solved.

(6) Technical improvement and R & D of SFP equipment

With the development of integrated circuit technology, the semiconductor wafer processing technology nodes becomes smaller and smaller, and the size of copper wiring, as conductive connection device, inside the chip becomes smaller and smaller too. At present, the inter-layer wiring in the chip is mainly performed using a Damascus process, and the copper layer on the rear surface of each layer is polished and removed

using a chemical mechanical polishing technique, leaving copper in the dielectric layer as a conductive wire. CMP technology has been widely used because of its extremely high flatness and overall flattening effect. However, in the CMP process, a certain pressure is required to act on the wafer to easily cause scratches on the wafer surface, or even damages to the pattern edge copper wire and the low-k dielectric constant material structure. To overcome the disadvantages of the above CMP technology, for the first time in the world, the concept of Stress Free Polish (SFP) is proposed by the Company. In the process of removing the metal coating on the wafer surface by using the principle of electrochemical reaction, the mechanical pressure in the polish process is completely discarded, thus the damage to the metal wire caused by the mechanical pressure is eliminated. After SFP polishing, the copper wire on the wafer surface is continuous and free of damage or defects due to no mechanical pressure applied. The core advantage of SFP stress-free polishing is that it does not cause mechanical damage to the structure of fine copper wire and ultra-low k ($k < 2.0$) dielectric constant material, thus ensuring the quality of the final copper interconnects.

This project will mainly focus on the research and development of the technology application of SFP technology in the technological nodes of dual Damascus process of logic circuits at 7nm, 5nm and below.

① In the technology node below 5nm, it will be a great technical difficulty to introduce barrier ruthenium to replace tantalum, the combination of stress-free copper casting process and wet etching process to satisfy the choice ratio of copper, ruthenium and underlying dielectric layer.

② In the technological node under 5nm, the pattern density increases, how to solve the uniformity of depression control under the condition of different metal copper distribution ratio of dense line structure and single line structure by the stress-free polishing process will also be a technical difficulty that needs to be solved.

③ In the technology node below 5nm, when the wet etching technology is used to remove the new ruthenium barrier layer, it is necessary to remove the barrier layer exposed on the front side, and it is also necessary to avoid over-etching of the vertical side wall in the bench. If overetched copper ions will enter the dielectric layer, causing failure and avoiding overetching is also a technical difficulty to be solved.

④ The integration of copper, ruthenium and ultra-low k dielectric is a potential solution for signal delay in the future. Developed the wet etching process to improve the selection ratio of ruthenium oxide and ultra-low k dielectric after stress-free polishing.

(7) Technical improvement and R&D of vertical furnace equipment

In order to improve the product diversity of the company, the Company strode from the wet process equipment field into the dry process equipment field, and self-developed vertical furnace equipment. Vertical furnace equipment field refers to the furnace equipment in the semiconductor manufacture, which is an important semiconductor front end equipment. It can be divided into diffusion equipment, low pressure chemical vapor deposition equipment and atomic layer deposition equipment according to different process types; furnace equipment structure is similar; for the reasons of process needs, functions like oxidation, annealing, LPCVD and ALD can be flexibly configured. The diffusion equipment is mainly used in the oxidation and annealing process, the furnace operating temperature is 100 ~ 1050 degrees, the pressure is a standard atmospheric pressure, and generally it uses hydrogen plus oxygen, or nitrogen; low pressure chemical vapor deposition equipment is mainly used in polysilicon, silicon nitride, high temperature silicon oxide, medium temperature silicon oxide and other processes; the working temperature of the furnace is generally 500 ~ 800 degrees, the pressure is below 7.5pa, and vacuum pump must be equipped; the atomic layer deposition equipment is mainly used in the process of silicon oxide and silicon nitride. Compared with low pressure chemical vapor deposition equipment, the atomic layer deposition device provides the same process application, but the deposition order is different; the working environment requirements are similar to the low pressure chemical vapor deposition equipment.

The vertical furnace equipment developed in this project by the Company will focus on low pressure chemical vapor deposition equipment first, then expand to oxidation and diffusion furnaces, and finally to the ALD application. Facing the technical nodes of 28nm and below, the project mainly solves the following technical difficulties:

① Uniformity of deposition coverage: When chemical deposition is carried out, a thin film is formed on both the bottom and the side, and the coverage index will become more and more important as the technology nodes become smaller and smaller.

② Control the film deposition thickness difference of different aspect ratio structure: In the same device, different width and depth regions, the film thickness formed by chemical deposition will be obviously different, when the technology node becomes smaller and smaller, How to control these thickness difference within that range of process requirement will be very difficult.

③ Develop high temperature oxidation furnace, solve the reliability of 1, 200°C high temperature oxidation furnace, improve the uniformity of silicon wafer temperature.

④ Developing ALD equipment, developing new precursor chemical materials, improving the coating forming efficiency and coating quality of ALD.

2. Budget estimate for project investment

The specific directions of the Company's R&D project include following seven: technical improvement and R & D of TEBO megasonic cleaning equipment, technical improvement and R & D of Tahoe single wafer wet bench combined cleaning equipment, technical improvement and R & D of single wafer backside cleaning equipment, technical improvement and R & D of single wafer brush scrubber, technical improvement and R & D of front end process electroplating equipment, technical improvement and R & D of stress-free polishing equipment and technical improvement and R & D of vertical furnace equipment. And the investment is mainly used for purchasing relevant R&D materials, paying testing costs, inspection expenses and personnel remuneration, etc.. The specific plans are as follows:

Unit: RMB 10,000 Yuan

S/N	Project name	Amount	Proportion
1	Hardware investment	8,156.15	18.12%
2	R&D Materials	28,790.22	63.98%
3	Testing and inspection	749.23	1.66%
4	Staff remuneration	6,177.60	13.73%
5	Other expenses	1,126.80	2.50%
Total		45,000.00	100.00%

Other expenses mainly include technical consultation fee, patent authorization fee and site lease fee required for research and development in the project.

3. Performance of the procedures for filing raised funds

The construction content of this project has obtained the Notice on Enterprise Investment Project Filing of Zhangjiang Science City Construction Management Committee of China (Shanghai) Pilot Free Trade Zone in May 2020 from

4. Environmental protection of the project

This project is a R&D project, and the impact on the environment mainly comes from the waste liquid, waste water and solid waste generated during the R&D process, which are all collected in a unified manner, and delivered to a qualified third party company for regular collection, transportation and unified treatment. The Environmental Impact Registration Form of the Project has been filed and publicized online in the filing system (Shanghai) of Environmental Impact Registration.

5. Relationship with the Issuer's existing major businesses and core technologies

The company is mainly engaged in the research and development, production and sales of semiconductor special equipment, the main products include semiconductor cleaning equipment, semiconductor plating equipment and advanced packaging wet equipment. The Company adheres to the development strategy of differential competition and innovation, and adopts the self-developed single wafer megasonic cleaning technology, single wafer wet bench combined cleaning technology, plating technology, stress-free polishing technology and vertical furnace tube technology, provide customized equipment and process solutions to global wafer manufacturing, advanced packaging and other customers to effectively improve customer production efficiency, improve product yield and reduce production costs. On this basis, the project will carry out technical improvement and R & D on the basis of existing products and technologies, aiming at more advanced technical nodes and technical performance. We will also expand and establish a complete range of product lines combining wet process and dry process equipment to consolidate our market position and enhance our profitability.

(III) Supplementary Working Capital

1. Basic information of the project

The Company plans to supplement the working capital in an appropriate amount based on the actual operating conditions and the future strategic development objectives. The project of supplementary working capital does not involve filing and environmental impact assessment procedures.

2. Necessity of the project

During the Reporting Period, the Company's capital demand is mainly met through its own operation accumulation. However, with the continuous expansion of the Company's business scale, the Company's product range is continuously enriched, and its investment in product R&D and industrial chain integration continues to expand, the Company is expected to have a liquidity gap. By supplementing the working capital, the Company will effectively increase the working capital, enhance the R&D capacity, multi-product operation capacity and continuous operation capacity, improve the solvency, reduce the liquidity and operation risk, and optimize the financial structure, thereby enhancing the Company's market competitiveness.

3. Management and operation arrangements for supplementary working capital

The Company will strictly implement the provisions of Shanghai Stock Exchange and CSRC on the use of raised funds, and manage the supplementary working capital in accordance with the *Management System for Raised Funds*. The Company implements the special account storage system for raised funds, with the raised funds to be deposited into the special account determined by the Board of Directors for centralized management. During the use process, the Company will reasonably arrange the use of supplementary working capital according to the needs of business development and actual operation of the Company, ensure the safe and efficient use of raised funds, and guarantee and increase the return of shareholders. In the process of fund allocation, the Company will approve and allocate funds in strict accordance with relevant provisions of the *Management System for Raised Funds* and the *Financial Management System*.

4. The impact of supplementary working capital on the financial position and operating results of the Company and its role in enhancing the core competitiveness of the Company

After the supplementary working capital is allocated in place, the Company's net assets and net assets per share will be increased. The increase in net assets will enhance the Company's ability to sustain development and resist risks. In the short term, due to the increase of net assets, the return on net assets of the Company will be diluted and the earnings per share will decline to a certain extent. In the medium and long term, the supplementary working capital will be an important source of funding for R&D team building, business expansion and daily operation of the Company; the Company will

consolidate its market position in the field of integrated circuit equipment manufacturing, increase its market competitiveness and influence, and enhance its core competitiveness.

III. Explanation on the Newly Acquired Land or Real Estate Involved in the Use of Raised Funds

In the projects with raised fund, ACMSH Semiconductor Equipment R&D and Manufacturing Center and High-end Semiconductor Equipment R&D project involve land or real estate use, while the project of supplementary working capital does not involve land and real estate use, of which the ACMSH Semiconductor Equipment R&D and Manufacturing Center project involves newly acquired land or real estate with the details as follows:

The construction land of ACMSH Semiconductor Equipment R&D and Manufacturing Center is located in the heavy equipment industry area of Shanghai Lin-gang Special Area, Pudong New Area, the total land area is 42,786.30 square meters, the total floor area is 125,977.50 square meters; Land Transfer Contract No.: HuZiMaoLinGang (2020) Transfer Contract No. 1

The implementation location of ACMSH High-end Semiconductor Equipment R&D Project is Building 4, No. 1690 Cailun Road, Zhangjiang High-tech Park, Shanghai, which is the existing leased plant of the Issuer and does not involve newly acquired land or real estate.

IV. Strategic Planning of the Company

(I) Development Strategy of the Company

1. Overall strategy

Since its establishment, the Company has been dedicated to the field of semiconductor special equipment, focusing on large-scale high-end integrated circuit wet and dry equipment products, to provide customers with a series of integrated circuit equipment products and services. The Company has always adhered to the technical R&D strategy of differential competition and innovation, accumulated a series of innovative technologies through the combination of independent original R&D and effective and controllable overseas business expansion, and continuously cultivated and built a first-class R&D team relying on an talent team to attract high-end professionals at home and abroad; improves the core competitiveness of the Company through continuously launching differentiated new products and technologies with a leading level in the world; and through a strong market expansion at home and abroad, enhances the market share; while keeping the reasonable gross profit rate, expands the Company's income scale, creating the value for the customer and the shareholder.

2. Continuous innovation plan

The Company will strive to seize the rapid development opportunities of China's semiconductor industry, give full play to its existing market position, R&D advantages, technological accumulation and industry experience, and pay close attention to the leading technologies development direction of the global semiconductor special equipment industry to ensure the Company's product quality, ensure its core technology in the leading position industry in China, and ensure the original innovation technology and products to be maintained in the international leading level. The Company will realize continuous improvement of product performance and technology on the basis of existing products, keep tracking the changes in emerging terminal markets, and ensure effective integration of the Company's products and market demands.

3. Development objectives

While maintaining the continuous growth of the company's semiconductor cleaning equipment, semiconductor electroplating equipment and advanced packaging wet equipment and vertical furnace tube equipment, the Company will focus on its core advantages, improve the core technology and integrate the inside and outside sources; based on differentiated independent innovation and R&D, combined with effective and

controllable overseas business expansion models to promote the R&D of new products through investment and M&A; and expand and establish a complete product line combining wet and dry process equipment. The Company will further transform itself into an integrated product company, continuously enhance its comprehensive competitiveness, strive to build ACMSH into a comprehensive integrated circuit equipment group, and rank among the first echelon of international integrated circuit equipment enterprises.

(II) Measures Taken to Realize the Strategic Objectives during the Reporting Period and the Implementation Results

During the Reporting Period, the Company completed the equity acquisition of CleanChip HK, ACMKR and ACM CA through the merger of enterprises under the same control, and realized the integration of all business processes such as sales, R&D, production and procurement.

After years of continuous input on research and development and market development, the Company has successively developed semiconductor cleaning equipment for single wafer SAPS megasonic cleaning, single wafer TEBO megasonic cleaning, single wafer backside cleaning, single wafer brush scrubbing, automatic wet bench cleaning and single wafer wet bench combined cleaning, and advanced packaging wet process equipment such as vertical furnace equipment, electroplating equipment used in the front end and back end process of semiconductor manufacturing, stress-free polishing equipment, wet etching equipment, gluing equipment, developing equipment and degluing equipment, etc.. With advanced technology and rich product lines, the Company has developed into one of few semiconductor special equipment suppliers with certain international competitiveness in China, and its products have been recognized by many mainstream semiconductor chip manufacturers at home and abroad, winning a good reputation in the market.

Through the projects invested by raised fund, the Company will continuously expand its competitive advantages in the field of semiconductor cleaning equipment cleaning, and maintain the the leading position of SAPS, TEBO megasonic cleaning equipment, single wafer wet bench combined cleaning equipment, front end electroplating and stress-free polishing equipment in the industry. The Company will continue to consolidate and expand the process application and customer base, actively promote the market expansion of the vertical furnace series products, launch new products continuously to realize the long-term sustainable growth of the Company's performance .

(III) Measures Taken in the Future Planning

In the future, the Company will follow the principle of prudence and rigorous development, adhere to the development strategy of talent introduction, independent research and development, global patent protection and differential competition, actively seek multi-level and multi-field cooperation, strive to overcome a number of key technologies, further build an industrial ecosystem, continuously increase the market share of semiconductor special equipment, and strive to occupy an important position in the world's advanced semiconductor special equipment industry.

1. Technological innovation plan

Technology is the key factor of long term development of semiconductor special equipment enterprises. The Company closely follows the trend of global semiconductor industry development, further enhances R&D and industrialization capacity, continuously develops new products and new technologies through independent R&D and domestic and overseas M&A, enriches core technologies and enhances existing production performance and quality of products to expand global market share.

The Company will continue to work closely with teaching and scientific research institutions to improve its own technology while promoting scientific and technological

progress of semiconductor special equipment, and provide new solutions for the global semiconductor equipment industry.

The Company will further increase research and development investment in technologies related to core products, and continue to maintain the international advanced level in the forefront of single wafer cleaning equipment, copper electroplating equipment and stress-free polishing equipment, etc..

2. Plans for the expansion of the capacity for advanced products

With the booming development of industries at the downstream of the semiconductor industry like 5G communication, computer, consumer electronics, network communication, automobile electronics, Internet of Things etc., the production capacity of chip manufacturing enterprises continues to expand, and the market demand for semiconductor special equipment of the Company will further increase. The Company plans to use the raised funds to accelerate the construction of ACMSH Semiconductor Equipment R&D and Manufacturing Center project, successfully build a global first-class semiconductor equipment R&D laboratory, and realize the expansion of the production capacity of the Company's semiconductor special equipment to enhance the competitiveness of the Company in the industry.

On the basis of maintaining the existing semiconductor special equipment business, the Company plans to realize the product layout that can cover the larger market through expanding production and technology upgrading, especially upgrading to more advanced process nodes, so as to further increase production and marketing scale, steadily increase the gross profit rate of products, reduce production cost, improve product quality, optimize product structure, realize the growth of performance and enhance the Company's position in the industry and core competitiveness.

3. Market and business development plan

Based on the demand of chip manufacturing enterprises in China mainland, mainly for the demand of mainland China , the Company will increase the market share of existing products in existing customers, accelerate the process of product certification for new customers, and strive to promote simultaneously certification work of multi-customer and multi-product. At the same time, the Company will pay close attention to the launch plan of chip manufacturing production lines around the world on the basis of successfully entering the markets of South Korea and Taiwan, following closely the big customers of the first tier of the world semiconductor industry, and improve the size the sales proportion of the international market outside mainland China, eventually becoming a world's influential semiconductor equipment industry group.

4. Human resources plan

The Company has always attached importance to the introduction and cultivation of talents at home and abroad. Semiconductor special equipment industry is a highly talent intensive industry, which needs multi-disciplinary and multi-domain talents in microelectronics, electrical, mechanical, materials, chemical engineering, fluid mechanics, automation, image recognition, communication, and software system, etc.. According to the actual situation and future development plan, the Company will continue to introduce and cultivate talents of all aspects, absorb high-end talents from the world at the same time, and optimize the talent structure; the Company will strengthen employee training, and continue to improve the employee training plan, shape an effective personnel training and growth mechanism, and improve the employees' business ability and overall quality through internal and external training and subject research; and foster the team awareness and enhance the spirit of cooperation while keeping employees' personalized and differentiated development, to build a world-class team of top talents and realize sustainable development. Meanwhile, the Company will provide continuous equity or option incentives to outstanding talents in the future according to specific conditions, combining interests of the Company, individual and shareholders, so as to effectively motivate the outstanding talents.

5. Plan for extending the industrial chain

In the future, the Company will further extend and improve the industrial chain, expand the products of the Company, work closely with domestic and overseas manufacturers of key components for semiconductor special equipment, and realize effective cooperation and complement advantages of production elements in a wide range, to tamp up the position in the field of international semiconductor special equipment.

6. Extension-type development plan

According to the overall development strategy and target plan, the Company will properly acquire and merge some technical and innovative enterprises around the core business of the Company when conditions are met, and integrate them into the Company's global R&D, production and sales platform. At the same time, after its market value reaches a certain scale, the Company will acquire and merge some mature semiconductor special equipment enterprises at home and abroad, with a certain scale and good benefit, which is of strategic significance to the development of the Company, so as to improve the production and operation scale and competition strength of the Company, and further to achieve the effect of expanding the market scale, increasing market share, expanding income sources, reducing production costs and expanding talent team, etc., promote rapid expansion of the Company, and maintain sound and sustainable development.

According to the development trend of the global semiconductor industry and the actual business conditions of the Company, the Company has formulated the above-mentioned strategic plan. After many years of development, the Company has established leading position in the industry in China, and has a strong competitive edge in the industry in the international market competition. Such conditions laid the foundation for the realization of the above objectives. Realizing the above-mentioned business development objectives will help consolidate and enhance the competitive advantages of the Company and realize steady improvement of the Company's profitability.

Section X Investor Protection

I. Main Arrangements by the Issuer on Investor Relations

For protecting the lawful rights and interests of investors, regulating the Company's information disclosure behaviors and investor relations management, and safeguarding the legitimate rights and interests of the Company's shareholders, creditors and other stakeholders, the Company, as required by Chinese laws and regulations, has formulated certain corporate governance documents such as the *Information Disclosure Management Rules*, the *Investor Relations Management Rules* and others, and established systems for information disclosure and investor relations management which are gradually improving in conformity with the listing requirements, so as ensure that information can be disclosed in a timely and fair manner and the information disclosed is true, accurate and complete. Therefore, the Company can guarantee the investors' rights to know, to make decisions and to participate, and protect the lawful rights and interests of investors effectively.

(I) Information Disclosure Rules and Procedures

On April 30, 2020, the Company held the fourth meeting of the first board of directors, deliberating and adopting the *Information Disclosure Management Rules*, in which clear provisions are made with respect to the Company's basic principles and requirements for information disclosure, periodic reports, contents to be disclosed, management of information disclosure affairs, basic procedures, confidentiality measures, data management and other related matters. Pursuant to the *Information Disclosure Management Rules*, the Company and the relevant information disclosure obligors shall disclose all matters that may considerably affect the Company's stock trading price or the investment decision-making. The Company and the relevant information disclosure obligors shall make the disclosure in a timely and fair manner to ensure the truth, accuracy and completeness of the information disclosed. The *Information Disclosure Management Rules* expressly stipulate that the board office

shall be responsible for managing the Company's information disclosure under the unified leadership and management of the board of directors, and also make corresponding provisions on the general procedures of collecting, submitting, reviewing and disclosing periodic reports and interim announcements. Without the written authorization of the Company's board of directors, no directors, supervisors, senior executives, key technicians or other personnel of the Company shall release or disclose to shareholders or the media such information as has not been made public by the Company in any form on behalf of the Company or the board of directors.

(II) Establishment of Communication Channels for Investors

On April 30, 2020, the Company held the fourth meeting of the first board of directors, deliberating and adopting the *Investor Relations Management Rules* in which clear provisions are made with respect to the purposes, principles, objects and contents of investor relations work, the investor relations management departments and responsibilities, and the investor relations activities, among others. The board chairman of the Company shall be the first responsible person for, and the secretary of the Company's board of directors shall be the specific person in charge of, the management of investor relations. The Company's board office and other relevant functional departments shall undertake specific work by organizing and coordinating the daily affairs of the Company's investor relations management. According to the provisions of the *Investor Relations Management Rules*, the Company may communicate with investors through multiple channels and at multiple levels in a way as convenient and effective as possible for the investors' participation, including without limitation: announcements (inclusive of periodic reports and ad hoc reports), general meeting of shareholders; company website and e-mail; analyst meetings, performance presentations and road shows; one-on-one communication; site visit and symposium; and telephone counseling. Where a relevant major issue of the Company is highly concerned about or is challenged by the market, the Company shall, in addition to performing the obligation of information disclosure timely according to the listing rules, convene explanation meetings on site, online or by any other means to introduce the situation, explain reasons and answer the relevant questions. The board chairman, general manager, secretary of the board of directors, chief financial officer or any other responsible person of the Company shall participate in the explanation meetings.

(III) Future Plans for Investor Relations Management

In order to strengthen the information communication between the Company and the investors for better services to the investors, the Company will, according to the provisions of the *Company Law*, the *Securities Law*, the *Administrative Measures for the Disclosure of Information of Listed Companies*, the *Working Guidelines for the Relationship Between Listed Companies and Investors*, the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange* and other laws, regulations as well as the *Articles of Association (Draft)* applicable to the Company after the IPO and the *Investor Relations Management Rules*, effectively carry out related work in terms of the construction, management and maintenance of investor relations to establish an open communication platform for the Company and Investors, ensuring the investors' fair and timely access to the Company's public information. Through information disclosure and exchange, the Company will establish two-way communication channels and effective mechanisms between the Company and investors, promote the benign relationship between the Company and investors, and effectively safeguard the interests of all shareholders, especially small and medium shareholders, in an effort to maximize the value of the Company and the interests of shareholders.

II. Dividend Distribution Policy of the Issuer

(I) Dividend Distribution Policy After the Offering

In accordance with the *Articles of Association (Draft)* applicable to the Company after the IPO and the *Plan for Dividend Return in the Three Years Following Listing*, which were deliberated and adopted by the second extraordinary general meeting of shareholders on May 15, 2020, the dividend distribution policy of the Company after

the offering is as follows:

1. Principle of Dividend Return Planning

The Company plans to pay dividends subject to the actual situation of the Company by fully considering and accepting the opinions of shareholders (especially small and medium shareholders), independent directors and supervisors through a variety of channels, and implements a sustained and stable profit distribution policy.

2. Form of Profit Distribution

There are mainly three forms in which the Company makes dividend distribution, which are cash, stock and combination of cash and stock. The Company will give priority to dividend distribution in the form of cash, and may, according to the Company's cash flow status, business growth, size of net assets per share and other reasonable factors, adopt the form of stock or a combination of cash and stock to distribute dividends.

3. Term Interval of Profit Distribution

Generally the Company will make annual dividends, while the board of directors may also propose to make interim cash dividends in the context of the Company's fund demand status.

4. Conditions and Proportions of Cash Dividends

If there is no major investment plan or major cash expenditure after the Company makes profits and draws statutory reserve, surplus reserve and the like according to law for a current year, the annual cash dividend amount shall not be less than 10% of the attributable profit realized in the current year.

Major investment plans or major cash expenditures shall refer to projects under which the Company's cumulative expenditures for proposed external investment, asset acquisition or equipment purchase, fixed asset investment or research and development in the next 12 months will reach or exceed 5% of the Company's audited net assets of the latest period, except for fund-raising investment projects.

By taking full into account, among others, the characteristics of the industry, the stage of development, the Company's own business model, the level of profitability, and whether there is major capital expenditure arrangement, the board of directors of the Company shall, in accordance with the procedures stipulated in the *Articles of Association*, propose a differentiated cash dividend policy in response to the different situations as below:

(1) If the Company is in a mature development stage and has no major capital expenditure arrangements, when making profit distribution, the minimum proportion of cash dividends in the corresponding profit distribution shall be 80%;

(2) If the Company is in a mature development stage and has major capital expenditure arrangements, when making profit distribution, the minimum proportion of cash dividends in the corresponding profit distribution shall be 40%;

(3) If the Company is in a growing development stage and has major capital expenditure arrangements, when making profit distribution, the minimum proportion of cash dividends in the corresponding profit distribution shall be 20%.

Where the Company is in an indistinguishable development stage but has major capital expenditure arrangements, the provisions of the preceding paragraph may apply. Currently the Company is in a growing development stage having major capital expenditure arrangement in the future, so when conducting profit distribution, the minimum proportion of cash dividends in the profit distribution should be 20%. If, with the continuous development, the Company moves to such a development stage as considered by the board of directors to be matured, depending on the presence of major capital expenditure arrangement, the board of directors shall, according to the profit distribution policy adjustment procedures stipulated in the *Articles of Association* proposes to the general meeting of shareholders on increasing the minimum proportion of cash dividends in the profit distribution.

5. Stock Dividends

Subject to the full distribution of cash dividends, the Company may make additional distribution by stock dividends and transfer capital reserve into share capital based on shareholders' wills and requirements, with the specific proposal, after being deliberated and passed by the Company's board of directors, submitted to the general meeting of shareholders for approval. The Company shall meet the following conditions for distribution of stock dividends:

(1) The Company is in good operating condition;

(2) The Company's stock price does not match the Company's share capital size, and the distribution of stock dividends will be beneficial to the overall interests of all shareholders of the Company;

(3) The proportions of cash dividends and stock dividends distributed conform to the provisions of the Company's *Articles of Association*;

(4) Other conditions stipulated by laws, administrative regulations, departmental rules and normative documents.

6. Use of the Remaining Undistributed Profits

The Company will use the remaining undistributed profits in a prudent and reasonable manner. The remaining undistributed profits will be mainly used for external investment, acquisition of assets, purchase of equipment and other major investment and cash expenditure, to gradually expand the scale of the Company's production and operation, accelerate the Company's business development and continuous growth in operating performance, achieve the Company's future development objectives in a planned and step-by-step manner, and generate more returns for the shareholders of the Company.

7. Decision-making Procedures and Mechanism of Profit Distribution Plan

In order to generate reasonable returns for shareholders, the board of directors of the Company shall, prior to the release of annual reports or semi-annual reports, and in the light of the Company's profit distribution plan as well as the Company's current production and operation status, cash flow status, future business development plans, fund use demands, and previous annual losses recovery, etc., carefully study and demonstrate the timing, conditions and minimum proportion of the Company's cash dividends, adjustment conditions and decision-making procedures, etc., to establish the annual or semi-annual profit distribution plans which shall be subject to the approval by a majority of the board of directors after deliberation. The independent directors shall express independent opinions on the profit distribution plans.

The profit distribution plans shall be submitted by the board of directors to the general meeting of shareholders for approval after deliberation through the above-mentioned procedures, and shall be approved by a majority of the voting rights held by the shareholders (including their proxies) present at the general meeting of shareholders. Before the general meeting of shareholders deliberates on a specific plan of cash dividends, the Company shall actively communicate with shareholders, especially small and medium shareholders, through various channels to fully open to opinions and appeals from small and medium shareholders, and timely reply to questions concerned by the small and medium shareholders.

8. Adjustment of Profit Distribution Policy

Where it becomes absolutely necessary for the Company to adjust the profit distribution policy in response to its production and operation situation, investment planning and long-term development needs, the profit distribution plan so adjusted shall not violate the provisions of the securities regulatory authorities, and the proposal for profit distribution plan adjustment shall, after opinions of the independent directors and the board of supervisors as well as deliberation by the board of directors of the Company, be submitted to the general meeting of shareholders for approval, which shall be passed by a vote of more than two thirds of the voting rights held by the shareholders (including their proxies) present at the general meeting. At the same time, online voting shall be made available to the public shareholders for their voting in the general meeting of

shareholders.

(II) Difference of Dividend Distribution Policy before and After the Offering

In accordance with the relevant laws and regulations promulgated by the CSRC, the Shanghai Stock Exchange and other regulatory authorities, the Company has formulated the *Articles of Association (Draft)* applicable to it after the IPO, which has been deliberated and approved by the Company's second extraordinary general meeting of shareholders in 2020. The dividend distribution policy of the Company after the public offering as below has been further improved and refined on the basis of the current *Articles of Association* by adding contents such as profit distribution principle, profit distribution form, as well as profit distribution conditions and proportions.

III. Distribution Policy of Accumulated Profits before the Offering

According to the *Proposal on Distribution Plans for Accumulated Profits before the Company's Initial Public Offering* adopted by the Company's second extraordinary general meeting of shareholders after deliberation on May 15, 2020, the profits accumulated before the the Company's IPO shall be shared by the new and old shareholders in proportion to their shareholdings after the listing.

IV. Voting Mechanism for Shareholders of the Issuer

(I) Cumulative Voting System

According to the *Articles of Association (Draft)* applicable after the IPO deliberated and adopted by the Company's second extraordinary general meeting of shareholders on May 15, 2020, the general meeting of shareholders shall actively implement the cumulative voting system in the election of directors and supervisors. A listed company whose individual shareholders and their persons acting in concert hold 30% or more shares shall implement the cumulative voting system. The term "cumulative voting system" refers to a system of voting for the election of directors or supervisors at the general meeting of shareholders where in which a shareholder can multiply his voting rights by the number of candidates and vote them all for one candidate for director or supervisor.

(II) Separate Voting System for Small and Medium Investors

According to the *Articles of Association (Draft)* applicable after the IPO adopted by the Company's second extraordinary general meeting of shareholders after deliberation on May 15, 2020, when a general meeting of shareholders deliberates on significant matters which have an impact on the interests of small and medium investors, the votes of small and medium investors shall be computed separately. The separate voting results shall be announced and disclosed promptly. The term "small and medium investors" refers to the shareholders other than the directors, supervisors, senior executives of the Company and the shareholders holding 5% or more of the shares in the Company individually or jointly on the share record date corresponding to the general meeting of shareholders.

(III) Online Voting at General Meetings of Shareholders

According to the *Articles of Association (Draft)* applicable after the IPO deliberated and adopted by the Company's second extraordinary general meeting of shareholders on May 15, 2020, the Company shall provide online voting method or otherwise to facilitate participation by shareholders in general meetings of shareholders. In the case of online voting by shareholders, the relevant provisions made by the CSRC, Shanghai Stock Exchange, China Securities Depository and Clearing Co., Ltd. and other authorities as well as the *Articles of Association* shall be followed. Shareholders participating in a general meeting of shareholders via the aforesaid method shall be deemed present at the meeting.

Where a general meeting of shareholders adopts online or other method, the voting

time and procedures for such online or other method shall be stated in the notice of the meeting. The general meeting of shareholders adopting online or other voting method shall not commence earlier than 3:00 p.m. on the day preceding the date of the physical general meeting of shareholders or later than 9:30 a.m. on the date of the physical general meeting of shareholders, nor shall it end before 3:00 p.m. of the date of the physical general meeting of shareholders.

The same voting rights may only be exercised on site, online or via one of any other voting methods. In the event of repeated voting using the same voting rights, the first voting shall prevail.

A physical general meeting of shareholders shall not end earlier than the meeting using online or any other method, and the chairman of the meeting shall announce the voting status and result for each proposal and announce in accordance with the voting result whether the proposal is adopted.

Before the voting result is officially announced, the company, counters, scrutineers, major shareholders, network service providers and other relevant parties involved in the voting at the general meeting of shareholders physically, online or otherwise shall be obliged to keep the voting status confidential.

(IV) Solicitation of Voting Rights

According to the *Articles of Association (Draft)* applicable after the IPO deliberated and adopted by the Company's second extraordinary general meeting of shareholders on May 15, 2020, the board of directors, independent directors and shareholders satisfying the stipulated criteria may openly solicit voting rights of shareholders. In soliciting the voting rights from shareholders, specific information such as voting intent shall be fully disclosed to the relevant shareholders. It is prohibited to solicit voting rights from shareholders with direct or indirect compensations. The Company shall not impose a minimum shareholding limit on the solicitation of voting rights.

V. Important Commitments Made by Relevant Parties to the Offering and Their Fulfillment

As of the execution date of this [***], the parties to the Offering have made the important commitments as follows:

(I) Commitments on Restricted Sale of Shares Before the Offering, Voluntary Share Lock-up, and Extension of Lock-up Period

1. Commitments from ACMR Acting as the Controlling Shareholder of the Company

(1) Within 36 months from the listing date of the Issuer's shares, we shall not transfer or entrust another person to manage the shares of the Issuer held directly or indirectly by us before the IPO ("Pre-IPO Shares"), or propose the repurchase of such shares by the Issuer. The said commitments will not affect the normal trading of our shares at American Stock Exchange or the conduct of our financing activities, merges and acquisitions in accordance with the provisions of U.S. securities laws.

(2) If the daily closing price of the Issuer's shares is lower than the issue price at the IPO ("Issue Price of the Issuer") for 20 consecutive trading days within 6 months after the IPO, or the closing price at the end of the 6-month period after the IPO is lower than the Issue Price of the Issuer, the lock-up period of the shares held by us in the Issuer will be automatically extended for 6 months. If the Issuer has paid dividends, given bonus shares, capitalized capital reserve, issued new shares or had other ex-right and ex-dividend matters, the said issue price refers to the adjusted price of the Issuer's shares.

(3) If the Issuer, upon the occurrence of any of the material law-breaking circumstances specified in Section 2, Chapter XII of the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*, triggers the delisting criteria, we will not reduce our shareholdings in the Issuer during the period from the date of a relevant administrative penalty decision or judicial decision to the termination of listing of the Issuers' shares.

(4) If we reduce our shareholdings of Pre-IPO Shares after the expiration of the lock-up period, we will strictly abide by laws, administrative regulations, departmental rules, normative documents and relevant provisions of Shanghai Stock Exchange, and fulfill corresponding information disclosure obligations.

(5) We will promptly report to the Issuer the shares by us in the Issuer held and the changes thereof.

(6) If we violate the said commitments to reduce our shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer.

2. Commitments from HUI WANG Acting as the Company's De Facto Controller, Director, and Key Technician

(1) Within 36 months from the listing date of the Issuer's shares, I shall not transfer or entrust another person to manage the shares of the Issuer held directly or indirectly by me before the IPO ("Pre-IPO Shares"), or propose the repurchase of such shares by the Issuer.

(2) If the daily closing price of the Issuer's shares is lower than the issue price for 20 consecutive trading days within 6 months after the IPO, or the closing price at the end of the 6-month period after the IPO is lower than the issue price, the lock-up period of the shares held by me in the Issuer will be automatically extended for 6 months. If the Issuer has paid dividends, given bonus shares, capitalized capital reserve, issued new shares or had other ex-right and ex-dividend matters, the said issue price refers to the adjusted price of the Issuer's shares.

(3) If the Issuer, upon the occurrence of any of the material law-breaking circumstances specified in Section 2, Chapter XII of the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*, triggers the delisting criteria, I will not reduce my shareholdings in the Issuer during the period from the date of a relevant administrative penalty decision or judicial decision to the termination of listing of the Issuers' shares.

(4) After the expiration of the said share lock-up period, during the period of being a director of the Issuer, and subject to the fulfillment of the share lock-up commitment, the shares of the Issuer transferred by me each year shall not exceed 25% of the total shares of the Issuer held by me. If I leave office for any reason, within six months thereafter, I will not transfer or entrust another person to manage the shares of the Issuer held by me. If I leave office before the expiration of my term of office, I will continue to comply with the aforesaid reduction requirements within the remaining portion of my term of office determined at the time of taking office and within 6 months after the expiration of my term of office.

(5) I, as the key technician of the Issuer, shall not transfer the Pre-IPO Shares held by me each year during the 4 years upon the expiration of the lock-up period for the Pre-IPO Shares held by me exceeding 25% of the total Pre-IPO Shares held by me when the Issuer was listed, and such percentage may be applied on a cumulative basis; and during the 6 months upon my resignation, I will neither transfer or entrust another person to manage the Pre-IPO Shares held by me nor propose the repurchase of such shares by the Issuer.

(6) I will strictly abide by the relevant provisions on the shareholding and share change of the de facto controllers, directors and key technicians of the Issuer under laws, administrative regulations, departmental rules and normative documents, truthfully and timely report to the Issuer on the shares of the Issuer directly or indirectly held by me and their changes and fulfill my obligations as a director in a standardized and honest way. I will not refuse to perform the above commitments due to position change, resignation and other reasons.

(7) If I violate the said commitments to reduce my shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer.

3. Commitments from Shareholders of the Company Including Xinwei Consulting, HTXC, Jinpu Investment, Taihu Guolian, Xinshi Consulting, Hai Feng Investment and Xingang Consulting

(1) Within 12 months from the listing date of the Issuer's shares, we shall not transfer or entrust another person to manage the shares of the Issuer held by us before the IPO ("Pre-IPO Shares"), or propose the repurchase of such shares by the Issuer.

(2) If we reduce our shareholdings of Pre-IPO Shares after the expiration of the lock-up period, we will strictly abide by laws, administrative regulations, departmental rules, normative documents and relevant provisions of Shanghai Stock Exchange, and fulfill corresponding information disclosure obligations.

(3) If we violate the said commitments to reduce our shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer, and all losses and legal consequences arising therefrom shall be borne by us.

4. Commitment from Yongkong Consulting, SYEM, Shangrong Innovation, SRJY, Runguang Investment, SICIF, PEII and ZJTVC, Shareholders of the Company

(1) Within 36 months from the date of direct holding the Issuer's shares (i.e. December 13, 2019, the date when the industrial and commercial change registration procedures are completed), we shall not transfer or entrust another person to manage the shares of the Issuer held by us before the IPO ("Pre-IPO Shares"), or propose the repurchase of such shares by the Issuer.

(2) Within 12 months from the listing date of the Issuer's shares, we shall not transfer or entrust another person to manage the Pre-IPO Shares held by us, or propose the repurchase of such shares by the Issuer.

(3) If we reduce our shareholdings of Pre-IPO Shares after the expiration of the lock-up period, we will strictly abide by laws, administrative regulations, departmental rules, normative documents and relevant provisions of Shanghai Stock Exchange, and fulfill corresponding information disclosure obligations.

(4) If we violate the said commitments to reduce our shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer, and all losses and legal consequences arising therefrom shall be borne by us.

5. Commitments from QIAN DONG, a Supervisor of the Company

(1) Within 12 months from the listing date of the Issuer's shares, I will not transfer or entrust another person to manage the shares of the Issuer held by me directly or indirectly through Xinwei (Shanghai) Management Consulting Partnership (L.P.) before the IPO, or propose the repurchase of such shares by the Issuer.

(2) If the Issuer, upon the occurrence of any of the material law-breaking circumstances specified in Section 2, Chapter XII of the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange*, triggers the delisting criteria, I will not reduce my shareholdings in the Issuer during the period from the date of a relevant administrative penalty decision or judicial decision to the termination of listing of the Issuers' shares.

(3) After the expiration of the said share lock-up period, during the period of being the supervisor of the Issuer, and subject to the fulfillment of the share lock-up commitment, the shares of the Issuer transferred by me each year shall not exceed 25% of the total shares of the Issuer held by me. If I leave office for any reason, within six months thereafter, I will not transfer or entrust another person to manage the shares of the Issuer held by me. If I leave office before the expiration of my term of office, I will continue to comply with the aforesaid reduction requirements within the remaining portion of my term of office determined at the time of taking office and within 6 months after the expiration of my term of office.

(4) During the period of being the supervisor of the Issuer, I will strictly abide by the relevant provisions on the shareholding and share change of the supervisor of the Issuers under laws, administrative regulations, departmental rules and normative documents, fulfill my obligations as a supervisor in a standardized and honest way, and truthfully and timely report to the Issuer on the shares of the Issuer directly or indirectly held by me and their changes. I will not refuse to perform the above commitments due to position change, resignation and other reasons.

(5) If I violate the above commitments to reduce my shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer.

6. Commitments from each of the Company's Key Technicians

(1) Within 12 months from the listing date of the Issuer's shares and during the 6 months upon my resignation, I will not transfer or entrust another person to manage the shares of the Issuer held by me directly or indirectly through Xinshi (Shanghai) Management Consulting Partnership (L.P.) before the IPO ("Pre-IPO Shares"), or propose the repurchase of such shares by the Issuer. If I leave office before the expiration of the said lock-up period, I will still comply with the aforesaid commitments on share lock-up.

(2) The Pre-IPO Shares I transfer each year during the 4 years upon the expiration of the lock-up period for the Pre-IPO Shares held by me shall not exceed 25% of the total Pre-IPO Shares held by me when the Issuer was listed, and such percentage may be applied on a cumulative basis.

(3) During the term when I acts as a key technician of the Issuer, I will strictly abide by the relevant provisions on the shareholding and share change of key technicians under laws, administrative regulations, departmental rules and normative documents. I agree to assume and compensate for all such losses as may be caused to the Issuer and its controlled companies as a result of my breach of the above commitment.

(4) During my shareholding period, if the laws, administrative regulations, departmental regulations, normative documents and requirements of securities regulatory authorities for locking up and reducing shares change, I am willing to automatically apply the changed laws, regulations, departmental regulations, normative documents and requirements of securities regulatory authorities.

(5) If I violate the above commitments to reduce my shareholdings in the Issuer, the actual proceeds (if any) from such reduction shall be owned by the Issuer, and all losses and legal consequences arising therefrom shall be borne by me.

(II) Letter of Commitment on Intention to Maintain/Reduce Shares

1. Commitments from ACMR as the Company's Controlling Shareholder and HUI WANG as the De Facto Controller

(1) Upon expiration of the lock-up period for shares held in the Company, we/I shall decide whether to reduce shares and the amount of shares to be reduced according to the actual needs and the secondary market conditions.

(2) If we/I intend to reduce our/my shares held in the Company that were issued before the IPO ("Pre-IPO Shares"), we/I will strictly abide by the relevant provisions of the CSRC and the Shanghai Stock Exchange on shareholding reduction, carefully formulate the shareholding reduction plan, and confirm and disclose the arrangement for the control of the Company in advance, so as to ensure the Company's continuous and stable operation. Where we/I intend to reduce our/my shareholding within two years after the expiration of the lock-up period for shares held in the Company, the price at which the shares are to be reduced shall not be lower than the issue price at the time of the Company's IPO (if the Company pays dividends, gives bonus shares, capitalizes capital reserve, issues new shares or proceeds with other ex-right and ex-dividend matters, the price of reduced shares will be adjusted as per the regulatory provisions), and we/I shall make the announcement through the Company within three trading days before the reduction or within the time limit stipulated by relevant laws and regulations, as well as disclose in the relevant information disclosure documents the reasons for the reduction, the amount to be reduced, the future shareholding intention and the impact of the reduction on the Company's governance structure, equity structure and going concern.

(3) We/I will, in case of reducing the Pre-IPO Shares after the expiration of the lock-up period, strictly comply with the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China* and other applicable laws, administrative regulations, departmental rules, normative documents and relevant regulatory provisions on shareholding reduction and information disclosure for the way and procedures of reduction.

(III) Plan and Restraint Measures to Stabilize the Company's Stock Price within Three Years after Listing

1. Plan of the Issuer to Stabilize Stock Price

The Company has prepared the *Proposal on the Plan to Stabilize Stock Price within Three Years after Initial Public Offering and Listing on the STAR Market* upon deliberation and approval by the second extraordinary meeting of general shareholders dated 15 May, 2020. The Company, its controlling shareholder, de facto controllers as well as those directors (other than any independent director) and senior executives who receive salaries and/or allowances from the Company undertake to strictly comply with the following Plan to Stabilize Stock Price:

(1) Conditions for Starting/Stopping Stock Price Stabilization Measures

① Starting conditions: If, for 20 consecutive trading days within three years after its IPO and listing on the STAR Market, the daily closing price of the Company's shares is less than the audited value of net asset per share of the Company for the previous fiscal year (value of the net asset per share = total equity attributable to ordinary shareholders of the parent company in the consolidated financial statements/total number of shares of the Company at the end of the year; if the net assets of the Company or the total number of its shares varies due to dividend distribution, issue of bonus stocks, capitalization of capital reserve, issue of new shares and other ex-rights and ex-dividend matters in respect of the Company's shares or due to other reasons, the relevant calculation and comparison methods shall be adjusted in accordance with the relevant provisions of the stock exchange or other applicable provisions, the same below), the Company will take one or more of the following measures in sequence to stabilize the Company's stock price: A. the Company repurchases its shares; B. the controlling shareholder increases its shareholdings; and/or C. directors and senior executives increase their shareholdings.

② Stopping conditions: During the implementation period of the specific measures to stabilize the stock price, if the daily closing price of the Company's shares is higher than the audited value of net asset per share of the Company for the previous fiscal year for 20 consecutive trading days, or if the continued repurchase and/or shareholding increase will make the Company ineligible for listing in terms of its equity distribution, the stock price stabilization measures will be stopped.

(2) Specific Measures to Stabilize Stock Price

① Measures Taken by the Company to Stabilize Stock Price

When the starting conditions for the above stock price stabilization measures are triggered, on the premise of ensuring that the Company's equity distribution complies with the listing conditions and does not affect its normal production and operation, the Company shall timely perform relevant legal procedures and repurchase shares from public shareholders pursuant to the provisions of the *Company Law of the People's Republic of China*, the *Measures on the Administration of Listed Companies' Repurchase of the Shares Held by the Public (for Trial Implementation)*, the *Supplementary Provisions on the Share Repurchase by Listed Companies by Means of Centralized Bidding* and other relevant laws, administrative regulations, departmental rules, normative documents, relevant stock exchange rules, the Articles of Association and the internal corporate governance system of the Company.

The Company shall, within 10 trading days from the date when the measures to stabilize the stock price are triggered, convene a board meeting to deliberate the Company's share repurchase proposal, which shall be approved by a majority vote of all the directors of the Board of Directors. Moreover, the Company shall, within 2 trading days after the resolution of the Board of Directors, announce the board resolution, the relevant proposal and the notice on convening the general meeting of shareholders. The share repurchase proposal shall include the price or price range of the shares to be repurchased, the number of shares, the duration of the repurchase, and other information that shall be included under the laws, administrative regulations, departmental rules, normative documents and relevant stock exchange rules then in effect. The resolution of the Company's general meeting of shareholders on the share repurchase proposal shall be approved by no less than two-thirds of the voting rights held by the shareholders present at the general meeting, and the controlling shareholder of the Company shall undertake to vote in favor of such repurchase at the general meeting. The Company shall initiate the implementation of the specific scheme to stabilize the stock price within 5 trading days after the proposal is approved by the general meeting of shareholders. The repurchased shares will be canceled in accordance with the law and the Company will promptly go through the procedures for capital reduction.

Where the Company adopts a share repurchase proposal for the purpose of stabilizing the stock price, the number and amount of shares repurchased shall meet the following conditions:

A. The amount of funds used to repurchase the shares on a single occasion shall be no less than 10% but no more than 20% of the audited net profits attributable to the Company's shareholders for the previous fiscal year;

B. The total repurchase funds used to stabilize the stock price for the same fiscal year shall not exceed 50% of the audited net profits attributable to the shareholders of the Company for the previous fiscal year.

If the above criteria are exceeded, the relevant measures to stabilize the stock price will no longer be implemented in the current year. However, the Company will continue to implement the Plan to Stabilize Stock Price in accordance with the above principles in the event that the stock price stabilization measures need to be started in the following year.

② Measures Taken by Controlling Shareholder to Stabilize Stock Price

When the daily closing price of the Company's shares is lower than the audited value of net asset per share for the previous fiscal year for 20 consecutive trading days after expiration of the implementation period of the Company's share repurchase plan, or when it is impossible to implement the stock price stabilization measures by way of the Company's share repurchase, the controlling shareholder of the Company shall initiate the plan to increase its shareholdings in the Company through competitive bidding in the secondary market:

A. Subject to the conditions and requirements set forth in the *Measures for the Administration of the Takeover of Listed Companies*, the *Rules Governing the Listing of Stocks on the STAR Market of Shanghai Stock Exchange* and other relevant laws, administrative regulations, departmental rules, normative documents and relevant stock exchange rules, the controlling shareholder of the Company shall increase its holdings of the Company's shares and shall undertake to vote in favor of the Company's stock price stabilization plan at the general meeting of shareholders with all the votes it has.

B. The controlling shareholder shall, within 10 trading days from the date of triggering the stock price stabilization measures, notify the Company in writing of the specific plan to increase its shareholdings in the Company, which shall be announced by the Company. The controlling shareholder shall initiate the implementation of the specific plan to stabilize the stock price within 5 trading days after the announcement of the plan.

C. Where the controlling shareholder of the Company increases its shareholdings in the Company for the purpose of stabilizing the stock price, the number and amount of the shares purchased shall meet the following conditions:

a. The accumulative amount of funds used by the controlling shareholder to increase its shareholdings in the Company within a period of 12 consecutive months shall be no less than 30% but no more than the total amount of after-tax cash dividend received by the controlling shareholder from the Company for the previous year; and

b. The accumulative number of shares purchased by the controlling shareholder within a period of 12 consecutive months shall not exceed 2% of the total shares in the Company. If the requirement in sub-paragraph b contradicts that in sub-paragraph a, the former shall prevail.

If the above criteria are exceeded, the relevant measures to stabilize the stock price will no longer be implemented in the current year. However, the controlling shareholder will continue to implement the Plan to Stabilize Stock Price in accordance with the above principles in the event that the stock price stabilization measures need to be started in the following year.

③ Measures Taken by Directors and Senior Executives to Stabilize Stock Price

When the Company starts the stock price stabilization measures and the daily closing price of the Company's shares is lower than the audited value of net asset per share for the previous fiscal year for 20 consecutive trading days after expiration of implementation period of the controlling shareholder's shareholding increase plan, or when it is impossible to implement the stock price stabilization measures by way of the controlling shareholder's shareholding increase, the directors and senior executives of the Company shall initiate the plan to increase their shareholdings in the Company through competitive bidding in the secondary market:

A. Subject to the conditions and requirements set forth in the *Measures for the Administration of the Takeover of Listed Companies*, the *Rules on the Management of Shares Held by the Directors, Supervisors and Senior Executives of Listed Companies and the Changes Thereof* and other relevant laws, administrative regulations, departmental rules, normative documents and relevant stock exchange rules, the directors and senior executives shall increase their shareholdings in the Company and undertake, in their capacity as directors (if any), to vote in favor of the Company's stock price stabilization plan at the meeting of the board of directors.

B. The above-mentioned directors and senior executives with the obligation to increase their shareholdings shall, within 10 trading days from the date of triggering the stock price stabilization measures, notify the Company in writing of the specific plan to increase their shareholdings in the Company, which shall be announced by the Company. Such directors and senior executives shall initiate the implementation of the specific plan to stabilize the stock price within 5 trading days after the announcement of the plan.

C. Where the above-mentioned directors and senior executives increase their shareholdings in the Company for the purpose of stabilizing the stock price, except for force majeure, the number and amount of the shares purchased shall meet the following conditions:

Within one fiscal year from the date upon the satisfaction of the starting conditions for the above stock price stabilization measures, the funds used by any of the directors and senior executives to increase its shareholdings in the Company shall be no less than 10% but no more than 30% of the sum of after-tax cash dividends (if any), salaries and allowances received by it from the Company for the previous year.

If the above criteria are exceeded, the relevant measures to stabilize the stock price will no longer be implemented in the current year. However, they will continue to implement the Plan to Stabilize Stock Price in accordance with the above principles in the event that the stock price stabilization measures need to be started in the following year.

D. During the term of the *Plan to Stabilize Stock Price*, newly appointed directors and senior executives who meet the above conditions shall abide by the provisions of the *Plan to Stabilize Stock Price* on the obligations and responsibilities of the directors and senior executives of the Company. The Company and its controlling shareholder, existing directors and senior executives shall procure that the newly appointed directors and senior executives will abide by the *Plan to Stabilize Stock Price* and enter into the relevant undertakings before they are nominated in writing.

④ Other Measures to Stabilize Stock Price

A. Subject to the laws, administrative regulations, departmental rules, normative documents and relevant stock exchange rules and on the premise that the capital meets the Company's operation demand, the Company may stabilize its stock price by making profit distribution or capitalizing capital reserve upon the deliberation and approval by the Board of Directors and the general meeting of shareholders;

B. Subject to laws, administrative regulations, departmental rules, normative documents and relevant stock exchange rules, the Company may improve its performance and stabilize its stock price by cutting expenses, restricting the salaries of senior executives, and suspending implementation of the equity incentive plan; and

C. Other stock price stabilization measures prescribed by the laws, administrative regulations, departmental rules and normative documents, as well as those approved by the CSRC and relevant stock exchange.

2. Restraint Measures

(1) Restraint Measures in Case of the Company's Failure to Fulfill Stock Price Stabilization Commitment

If the Company fails to fulfill its commitments to stabilize the stock price or fails to fulfill the said commitments as scheduled, it shall publicly explain the specific reasons at the general meeting of shareholders and the disclosure media designated by the CSRC. If such failure is not caused by force majeure and results in losses to the investors, the Company shall be liable to compensate the investors according to law, and shall bear the corresponding liabilities as provided by the laws, administrative regulations and as required by relevant regulatory authorities; if such failure is caused by force majeure, the Company shall work out the solution to minimize the losses of investors' interests, and submit it to the general meeting of shareholders for consideration so as to protect the interests of the investors as much as possible.

(2) Restraint Measures in Case of the Controlling Shareholder's Failure to Fulfill Stock Price Stabilization Undertakings

If the controlling shareholder fails to fulfill its commitments to stabilize the stock price or fails to fulfill the commitments as scheduled, the controlling shareholder shall publicly explain the specific reasons at the general meeting of shareholders and the disclosure media designated by the CSRC. If such failure is not caused by force majeure, the controlling shareholder shall agree not to receive the portion of the Company's distributed profits attributable to the controlling shareholder until the relevant commitments have been fulfilled, and agree to compensate the investors for the losses according to laws; if such failure is caused by force majeure, the controlling shareholder shall work out the solution to minimize the losses of investors' interests so as to protect their interests as much as possible.

(3) Restraint Measures in Case of the Directors' and Senior Executives' Failure to Fulfill Stock Price Stabilization Undertakings

If the foregoing directors and senior executives with the obligation to increase their shareholdings fail to fulfill their commitments to stabilize the stock price or fails to fulfill the commitments as scheduled, they shall publicly explain the specific reasons at the general meeting of shareholders and the disclosure media designated by the CSRC. If such failure is not caused by force majeure, the salaries and/or allowances of directors and senior executives shall be reduced or suspended, and if losses are caused to the investors, they shall compensate the investors according to laws; if such failure is caused by force majeure, they shall work out the solution to minimize the losses of investors' interests so as to protect their interests as much as possible.

(IV) Commitments on Repurchase of Shares in Case of Fraudulent Offering and Listing

The Company, its controlling shareholder and the de facto controller make the following commitments:

1. There is no fraud in the IPO of the Company.

2. If the Company is ineligible for the IPO but manages to obtain issuance registration and complete the IPO by fraud, the Company and its controlling shareholder/de facto controller will, within 5 working days from date when a determination (if a litigation is involved, the final judgment of the competent judicial authority shall prevail) of fraudulent offering and listing is made by the CSRC and other competent authorities and such determination comes into force, start the stock repurchase procedure to buy back all the new shares issued by the Company in the IPO, with the specific repurchase liabilities that should be assumed to be determined by the CSRC and other competent authorities.

(V) Measures and Commitments on Compensation of Diluted Immediate Returns

1. Commitments from the Company

The Company undertakes to take various measures to prevent the risk of dilution of immediate returns, specifically:

(1) Rapidly enhancing the Company's overall strength, and expanding the Company's business scale

Upon this IPO, the Company's total assets will be further increased, and its anti-risk ability, comprehensive strength as well as market value will be significantly improved. By making use of the capital market and good development opportunities, the Company will continue to expand the main business scale, and give full play to its advantages in the field of semiconductor equipment for its sustainable, healthy and stable development.

(2) Strengthening internal management and reducing operating cost

The Company will actively promote the optimization of product process, improvement of technical process, and transformation and upgrading of technical equipment, and strengthen fine management to continuously improve its production and operation efficiency, and reduce its production losses. At the same time, the Company will strengthen budget management and control its expense ratio to improve its profitability.

(3) Speeding up implementation of the fund-raising investment projects and improving the management of funds raised

The funds raised herein will be used for investments focusing on the Company's main business, which is conducive to the improvement of the Company's comprehensive competitiveness and profitability. After the funds are successfully raised, the Company will accelerate implementation of the relevant investment projects to obtain the expected return as soon as possible. Meanwhile, the Company will, according to the requirements in the *Articles of Association of ACM Research (Shanghai) Inc. (Draft)*, the *Rules for Management of Funds Raised by ACM Research (Shanghai) Inc.* and other relevant regulations, strengthen the management of funds raised and regulate the use thereof to ensure that the funds are used as intended for earnings.

(4) Improving profit distribution policies and increasing returns to investors

In order to define the dividend return to the Company's shareholders based on equities, the Company has, in the light of its factual situation, further refined the provisions on the dividend distribution principles in the *Articles of Association of ACM Research (Shanghai) Inc. (Draft)*, and established the *Plan for Dividend Return in the Three Years Following Listing of ACM Research (Shanghai), Inc.* in accordance with the requirements of relevant regulations, including, among others, the *Notice of the CSRC on the Implementation of Related Matters Concerning Cash Dividends by Listed Companies*, and the *Guidelines No. 3 on the Supervision and Administration of Listed Companies - Distribution of Cash Dividends of Listed Companies*. The Company will implement the profit distribution policy in a strict manner, actively make profit distributions to the shareholders if the conditions for distribution are satisfied, and optimize the investment return mechanism.

2. Commitments from AMCR Acting as the Controlling Shareholder of the Company

As the controlling shareholder of the Issuer, we hereby make the following commitments with respect to the compensation for diluted immediate returns, in accordance with relevant laws, regulations and the relevant provisions of the CSRC:

We will urge the Issuer to effectively fulfill the measures to compensate the diluted immediate returns, and undertake that: we or the directors nominated by us shall participate in the operation and management activities of the Issuer within the authority and shall make every effort to safeguard the legitimate interests of the Issuer and its shareholders.

3. Commitments from the Company's Directors and Seniors Executives

I, as the director/senior executive of the Issuer, hereby make the following commitments on the compensation for diluted immediate returns in accordance with the relevant laws, administrative regulations and the relevant provisions of the CSRC:

(1) I will not transfer benefits to any other units or individuals for free or on the unfair conditions, nor harm the Issuer's interests in any other forms.

(2) I will restrict my behavior of duty-related consumption.

(3) I will not use the assets of the Issuer to engage in investment and consumption activities unrelated to my duties.

(4) I will do my best to procure that the compensation system prepared by the Company's board of directors or remuneration and appraisal committee is related to the implementation of measures for compensation for diluted immediate returns by the Company.

(5) If the Issuer intends to implement the equity incentives, I will do my best to the extent of my own duties and authorities to procure that the conditions for exercise of equity incentives to be published by the Issuer are related to the implementation of measures for compensation for diluted immediate returns by the Issuer.

(6) I will effectively fulfill my commitments on measures for compensation for diluted immediate returns. If I violate the commitment, causing losses to the Issuer or investors, I am willing to be liable for compensation according to laws.

(VI) Commitments on Profit Distribution Policy

Please refer to Article II. (I) Dividend Distribution Policy After the Offering hereof for details.

(VII) Commitments on Making or Bearing Liability for Compensation

1. Commitments from the Company

(1) There are no misrepresentations, misleading statements or major omissions in the [***] and other information disclosure materials concerning the Company's IPO, and the Company will be severally and jointly liable for the authenticity, accuracy and completeness thereof.

(2) If there are misrepresentations, misleading statements or major omissions in the [***] and other information disclosure materials, thus causing investors to suffer losses in the issuance and trading of securities, the Company will compensate investors for such losses according to law after the China Securities Regulatory Commission (the "CSRC"), Shanghai Stock Exchange or any other competent authority makes final determination thereon.

(3) if there is any misrepresentation, misleading statement or material omission in the [***] as determined by China Securities Regulatory Commission (the "CSRC"), Shanghai Stock Exchange or other competent authorities, which has a significant and substantive impact on the judgment as to whether the Issuer has met the issuance conditions prescribed by law, the Company promises to legally repurchase all its new shares of initial public offering subject to the following methods:

①To the extent permitted by laws, if the said circumstance occurs during the period after the Company completes the initial public offering of new shares but before such shares are listed, the Company will, within 30 days from the date when the CSRC, Shanghai Stock Exchange or any other competent authority determines that the Company is under the said circumstance, repurchase all its new shares of initial public offering from online lot winning investors and offline investors at the issue price plus the interest calculated on the price using the bank deposit interest rate for the corresponding period;

②To the extent permitted by laws, if the said circumstance occurs after the Company completes the listing of new shares of initial public offering, the Company will, within 5 days from the date when CSRC, Shanghai Stock Exchange or any other competent authority determines that the Company is under the said circumstance, prepare the share repurchase plan and submit it to the board of directors and the general meeting of shareholders for deliberation and approval and thereafter, repurchase all its new shares of initial public offering through the trading system of Shanghai Stock Exchange at the repurchase price to be based on the issue price and determined with reference to relevant market factors. If the Company has paid dividends, given bonus shares, capitalized capital reserve or had other ex-right and ex-dividend matters after the IPO, the said issue price will be adjusted accordingly.

(4) If the Company fails to timely make repurchase or compensate the investors for losses in violation of its commitments, it will publicly explain the specific reasons for nonfulfillment at the general meeting of shareholders and the disclosure media designated by the CSRC; if the shareholders and public investors suffer losses due to its nonfulfillment of commitments, the Company will compensate them for such losses according to laws.

2. Commitments from ACMR Acting as the Controlling Shareholder of the Company

(1) There are no misrepresentations, misleading statements or major omissions in the [***] and other information disclosure materials provided by the Issuer in connection with the IPO, and we will be severally and jointly liable for the authenticity, accuracy and completeness thereof.

(2) We undertake that, if there is any misrepresentation, misleading statement or material omission in the [***] as determined by China Securities Regulatory Commission (the "CSRC"), Shanghai Stock Exchange or other competent authorities, which has a significant and substantive impact on the judgment as to whether the Issuer has met the issuance conditions prescribed by law, we will repurchase all the original restricted shares that have been transferred (if any) in accordance with the *Company Law of the People's Republic of China* and the *Securities Law of the People's Republic of China*.

(3) If any misrepresentation, misleading statement or material omission is contained in the Issuer's [***] or other information disclosures, thus causing investors to suffer losses in the issuance and trading of securities, we will compensate for the losses suffered by the investors according to law.

3. Commitments from HUI WANG Acting as the De Facto Controller of the Company

(1) There are no misrepresentations, misleading statements or major omissions in the [***] and other information disclosures provided by the Issuer in connection with the IPO, and I will be severally and jointly liable for the authenticity, accuracy and completeness thereof.

(2) If there is any misrepresentation, misleading statement or material omission in the [***] as determined by China Securities Regulatory Commission (the "CSRC"), Shanghai Stock Exchange or other competent authorities, which has a significant and substantive impact on the judgment as to whether the Issuer has met the issuance conditions prescribed by law, I will repurchase all the original restricted shares that have been transferred (if any) in accordance with the *Company Law of the People's Republic of China* and the *Securities Law of the People's Republic of China*.

(3) If there are misrepresentations, misleading statements or major omissions in the [***] and other information disclosures of the Issuer, thus causing investors to suffer losses in the issuance and trading of securities, I will compensate the investors for such losses according to laws.

4. Commitments from Each of Company's Directors, Supervisors and Senior Executives

(1) There are no misrepresentations, misleading statements or major omissions in the [***] and other information disclosures provided by the Issuer in connection with the IPO, and I will be severally and jointly liable for the authenticity, accuracy and completeness thereof.

(2) If there is any misrepresentation, misleading statement or major omission in the [***] and other information disclosures of the Issuer, thus causing investors to suffer losses in the issuance and trading of securities, I will compensate the investors for such losses according to laws.

(3) I am willing to bear all legal liabilities arising from breach of the above commitment, which will remain unchanged regardless of my position change or resignation.

5. Commitments from [*] Acting as the Company's Sponsor and Lead Underwriter**

"We undertakes that, if there is any misrepresentation, misleading statement or major omission in the documents made or issued by us concerning the Issuer's IPO, thus causing losses to investors, we will compensate the investors for such losses according to laws."

6. Commitments from King & Wood Mallesons Acting as the Company's Lawyer

"We solemnly undertake that:

If there is any misrepresentation, misleading statement or major omission in the documents made or issued by us concerning the IPO of ACMSH, thus causing losses to investors, we will compensate the investors for the losses resulting therefrom according to laws after the same are determined by effective judgments of judicial authorities.

The qualifications of investors entitled to compensation, the standards for calculating losses, the division of liabilities among indemnitors and the exemption from liability, etc. shall be determined in accordance with the provisions of the *Securities Law, Some Provisions of the Supreme People's Court on Trying Cases of Civil Compensation Arising from False Statement in Securities Market* (Interpretation No. 2 [2003] of the Supreme People's Court) and other relevant laws and regulations, as amended from time to time.

We will strictly bear such compensation liability as determined by the effective judicial documents and accept social supervision to ensure that the legitimate rights and interests of investors are effectively protected."

7. Commitments from BDO China SHU LUN PAN Certified Public Accountants LLP Acting as the Company's Audit Agency

"If it is established that there is any misrepresentation, misleading statement or major omission in the documents made and issued by us for the Issuer's IPO and listing, thus resulting in losses to investors, we will compensate the investors for the losses suffered by the investors as per the conclusive decisions or effective judgments of the CSRC, the people's courts or other competent authorities."

8. Commitments from China United Assets Appraisal Group Co., Ltd. Acting as the Company's Asset Appraisal Agency

"Our company and the handlers undertake that: the conclusions of the asset appraisal report issued for reference in the application documents for ACMSH's IPO and listing on the STAR Market are authentic, accurate and complete without misrepresentation, misleading statement or major omission. We will assume corresponding legal liability as to the authenticity, accuracy and completeness thereof."

(VIII) Commitments on Restraint Measures for Non-fulfillment

1. Commitments from the Company

(1) The Company will strictly fulfill all the obligations and responsibilities under all public commitments disclosed in the IPO [***] of the Company.

(2) If the Company fails to fulfill its public commitments due to reasons other than force majeure, it shall make new commitments (which shall be subject to the relevant approval procedures in accordance with laws, regulations and Articles of Association of the Company) and accept the following restrain measures, until the new commitments are fulfilled or the corresponding remedial measures are completed:

①The Company will publicly explain the specific reasons for non-fulfillment of its commitments at the general meeting of shareholders and the disclosure media designated by the China Securities Regulatory Commission (the "CSRC");

② The Company will reduce or suspend paying remunerations and/or allowances of any director, supervisor, senior executive and key technician who shall be personally liable for the said non-fulfillment;

③The Company will make supplementary or substituted commitments to the investors to protect their rights and interests as much as possible and agree to submit the said supplementary or substituted commitments to the general meeting of shareholders for deliberation;

④ If the investors suffer losses due to the non-fulfillment of the relevant commitments, the Company will compensate investors for such losses according to laws. If it is available to continue the fulfillment of the said commitments violated, the Company will continue to fulfill.

(3) If the Company fails to fulfill the public commitments due to force majeure, it will make new commitments (which shall be subject to the relevant approval procedures in accordance with laws, regulations and Articles of Association of the Company) and accept the following restrain measures, until the new commitments are fulfilled or the corresponding remedial measures are completed:

①The Company will publicly explain the specific reasons for non-fulfillment at the general meeting of shareholders and the disclosure media designated by the CSRC;

② The Company will work out the solution as soon possible to minimize the loss of investors' interests and protect investors' interests to the fullest possible extent.

2. Commitments from the Company's Controlling Shareholder and De Facto Controller

(1) We/I will strictly fulfill all the obligations and responsibilities in all public commitments disclosed in the IPO [***] of the Issuer.

(2) If we/I fail to fully or effectively fulfill our public commitments due to reasons other than force majeure, we/I will undertake to take the following restraint measures as appropriate:

① We/I will publicly explain the specific reasons for non-fulfillment of our commitments at the general meeting of shareholders and the disclosure media designated by the China Securities Regulatory Commission (the "CSRC");

② If the investors suffer losses in securities trading due to the non-fulfillment of our/my public commitments, we/I will compensate for such losses according to laws;

③ We/I will not receive the dividends or bonus shares distributed by the Issuer until we/I completely eliminate all adverse effects caused by our/my non-fulfillment of the relevant commitments;

④ If we/I receive financial gains due to our/my non-fulfillment/fulfill of the public commitments, such gains shall belong to the Issuer, and we/I will pay such gains to the account designated by the Issuer within five working days from the date of receipt of such gains.

(3) If we/I fail to fulfill the public commitments due to force majeure, we shall make new commitments (which shall be subject to the relevant approval procedures in accordance with laws, regulations and Articles of Association of the Issuer) and accept the following restraint measures, until the new commitments are fulfilled or the corresponding remedial measures are completed:

① We/I will publicly explain the specific reasons for non-fulfillment at the general meeting of shareholders and the disclosure media designated by the CSRC;

② We/I will work out the solution to minimize the loss of investors' interests to protect investors' interests to the fullest possible extent.

3. Commitments from Each of the Company's Directors, Supervisors, Senior Executives and Key Technicians

(1) I will strictly fulfill all the obligations and responsibilities under all public commitments disclosed in the IPO [***] of the Issuer.

(2) If I fail to fully or effectively fulfill my public commitments due to reasons other than force majeure, I will undertake to take the following restraint measures as appropriate:

① I will publicly explain the specific reasons for non-fulfillment of my commitments at the general meeting of shareholders and the disclosure media designated by the China Securities Regulatory Commission (the "CSRC");

② If the investors suffer losses in the securities trading due to my non-fulfillment of public commitments, I will voluntarily compensate the investors for such losses in advance according to laws using all my remunerations and/or allowances (if any) received from the Issuer for the year when the Issuer gets listed, and I will not request the Issuer to increase salaries or allowances for me in any form until I completely eliminate all adverse effects caused by my non-fulfillment of relevant commitments;

③ I will not receive the dividends or bonus shares distributed by the Issuer (if applicable) until I completely eliminate all adverse effects caused by my non-fulfillment of relevant commitments;

④ If I receive financial gains due to my non-fulfillment of public commitments, such gains shall belong to the Issuer, and I will pay such gains to the account designated by the Issuer within five working days from the date of receipt of such gains.

(3) If I fail to fulfill the public commitments due to force majeure, I will make new commitments (which shall be subject to the relevant approval procedures in accordance with laws, regulations and Articles of Association of the Company) and accept the following restrain measures, until the new commitments are fulfilled or the corresponding remedial measures are completed:

④ I will publicly explain the specific reasons for non-fulfillment and apologize to shareholders and public investors at the general meeting of shareholders and the disclosure media designated by the CSRC;

② I will work out the solution as soon as possible to minimize the loss of investors' interests and protect investors' interests to the fullest possible extent.

(IX) Other Commitments

1. Commitments on Avoidance of Horizontal Competition

Please refer to VIII(II) Commitments on Avoidance of Horizontal Competition, Section VII Corporate Governance and Independence hereof for details.

2. Commitments on Regulating and Reducing Related Transactions

Please refer to X(VI) Commitments on Regulating Related Transactions, Section VII Corporate Governance and Independence hereof for details.

Section XI Other Important Matters

I. Material Contracts

Based on its own business characteristics and financial condition, the Company has established the criteria whereby a contract is defined as a material one if it has a price of over RMB 10,000,000 (continuous contracts with the same counter-party in a same fiscal year of the same substance or nature shall be counted as a whole on an accumulative basis), that is, by multiplying the Company's three-year average operating revenue in 2017, 2018 and 2019 by 2% with the product rounded down.

(I) Purchase Contracts

The Company mainly makes purchases using orders on a deal-by-deal basis, a single order having a small price while the number of orders being large. Though the Company has entered into frame contracts with partial customers, the formal transactions are still contracted in the form of order. The completed and ongoing material purchase frame contracts of the Company are as follows:

S/N	Name of Supplier	Purchased Product	Contract Term	Degree of Performance
1	NINEBELL	Material transforming products	Non-fixed term from 2017/1/1	Ongoing
2	DOUBLE MERITS HOLDINGS LIMITED	Gas circuit and special equipment products, etc.	Non-fixed term from 2019/1/1	Ongoing
3	Nomura Micro Science Co., Ltd.	Special equipment products	Non-fixed term from 2017/1/1	Ongoing
4	SAS Technology Limited	Gas circuit products	Non-fixed term from 2017/1/1	Ongoing
5	ACMR	Electrical, machinery, gas circuit, drive, special equipment, materials transforming and other products	Non-fixed term from 2017/1/1	Completed
6	Tokyo Keiso (Beijing) Instrument Co., Ltd.	Gas circuit products, etc.	Non-fixed term from 2017/1/1	Ongoing
7	Fujikin of China Incorporated	Gas circuit and special equipment products, etc.	From 2016/1/1 to 2017/12/31	Completed
			Non-fixed term from 2018/1/1	Ongoing
8	Shanghai Molan Electromechanical Equipment Co., Ltd.	Electrical products, etc.	From 2016/1/1 to 2017/12/31	Completed
			Non-fixed term from 2018/1/1	Ongoing
9	Goodwill Precision Machinery (Suzhou) Co., Ltd.	Machinery and gas circuit products, etc.	From 2016/1/1 to 2017/12/31	Completed
			Non-fixed term from 2018/1/1	Ongoing
10	Wuxi Paisi Technology Co., Ltd.	Machinery products, etc.	From 2016/1/1 to 2017/12/31	Completed
			Non-fixed term from 2018/1/1	Ongoing

Note: The Company has terminated the purchase framework agreement with ACMR after it established a subsidiary ACM CA to replace ACMR to purchase raw materials as an agent in the U. S..

(II) Sales Contracts

Material sales contracts or orders completed by the Company during the Reporting Period are as follows:

Unit: USD'0,000

S/N	Seller	Final Customer	Subject Matter of Contract	Contract Price	Specified Delivery Date
1	Issuer	Hynix	Cleaning equipment	365.00	2018/8/4
2	Issuer	Sk Hynix Semiconductor (China) Ltd.	Cleaning equipment	4,176.23	Subject to the contract/order
3	CleanChip HK	Fujian Jinhua Integrated Circuit Co., Ltd.	Cleaning equipment	350.00	2018/9/15
4	CleanChip HK	Huahong Semiconductor (Wuxi) Co., Ltd.	Cleaning equipment	1,372.00	Last consignment 2019/7/1
5	Charter Base International, CleanChip HK	Jiangyin Changdian Advanced Packaging Co., Ltd.	Advanced packaging wet process equipment, electroplating equipment	1,320.50	Subject to the contract/order
6	CleanChip HK	Jinruihong Technology (Quzhou) Co., Ltd.	Cleaning equipment	315.00	Subject to the contract/order
7	CleanChip HK	Shanghai Huahong Grace Semiconductor Manufacturing Corporation	Cleaning equipment	185.00	2019/6/25
8	Charter Base International, CleanChip HK	Shanghai Huali Integrated Circuit Corporation	Cleaning equipment	3,727.90	Subject to the contract/order
9	Charter Base International	Shanghai Huali Microelectronics Corporation	Cleaning equipment	300.00	2017/6/30
10	Charter Base International, Issuer	Shanghai IC R&D Center Co., Ltd.	Cleaning equipment	520.00	Subject to the contract/order
11	Issuer	PSI	Cleaning equipment	326.90	2019/1/10
12	ACMR	Wuhan Xinxin Semiconductor Manufacturing Co., Ltd.	Cleaning equipment	278.00	2017/2/6
13	ACMR, CleanChip HK	Yangtze Memory	Cleaning equipment	6,428.00	Subject to the contract/order
14	Charter Base International	JRH	Cleaning equipment	310.00	Subject to the contract/order
15	Charter Base International	Semiconductor Manufacturing North China (Beijing) Corporation	Cleaning equipment	313.00	2017/9/28
16	Charter Base International	Semiconductor Manufacturing International (Shanghai) Corporation	Cleaning equipment	79.60	2017/3/30
17	CleanChip HK	Ningbo Semiconductor International Corporation	Cleaning equipment	220.00	4.5 months after receipt of the order
18	CleanChip HK	SMIC Southern Integrated Circuit Manufacturing Co., Ltd.	Cleaning equipment	280.00	2019/3/25
19	CleanChip HK	SJsemi	Advanced packaging wet process equipment, electroplating equipment	94.70	2018/7/30

Note: the set of semiconductor cleaning equipment in No. 12 was sold by the Issuer to ACMR, which was then sold by ACMR to Wuhan Xinxin Semiconductor Manufacturing Co., Ltd.. The 3 sets of semiconductor cleaning equipment in No. 13 were sold by the Issuer to ACMR, and then sold by ACMR to Yangtze Memory.

From January 1, 2020 to the execution date hereof, the completed and ongoing material sales contracts or orders of the Company are as follows:

Unit: USD10,000

S/N	Seller	Name of Customer	Subject	Contract	Specified
-----	--------	------------------	---------	----------	-----------

			Matter of Contract	Price	Delivery Date
1	CleanChip HK	SJsemi	Advanced packaging wet process equipment	230.00	Last consignment 2018/9/20
2	CleanChip HK	SMIC Southern Integrated Circuit Manufacturing Co., Ltd.	Cleaning equipment	628.00	Subject to the contract/order
3	Charter Base International	Semiconductor Manufacturing International (Shanghai) Corporation	Cleaning equipment	320.00	2017/6/30
4	CleanChip HK	Semiconductor Manufacturing North China (Beijing) Corporation	Cleaning equipment	822.00	Subject to the contract/order
5	CleanChip HK	Yangtze Memory	Cleaning equipment	1,938.00	Subject to the contract/order
6	CleanChip HK	Zing Semiconductor Corporation	Cleaning equipment	185.00	2020/2/15
7	Issuer	Wafer Works Epitaxial Corporation	Cleaning equipment	150.00	2019/11/1
8	CleanChip HK	Zhengzhou Konggang Hejing Technology Co., Ltd.	Cleaning equipment	202.00	2020/5/30
9	CleanChip HK	Shanghai Huali Microelectronics Corporation	Cleaning equipment	450.80	2019/8/20
10	Issuer, CleanChip HK	Shanghai Huali Integrated Circuit Corporation	Cleaning equipment	1,250.26	Subject to the contract/order
11	CleanChip HK	Xiamen Tongfu Microelectronics Co., Ltd.	Advanced packaging wet process equipment	290.00	Subject to the contract/order
12	CleanChip HK	Innotron Memory Co., Ltd.	Cleaning equipment	394.30	2019/6/25
13	Issuer, CleanChip HK	Jiangyin Changdian Advanced Packaging Co., Ltd.	Advanced packaging wet process equipment	778.00	Subject to the contract/order
14	CleanChip HK	Jiangsu CAS Microelectronics Integration Technology Co., Ltd.	Advanced packaging wet process equipment	171.00	Subject to the contract/order
15	CleanChip HK	Huahong Semiconductor (Wuxi) Co., Ltd.	Cleaning equipment	1,736.00	Subject to the contract/order
16	Issuer	Nepes	Advanced packaging wet process equipment	282.40	Subject to the contract/order

(III) Loan Contracts, Credit Contracts and Guarantee Contracts

As of the execution date hereof, the ongoing material loan contracts of the Company are as follows:

S/N	Lender	Borrower	Contract Name	Contract Amount	Term
1	China Everbright Bank Shanghai Branch	Issuer	Liquidity Loan Contract (No.: 3675022020002)	RMB19,000,000	2020/2/19 to 2020/8/24
2	China Everbright Bank Shanghai Branch	Issuer	Liquidity Loan Contract (No.: 3675022020005)	RMB30,000,000	2020/4/2 to 2021/4/1
3	China Everbright Bank Shanghai Branch	Issuer	Liquidity Loan Contract (No.: 3675022020006)	USD820,000	2020/4/30 to 2021/4/29

4	Bank of Communications Shanghai New Area Sub-branch	Issuer	Liquidity Loan Contract (No.: Z2004LN15653621)	RMB10,000,000	2020/4/20 to 2021/10/8
5	Bank of Shanghai Pudong Branch	Issuer	Liquidity Revolving Loan Contract (No.: 20120025801)	RMB70,000,000	2020/4/24 to 2022/3/19
6	Bank of Shanghai Pudong Branch	Issuer	Foreign Exchange Liquidity Revolving Loan Contract (No.: 20120025802)	USD9,500,000	2020/4/24 to 2022/3/19

As of the execution date hereof, the ongoing material credit contracts of the Company are as follows:

S/N	Credit Grantor	Credit Receiver	Contract Name	Maximum Credit Line	Term
1	China Everbright Bank Shanghai Branch	Issuer	Comprehensive Credit Agreement (No.: 3675012020003)	RMB80 million	2020/4/2 to 2021/4/1
2	Bank of Shanghai Pudong Branch	Issuer	Comprehensive Credit Agreement (No.: 201200258)	RMB70 million	2020/4/24 to 2022/3/19

As of the execution date hereof, the ongoing material guarantee contracts of the Company are as follows:

S/N	Lender	Guarantor	Contract	Guarantee Amount	Term
1	Bank of China Shanghai Pudong Development Zone Sub-branch	HUI WANG	Maximum Amount Guarantee Contract (No.: PKF2018ZGBZ No. 17146801)	Maximum principal balance of claims secured: RMB 30 million	2018/3/1 to 2021/3/1
2	China Everbright Bank Shanghai Branch	HUI WANG	Maximum Amount Guarantee Contract (No.: 3675012020003-1)	Maximum principal balance of claims secured: RMB 80 million	Two years after the expiration of the maturity of facility as stipulated in the specific credit contract or agreement
3	Bank of Shanghai Pudong Branch	CleanChip HK	Maximum Amount Guarantee Contract (No.: ZDB20120025801)	RMB77 million	2020/4/24 to 2022/3/19
4	Bank of Shanghai Pudong Branch	HUI WANG	Maximum Amount Guarantee Contract (No.: ZDB20120025802)	RMB77 million	2020/4/24 to 2022/3/19

(IV) License Contracts

On January 31, 2007, a Technology License Agreement was entered into by and between ACMR and ACMSH (before restructuring), whereby it is agreed that ACMR shall grant ACMSH (before restructuring) a world-wide exclusive license for the intellectual property rights owned or controlled by ACMR. For details of such agreement, please refer to V.(IV) Sharing of Key Resources with Other Parties, Section VI Business and Technology hereof.

(V) Land Grant Contract

As of the execution date hereof, the ongoing material land grant contract is as follows:

S/N	Grantor	Grantee	Contract No.	Location	Area	Grant Fee
1	China (Shanghai) Pilot Free Trade	Shengwei Shanghai	HZMLG (2020) Land Grant Contract No.1	Lot C02-05c of Lingang Heavy	42,786.30 square	RMB61.68 million

	Zone Lingang Area Development Administration			Equipment Base	meters	
--	--	--	--	----------------	--------	--

(VI) Other Contracts

In May 2019, the Company entered into a Sponsor Agreement with [***], under which [***] is engaged as the Sponsor for the Company’s initial public offering and listing on the STAR Market.

II. External Guarantee

As of the execution date of this [***], there has been no external guarantee involved by the Company and its subsidiaries.

III. Litigation and Arbitration

(I) Material Litigation or Arbitration Involved by the Company

As of the execution date of this [***], there has been no pending litigation or arbitration involved by the Company that may have great effect on the Company’s financial condition, operating results, reputation, business activities, and future prospects, among others.

(II) Litigation and Arbitration to Which Any Major Shareholder, De Facto Controller, Holding Subsidiaries, Director, Supervisor, Senior Executive and Key Technician is a Party

As of the execution date of this [***], no major shareholder, de facto controller, holding subsidiaries, director, supervisor, senior executive or key technician of the Company has been involved as a party to any criminal litigation, material litigation or arbitration that may have an adverse effect on the Company.

(III) Administrative Penalties and Recorded Investigations by Judicial Authorities and the CSRC against the Directors, Supervisors, Senior Executives and Key Technicians

As of the execution date of this [***], no director, supervisor, senior executive or key technician has been subject to any administrative penalty, judicial investigation or CSRC investigation on record in the last 3 years.

(IV) Serious Illegal Activities of the Controlling Shareholder and De Facto Controller

During the Reporting Period, no serious illegal activities were engaged in by the Company’s controlling shareholder and de facto controller.

Section XII Statements

I. Statement by All Directors, Supervisors and Senior Executives of the Issuer

All directors, supervisors and senior executives of the Company undertake that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear joint and several legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by All Directors:

_____ HUI WANG	_____ HAIPING DUN
_____ STEPHEN SUN-HAI CHIAO	_____ QIANLI LUO
_____ JIANG LI	_____ CHEN HUANG
_____ DI ZHANG	_____ MINGXIU PENG
_____ ZHANBING REN	

ACM Research (Shanghai),
Inc.

Date:

All directors, supervisors and senior executives of the Company undertake that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear joint and several legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by All Supervisors:

_____ TRACY DONG LIU	_____ QIAN DONG
_____ QIAN LI	

Signed by All Senior Executives:

_____ JIAN WANG	_____ FUPING CHEN
_____ SOTHEARA CHEAV	_____ LISA YI LU FENG
_____ MINGZHU LUO	

ACM Research (Shanghai),
Inc.

Date:

II. Statement by the Issuer’s Controlling Shareholder

We undertake that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear joint and several legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by the Authorized Representative:

HUI WANG

ACM RESEARCH, INC.

Date:

III. Statement by the Issuer’s De Facto Controller

I undertake that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear joint and several legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by the De Facto Controller:

HUI WANG

ACM Research (Shanghai), Inc.

Date:

IV. Statement (I) by the Sponsor (Lead Underwriter)

Having checked this [***], we confirm that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear corresponding legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by the Project Co-organizer:

Signed by the Sponsor Deputy:

Signed by the Sponsor’s General Manager:

Signed by the Sponsor’s President and Legal Representative:

Date:

IV. Statement (II) by the Sponsor (Lead Underwriter)

Having taken perusal of the full content of this [***]of ACM Research (Shanghai), Inc., we confirm that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear corresponding legal liabilities for the authenticity, accuracy and completeness hereof.

Signed by the Sponsor’s General Manager:

Signed by the Sponsor’s President:

Date:

V. Statement by the Co-lead Underwriter

Having checked this [***], we confirm that there are no misrepresentations, misleading statements or major omissions in this [***], and shall bear corresponding legal liabilities for the authenticity, accuracy and completeness hereof.

Legal Representative:

[***]

[***]

Date:

VI. Statement by the Issuer’s Lawyer

We and our handling lawyers have reviewed this [***] of Initial Public Offering and Listing of Shares on the STAR Market by ACM Research (Shanghai), Inc., and confirm that it is consistent with the legal opinion and the lawyer’s work report issued by us. We and our handling lawyers have no objection to the content of the legal opinion and the lawyer’s work report referenced by the Issuer in this [***], confirm that none of the said content may result in any misrepresentation, misleading statement or major omission herein, and shall bear corresponding legal liabilities for the authenticity, accuracy and completeness of such content so referenced.

Person in Charge:

LING WANG

Handling Lawyers:

HUI XU

FUAN CHEN

ANRONG WANG

King & Wood Mallesons

Date: [], 2020

VII. Statement by the Audit Institution

We and our certified public accountants undersigned have reviewed this [***], and confirm that it is consistent with the audit report and the internal control verification report issued by us as well as the non-recurring income statement verified by us. We and our certified public accountants undersigned have no objection to the content of the audit report and the internal control verification report issued by us as well as the non-recurring income statement verified by us that are referenced by the Issuer herein, confirm that none of the said content may result in any misrepresentation, misleading statement or major omission herein, and shall bear corresponding legal liabilities for the authenticity, accuracy, completeness and timeliness thereof.

Signed by the Executive Partner:

ZHIGUO YANG

Signed by the Certified Public Accountants:

YI TANG

JING ZHAO

BDO CHINA SHU LUN PAN Certified Public Accountants LLP

May [], 2020

VIII. Statement by the Asset Appraisal Agency

Having reviewed the [***]of Initial Public Offering and Listing of Shares on the STAR Market by ACM Research (Shanghai), Inc. (for Application) (the “[***]”), we and the certified public valuers undersigned confirm that its content is in line with the conclusions of the *Appraisal Report on the Total Equity Value Involved in the Restructuring of ACM Research (Shanghai), Inc. into a Joint-stock Company* (ZLPBZ [2019] No.1812) and the *Appraisal Report on the Total Stockholders’ Equity Involved in the Proposed Acquisition of CLEANCHIP TECHNOLOGIES LIMITED by ACM Research (Shanghai), Inc.* (ZLPBZ [2019] No.1879). issued by us. We and the certified public valuers undersigned have no objection to the conclusions of the *Appraisal Report on the Total Equity Value Involved in the Restructuring of ACM Research (Shanghai), Inc. into a Joint-stock Company* (ZLPBZ [2019] No.1812) and the *Appraisal Report on the Total Stockholders’ Equity Involved in the Proposed Acquisition of CLEANCHIP TECHNOLOGIES LIMITED by ACM Research (Shanghai), Inc.* (ZLPBZ [2019] No.1879). issued by us that are completely and correctly referenced in the [***] and its abstract, confirm that no reference to the asset appraisal conclusions issued by us may result in any misrepresentation, misleading statement or major omission in the [***] and its abstract, and shall bear corresponding legal liabilities for the authenticity, accuracy and completeness thereof.

Signed by the Certified Public Valuers:

WEI LIU

QIQUAN GE

Signed by the Legal Representative or Authorized Representative:

ZHI HU
China United Assets Appraisal Group Co., Ltd.

Date:

IX. Statement by the Capital Verification Institution

Having reviewed this [***], we and the certified public accountants undersigned confirm that it is consistent with the capital verification report issued by us. We and the certified public accountants undersigned have no objection to the content of the capital verification report issued by us referenced by the Issuer herein, confirm that none of the said content may result in any misrepresentation, misleading statement or major omission herein, and shall bear the corresponding legal liabilities for the accuracy, accuracy, completeness and timeliness thereof.

Signed by the Executive Partner:

ZHIGUO YANG

Signed by the Certified Public Accountants:

YI TANG

BAOYAN YIN

BDO CHINA SHU LUN PAN Certified Public Accountants LLP

May [], 2020

Section XIII Attachments

I. Documents for Future Reference

All the official documents relating to the Offering listed below are accessible to investors:

- (1) Letter of sponsorship for offering;
- (2) Letter of sponsorship for listing;
- (3) Legal opinions;
- (4) Financial reports and audit reports;
- (5) Articles of Association (Draft);
- (6) Letters of commitments made by the Issuer and other responsible parties in connection with the Offering and listing;
- (7) Relevant financial statements and review reports (if any) between the base date of the Issuer's audit report and the execution date of this [***];
- (8) Profit forecast report and audit report (if any);
- (9) Internal control verification report;
- (10) Non-recurring income statement verified by certified public accountants;
- (11) Documents from CSRC approving the Issuer's registration for the Offering;
- (12) Other important documents relating to the Offering.

II. Access to Documents for Future Reference

(I) Time for Access

9:00 to 11:30 a.m., and 13:30 to 17:00 p.m., on weekdays.

(II) Place for Access and Contact Information

1. Issuer: ACM Research (Shanghai), Inc.

Business Address: Building 4, No.1690 Cailun Road, China (Shanghai) Pilot Free Trade Zone

Tel: 021-50808868; Contact: MINGZHU LUO

2. Sponsor (Lead Underwriter): ***

Business Address: ***

Tel: ***; Contact: ***

Schedule I: Important Patents

1. Major Patents Owned in Mainland China by the Issuer and its Holding Subsidiaries

S/N	Patentee	Patent Name	Patent Type	Patent No.	Patent Application Date	Registration Place
1	Issuer	Heat treatment method and device for semiconductor workpieces	Invention	ZL200710046405.9	2007.09.26	China
2	Issuer	electroplating apparatus for electroplating metal on semi-conductor wok piece	Invention	ZL200710172314.X	2007.12.14	China
3	Issuer	Method and device for cleaning semiconductor chip	Invention	ZL200810034827.9	2008.03.20	China
4	Issuer	Heat treatment method and device for semiconductor workpieces	Invention	ZL200710046404.4	2007.09.26	China
5	Issuer	Device or method for preparing solution for processing single wafer semiconductor	Invention	ZL200810037270.4	2008.05.12	China
6	Issuer	Method and device for cleaning semiconductor chip	Invention	ZL200810034826.4	2008.03.20	China
7	Issuer	Electrodeposition system	Invention	ZL200810037271.9	2008.05.12	China
8	Issuer	Method and device for cleaning semiconductor silicon wafer	Invention	ZL200910050834.2	2009.05.08	China
9	Issuer	Method and apparatus for metallic layer front wafer surface presoaking for electrochemical or chemical deposition	Invention	ZL200710172313.5	2007.12.14	China

10	Issuer	Wafer cleaning device	Utility Model	ZL201320216748.6	2013.04.25	China
11	Issuer	Wet process equipment	Design	ZL201330546123.1	2013.11.14	China
12	Issuer	Method and device for removing barrier layer	Invention	ZL200910050835.7	2009.05.08	China
13	Issuer	Method and device for cleaning semiconductor silicon wafer	Invention	ZL200910053774.×	2009.06.25	China
14	Issuer	Method for depositing copper film on semiconductor wafer super-uniformly	Invention	ZL200810203809.9	2008.12.01	China
15	Issuer	Detector and detection method for wafer position	Invention	ZL201210369969.7	2012.09.27	China
16	Issuer	Cleaning machine for integrated circuit substrate	Utility Model	ZL201520110723.7	2015.02.15	China
17	Issuer	Vacuum chuck	Invention	ZL201280071561.X	2012.03.28	China
18	Issuer	Method and device for realizing deep hole uniform metal interconnection on semiconductor silicon chip	Invention	ZL201110365926.7	2011.11.17	China
19	Issuer	Wafer edge cleaning device	Invention	ZL201210163145.4	2012.05.22	China
20	Issuer	Vacuum chuck for electropolishing and/or electroplating	Invention	ZL201280071572.8	2012.03.28	China
21	Issuer	Method and apparatus for pulse electrochemical polishing	Invention	ZL201280073426.9	2012.05.24	China
22	Issuer	Device and method for cleaning reverse side of wafer	Invention	ZL201210220445.1	2012.06.28	China
23	Issuer	Nozzle for stress-free electrochemical polishing	Invention	ZL201280071560.5	2012.03.30	China
24	Issuer	Device and method used for electrochemical polishing/electroplating	Invention	ZL201210292690.3	2012.08.16	China
25	Issuer	Barrier layer removal method and barrier layer removal device	Invention	ZL201410257649.1	2009.05.08	China
26	Issuer	Preparation method of large-area nano-structure array	Invention	ZL201210243831.2	2012.07.13	China
27	Issuer	Viscosity automatic control system and automatic control method	Invention	ZL201210163151.X	2012.05.22	China
28	Issuer	Grinding head with wafer detection device	Invention	ZL201210491738.3	2012.11.27	China
29	Issuer	Method and apparatus for cleaning semiconductor wafer	Invention	ZL201280077256.1	2012.11.28	China
30	Issuer	Apparatus and method for electroplating and/or polishing wafer	Invention	ZL201380076475.2	2013.05.09	China
31	Issuer	An etching apparatus and an etching method	Invention	ZL201210089507.X	2012.03.30	China
32	Issuer	Wafer processing cavity	Invention	ZL201310116848.6	2013.04.07	China

33	Issuer	Method and device for cleaning flip chips	Invention	ZL201210189044.4	2012.06.08	China
34	Issuer	Stress-free polishing device and polishing method	Invention	ZL201210369944.7	2012.09.27	China
35	Issuer	Substrate cleaning device and method	Invention	ZL201210499934.5	2012.11.29	China
36	Issuer	Detection apparatus and detection method for wafer position	Invention	ZL201210214030.3	2012.06.26	China
37	Issuer	Polishing fluid arm	Invention	ZL201210366048.5	2012.09.27	China
38	Issuer	Semiconductor wafer polishing method	Invention	ZL201280077584.1	2012.12.10	China
39	Issuer	Method and apparatus for uniformly metallization on substrate	Invention	ZL201380075887.4	2013.04.22	China
40	Issuer	A technique for vapor etching a barrier layer with xenon difluoride	Invention	ZL201210089500.8	2012.03.30	China
41	Issuer	Washing device	Invention	ZL201310335864.4	2013.08.02	China
42	Issuer	System and method for controlling concentration of polishing solution to be stable	Invention	ZL201210375488.7	2012.09.27	China
43	Issuer	Method and device for manufacturing semiconductor device	Invention	ZL201210491746.8	2012.11.27	China
44	Issuer	Method for forming interconnection structures	Invention	ZL201280077240.0	2012.11.27	China
45	Issuer	Semiconductor process chamber	Invention	ZL201310117998.9	2013.04.07	China
46	Issuer	Load lock chamber and method of using load lock chamber to process substrates	Invention	ZL201210292475.3	2012.08.16	China
47	Issuer	Method for manufacturing tungsten plug	Invention	ZL201210213955.6	2012.06.26	China
48	Issuer	End point detection device and end point detection method	Invention	ZL201210290651.X	2012.08.15	China
49	Issuer	Hollow door	Invention	ZL201410236079.8	2014.05.30	China
50	Issuer	Apparatus and method used for quick preparation of nanostructured arrays	Invention	ZL201210292689.0	2012.08.16	China
51	Issuer	Process chamber	Invention	ZL201210501578.6	2012.11.30	China
52	Issuer	Wafer edge chip flattening method	Invention	ZL201310167821.X	2013.05.08	China
53	Issuer	Cleaning fluid flow control system and cleaning fluid flow control method	Invention	ZL201210290586.0	2012.08.15	China

54	Issuer	Wafer processing device	Invention	ZL201310566941.7	2013.11.14	China
55	Issuer	Electrochemical polishing device and method	Invention	ZL201410067707.4	2014.02.26	China
56	Issuer	Electrochemically polished metal anode and sealing structure thereof	Invention	ZL201410131557.9	2014.04.02	China
57	Issuer	Xenon difluoride gas-phase etching method for barrier layer	Invention	ZL201210366144.X	2012.09.27	China
58	Issuer	Chemical liquid supply and recycling system and method	Invention	ZL201310166862.7	2013.05.08	China
59	Issuer	Pipeline for preventing residual liquid from dripping	Invention	ZL201310567168.6	2013.11.14	China
60	Issuer	Silicon dioxide release technology	Invention	ZL201410117472.5	2014.03.26	China
61	Issuer	Electrochemical polishing liquid supply device	Invention	ZL201410190482.1	2014.05.07	China
62	Issuer	Sprayer device	Invention	ZL201410512483.3	2014.09.29	China
63	Issuer	Method for flattening through-silicon-via back-surface metal	Invention	ZL201310169389.8	2013.05.09	China
64	Issuer	Relative distance measurement device and method	Invention	ZL201410067724.8	2014.02.26	China
65	Issuer	Apparatus and method for taping adhesive film on semiconductor substrate	Invention	ZL201380077368.1	2013.06.19	China
66	Issuer	Photoresist bottle holding device	Invention	ZL201410235896.1	2014.05.30	China
67	Issuer	Method for forming metal interconnection	Invention	ZL201480079797.7	2014.07.08	China
68	Issuer	Wafer grinding head and wafer absorbing method	Invention	ZL201410110796.6	2014.03.24	China
69	Issuer	Electrochemical polishing end-point detection apparatus and method	Invention	ZL201410190424.9	2014.05.07	China
70	Issuer	Method for detecting inclination degree of wafer chuck plate	Invention	ZL201410235876.4	2014.05.30	China
71	Issuer	Method and apparatus for through-silicon vias reveal	Invention	ZL201380075888.9	2013.04.22	China
72	Issuer	Sprayer device	Invention	ZL201410512787.X	2014.09.29	China
73	NOMURA MICRO SCIENCE KK; Issuer; HJS ENG CO LTD	Washing hydrogen water producing method and producing apparatus	Invention	ZL201610561383.9	2016.07.15	China
74	Issuer	Apparatus and method for cleaning semiconductor wafer	Invention	ZL201480082120.9	2014.09.26	China

75	Issuer	Spray head device with electrodes	Invention	ZL201410235874.5	2014.05.30	China
76	Issuer	Method for optimizing process formula in pulse electrochemical polishing process	Invention	ZL201410365997.0	2014.07.29	China
77	Issuer	Workpiece processing device	Invention	ZL201310553969.7	2013.11.08	China
78	Issuer	Workpiece processing device	Invention	ZL201310553944.7	2013.11.08	China
79	Issuer	Connection part of frame structure	Invention	ZL201410235865.6	2014.05.30	China
80	Issuer	Apparatus and method for detecting position of wafer	Invention	ZL201280072827.2	2012.05.02	China
81	Issuer	Method for manufacturing through-silicon-via structure	Invention	ZL201310169431.6	2013.05.09	China
82	Issuer	Device for preventing residual liquid from dripping	Invention	ZL201310566899.9	2013.11.14	China
83	Issuer	Gas-phase etching device	Invention	ZL201410066813.0	2014.02.26	China
84	Issuer	Gluing method and gluing apparatus	Invention	ZL201410196004.1	2014.05.09	China
85	Issuer	Liquid storage tank adopting inert gas protection	Invention	ZL201410366139.8	2014.07.29	China
86	Issuer	Wafer processing device	Invention	ZL201310567261.7	2013.11.14	China
87	Issuer	Electrochemical polishing equipment	Invention	ZL201410366491.1	2014.07.29	China
88	Issuer	Electrochemical machining process and device	Invention	ZL201410366155.7	2014.07.29	China
89	Issuer	Polishing slurry filtering device	Invention	ZL201410366212.1	2014.07.29	China
90	Issuer	Device for processing semiconductor structure	Invention	ZL201410513602.7	2014.09.29	China
91	Issuer	Wafer gluing equipment	Invention	ZL201410366461.0	2014.07.29	China
92	Issuer	Polishing disk and cooling device thereof	Invention	ZL201410235835.5	2014.05.30	China
93	Issuer	Method for improving polishing uniformity of wafer	Invention	ZL201410236044.4	2014.05.30	China
94	Issuer	Workpiece processing device	Invention	ZL201310553898.0	2013.11.08	China
95	Issuer	Gelatinizing equipment and framework thereof	Invention	ZL201410365925.6	2014.07.29	China
96	Issuer	Levelness measuring device and method	Invention	ZL201410066598.4	2014.02.26	China
97	Issuer	Recovery device for metal ions in electrochemical polishing solutions	Invention	ZL201410512977.1	2014.09.29	China
98	Issuer	Method for forming semiconductor structures	Invention	ZL201310566058.8	2013.11.14	China
99	Issuer	Metal coating processing method	Invention	ZL201310330145.3	2013.07.31	China
100	Issuer	Apparatus For Holding Substrate	Invention	ZL201580085077.6	2015.12.04	China
101	Issuer	Horizontal adjusting device for chuck and method utilizing device to horizontally adjust chuck	Invention	ZL201410513026.6	2014.09.29	China
102	Issuer	Uniform air flow device	Invention	ZL201410366171.6	2014.07.29	China

103	Issuer	Gumming machine with automatic cleaning function and automatic cleaning method for gumming machine	Invention	ZL201510242142.3	2015.05.13	China
104	Issuer	Coaxial adjusting device and coaxial adjusting method using the same	Invention	ZL201510081687.0	2015.02.15	China
105	Issuer	Falling-prevention semiconductor cleaning device	Invention	ZL201510081989.8	2015.02.15	China
106	Issuer	Two-sided vapor-phase etching device	Invention	ZL201410512991.1	2014.09.29	China
107	Issuer	Brush moving device of semiconductor cleaning device	Invention	ZL201410366503.0	2014.07.29	China
108	Issuer	Copper-plated thinning integrated device	Invention	ZL201410190951.X	2014.05.07	China

2. Major Patents Owned Outside Mainland China by the Issuer and its Holding Subsidiaries

S/N	Patentee	Patent Name	Patent Type	Patent No.	Patent Application Date	Registration Place
1	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	4994501	2007.12.10	Japan
2	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	5367840	2008.12.12	Japan
3	Issuer	BARRIER LAYER REMOVAL METHOD AND APPARATUS	Invention	5412517	2008.08.20	Japan
4	Issuer	SOLUTION PREPARATION APPARATUS AND METHOD FOR TREATING INDIVIDUAL SEMICONDUCTOR WORKPIECE	Invention	5442705	2008.03.17	Japan
5	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	5466638	2007.07.05	Japan
6	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	5648047	2009.03.31	Japan
7	Issuer	METHODS AND APPARATUS FOR CLEANING FLIP CHIP ASSEMBLIES	Invention	6063944	2011.09.22	Japan
8	Issuer	NOZZLE FOR STRESS-FREE POLISHING METAL LAYERS ON SEMICONDUCTOR WAFERS	Invention	6076458	2012.03.30	Japan
9	Issuer	METHODS AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATES	Invention	6113154	2011.06.24	Japan
10	NOMURA MICRO SCIENCE KK; Issuer; HJS ENG CO LTD	WASHING HYDROGEN WATER PRODUCING METHOD AND PRODUCING APPARATUS	Invention	6154860	2015.07.17	Japan
11	Issuer	METHOD AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATE	Invention	6162881	2013.04.22	Japan
12	Issuer	APPARATUS AND METHOD FOR PLATING AND/OR POLISHING WAFER	Invention	6186499	2013.05.09	Japan
13	Issuer	SUBSTRATE SUPPORTING APPARATUS	Invention	6198840	2012.11.27	Japan

14	NOMURA MICRO SCIENCE KK; Issuer; HJS ENG CO LTD	FUNCTIONAL WATER PRODUCING APPARATUS AND FUNCTIONAL WATER PRODUCING METHOD	Invention	6232086	2016.01.29	Japan
15	Issuer	METHOD AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFER	Invention	6275155	2012.11.28	Japan
16	Issuer	METHOD FOR FORMING METAL INTERCONNECTION	Invention	6301003	2014.07.08	Japan
17	Issuer	APPARATUS AND METHOD FOR PLATING AND/OR POLISHING WAFER	Invention	6431128	2013.05.09	Japan
18	Issuer	BARRIER LAYER REMOVAL METHOD AND SEMICONDUCTOR STRUCTURE FORMING METHOD	Invention	6438131	2014.10.17	Japan
19	Issuer	APPARATUS AND METHOD FOR CLEANING SEMICONDUCTOR WAFER	Invention	6490202	2014.09.26	Japan
20	Issuer	METHOD FOR REMOVING BARRIER LAYER FOR MINIMIZING SIDEWALL RECESS	Invention	6574486	2015.02.15	Japan
21	Issuer	APPARATUS FOR SUBSTRATE BEVEL AND BACKSIDE PROTECTION	Invention	6592529	2015.05.14	Japan
22	Issuer	A FALL-PROOF APPARATUS FOR CLEANING SEMICONDUCTOR DEVICES AND A CHAMBER WITH THE APPARATUS	Invention	6591555	2015.09.08	Japan
23	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	6605044	2015.05.20	Japan
24	Issuer	APPARATUS FOR HOLDING SUBSTRATE	Invention	6633756	2015.12.04	Japan
25	Issuer	METHOD AND APPARATUS FOR THERMAL TREATMENT OF SEMICONDUCTOR WORKPIECES	Invention	10-1370807	2007.08.29	Korea
26	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	10--1424622	2007.07.05	Korea
27	Issuer	PLATING APPARATUS FOR METALLIZATION ON SEMICONDUCTOR WORKPIECE	Invention	10-1424623	2007.11.02	Korea
28	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	10-1467974	2007.12.10	Korea
29	Issuer	METHOD AND APPARATUS TO PREWET WAFER SURFACE FOR METALLIZATION FROM ELECTROLYTE SOLUTION	Invention	10-1487708	2007.10.30	Korea
30	Issuer	BARRIER LAYER REMOVAL METHOD AND APPARATUS	Invention	10-1492467	2008.08.20	Korea
31	Issuer	SOLUTION PREPARATION APPARATUS AND METHOD FOR TREATING INDIVIDUAL SEMICONDUCTOR WORKPIECE	Invention	10-1519832	2008.03.17	Korea
32	Issuer	METHOD FOR SUBSTANTIALLY UNIFORM COPPER DEPOSITION ONTO SEMICONDUCTOR WAFER	Invention	10-1521470	2008.09.16	Korea

33	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	10-1546660	2008.12.12	Korea
34	Issuer	METHODS AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATES	Invention	10-1783786	2011.06.24	Korea
35	Issuer	METHODS AND APPARATUS FOR CLEANING FLIP CHIP ASSEMBLIES	Invention	10-1837070	2011.09.22	Korea
36	Issuer	METHOD FOR FORMING AIR GAP INTERCONNECT STRUCTURE	Invention	10-1842903	2011.09.20	Korea
37	Issuer	NOZZLE FOR STRESS-FREE POLISHING METAL LAYERS ON SEMICONDUCTOR WAFERS	Invention	10-1891730	2012.03.30	Korea
38	Issuer, and NOMURA MICRO SCIENCE CO., LTD	WASHING HYDROGEN WATER PRODUCING METHOD AND PRODUCING APPARATUS	Invention	10-1913465	2016.07.14	Korea
39	Issuer	LOADLOCK CHAMBER AND METHOD FOR TREATING SUBSTRATES USING THE SAME	Invention	10-1940580	2012.05.24	Korea
40	Issuer	METHOD AND APPARATUS FOR PULSE ELECTROCHEMICAL POLISHING	Invention	10-1947032	2012.05.24	Korea
41	Issuer	VACUUM CHUCK	Invention	10-1963851	2012.03.28	Korea
42	Issuer	METHOD AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFER	Invention	10-1992660	2012.11.28	Korea

43	Issuer	METHOD FOR FORMING INTERCONNECTION STRUCTURES	Invention	10-1976727	2012.11.27	Korea
44	Issuer	METHOD AND APPARATUS FOR THROUGH-SILICON VIAS REVEAL	Invention	10-2024122	2013.04.22	Korea
45	Issuer	APPARATUS AND METHOD FOR PLATING AND/OR POLISHING WAFER	Invention	10-2043811	2013.05.09	Korea
46	Issuer	PLATING APPARATUS FOR METALLIZATION ON SEMICONDUCTOR WORKPIECE	Invention	161074	2007.11.02	Singapore
47	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	162170	2007.12.10	Singapore
48	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	157876	2007.07.05	Singapore
49	Issuer	METHOD FOR SUBSTANTIALLY UNIFORM COPPER DEPOSITION ONTO SEMICONDUCTOR WAFER	Invention	169663	2008.09.16	Singapore
50	Issuer	METHOD AND APPARATUS TO PREWET WAFER SURFACE FOR METALLIZATION FROM ELECTROLYTE SOLUTION	Invention	161057	2007.10.30	Singapore
51	Issuer	METHOD AND APPARATUS FOR THERMAL TREATMENT OF SEMICONDUCTOR WORKPIECES	Invention	159349	2007.08.29	Singapore
52	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	174616	2009.03.31	Singapore
53	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	172096	2008.12.12	Singapore
54	Issuer	SOLUTION PREPARATION APPARATUS AND METHOD FOR TREATING INDIVIDUAL SEMICONDUCTOR WORKPIECE	Invention	164856	2008.03.17	Singapore
55	Issuer	METHOD AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFER	Invention	11201503659Q	2012.11.28	Singapore
56	Issuer	METHODS AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATES	Invention	195849	2011.06.24	Singapore
57	Issuer	APPARATUS AND METHOD FOR TAPING ADHESIVE FILM ON SEMICONDUCTOR SUBSTRATE	Invention	11201510022S	2013.06.19	Singapore
58	Issuer	NOZZLE FOR STRESS-FREE POLISHING METAL LAYERS ON SEMICONDUCTOR WAFERS	Invention	11201405586T	2012.03.30	Singapore
59	Issuer	METHODS AND APPARATUS FOR CLEANING FLIP CHIP ASSEMBLIES	Invention	11201400619Q	2011.09.22	Singapore
60	Issuer	SUBSTRATE SUPPORTING APPARATUS	Invention	11201503660V	2012.11.27	Singapore
61	Issuer	APPARATUS AND METHOD FOR PLATING AND/OR POLISHING WAFER	Invention	11201508466Q	2013.05.09	Singapore
62	Issuer	METHOD AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATE	Invention	11201507894X	2013.04.22	Singapore

63	Issuer	METHOD FOR OPTIMIZING METAL PLANARIZATION PROCESS	Invention	11201706624U	2015.02.15	Singapore
64	Issuer	APPARATUS AND METHOD FOR CLEANING SEMICONDUCTOR WAFER	Invention	11201702033V	2014.09.26	Singapore
65	Issuer	METHOD FOR ELECTROCHEMICAL POLISH IN CONSTANT VOLTAGE MODE	Invention	11201803236V	2015.10.30	Singapore
66	Issuer	METHOD AND APPARATUS FOR THROUGH-SILICON VIAS REVEAL	Invention	10201708304V	2013.04.22	Singapore
67	Issuer	PLATING APPARATUS FOR METALLIZATION ON SEMICONDUCTOR WORKPIECE	Invention	I355686	2007.11.05	Taiwan, China
68	Issuer	METHOD AND APPARATUS FOR THERMAL TREATMENT OF SEMICONDUCTOR WORKPIECES	Invention	I364075	2007.08.30	Taiwan, China
69	Issuer	METHOD AND APPARATUS TO PREWET WAFER SURFACE FOR METALLIZATION FROM ELECTROLYTE SOLUTIONS	Invention	I366610	2007.10.31	Taiwan, China
70	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	I371063	2007.06.15	Taiwan, China
71	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	I390618	2007.12.10	Taiwan, China
72	Issuer	WAFER CLEANING DEVICE	Utility Model	M464807	2013.05.07	Taiwan, China
73	Issuer	ELECTROCHEMICAL DEPOSITION SYSTEM	Invention	I417962	2008.03.20	Taiwan, China
74	Issuer	METHOD FOR SUBSTANTIALLY UNIFORM COPPER DEPOSITION ONTO SEMICONDUCTOR WAFER	Invention	I425122	2008.09.17	Taiwan, China
75	Issuer	SOLUTION PREPARATION APPARATUS AND METHOD FOR TREATING INDIVIDUAL SEMICONDUCTOR WORKPIECE	Invention	I459489	2008.03.17	Taiwan, China
76	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	I483299	2009.01.09	Taiwan, China
77	Issuer	Wet process equipment	Design	D168609	2013.11.20	Taiwan, China
78	Issuer	BARRIER LAYER REMOVAL METHOD AND APPARATUS	Invention	I501302	2008.08.21	Taiwan, China
79	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	I501297	2009.03.31	Taiwan, China
80	Issuer	Method and apparatus for pulse electrochemical polishing	Invention	I501307	2013.07.31	Taiwan, China
81	Issuer	METHODS AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATES	Invention	I532083	2011.06.24	Taiwan, China
82	Issuer	Vacuum chuck for electropolishing and/or electroplating	Invention	I576468	2013.07.31	Taiwan, China
83	Issuer	Cleaning fluid flow control system and cleaning fluid flow control method	Invention	I587115	2013.08.27	Taiwan, China
84	Issuer	Detector and detection method for wafer position	Invention	I596695	2013.09.26	Taiwan, China
85	Issuer	Method and device for cleaning semiconductor silicon wafer	Invention	I604522	2014.05.16	Taiwan, China

86	Issuer	Apparatus and method for taping adhesive film on semiconductor substrate	Invention	I604521	2014.12.19	Taiwan, China
87	Issuer	Vacuum chuck	Invention	I606545	2013.07.31	Taiwan, China
88	Issuer	Formation method of air-gap interconnection structure	Invention	I608541	2012.01.20	Taiwan, China
89	Issuer	Method and apparatus for through-silicon vias reveal	Invention	I611507	2014.10.23	Taiwan, China
90	Issuer	Semiconductor wafer polishing method	Invention	I614799	2014.05.16	Taiwan, China
91	Issuer	Formation method of interconnection structure	Invention	I621234	2014.05.16	Taiwan, China
92	Issuer	Nozzle for stress-free electrochemical polishing	Invention	I639488	2013.07.31	Taiwan, China
93	Issuer	Method and apparatus for uniformly metallization on substrate	Invention	I639725	2014.10.13	Taiwan, China
94	Issuer	Substrate strutting apparatus	Invention	I644390	2014.05.16	Taiwan, China
95	NOMURA MICRO SCIENCE KK; Issuer; HJS ENG CO LTD	Manufacturing method and device of hydrogen water for cleaning	Invention	I646190	2016.06.29	Taiwan, China
96	Issuer	Apparatus and method for electroplating or polishing wafer	Invention	I647343	2014.05.16	Taiwan, China
97	Issuer	Apparatus and method for uniformly metallization on substrate	Invention	I658170	2015.02.17	Taiwan, China
98	Issuer	Load lock chamber and method of using load lock chamber to process substrates	Invention	I663676	2013.07.31	Taiwan, China
99	Issuer	Apparatus and method for removing edge film of reverse side of wafer	Invention	I665748	2015.12.04	Taiwan, China
100	Issuer	METHOD AND APPARATUS FOR THERMAL TREATMENT OF SEMICONDUCTOR WORKPIECES	Invention	US8,383,429	2007.08.29	USA
101	Issuer	PLATING APPARATUS FOR METALLIZATION ON SEMICONDUCTOR WORKPIECE	Invention	US8,518,224	2007.11.02	USA
102	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US8,580,042	2007.12.10	USA
103	Issuer	BARRIER LAYER REMOVAL METHOD AND APPARATUS	Invention	US8,598,039	2008.08.20	USA
104	Issuer	METHODES AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US8,671,961	2007.12.10	USA
105	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US9,070,723	2007.07.05	USA
106	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US9,281,177	2007.07.05	USA
107	Issuer	METHOD TO PREWET WAFER SURFACE	Invention	US9,295,167	2013.11.12	USA
108	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US9,492,852	2009.03.31	USA

109	Issuer	METHOD FOR FORMING INTERCONNECTION STRUCTURES	Invention	US9,496,172	2012.11.27	USA
110	Issuer	VACUUM CHUCK	Invention	US9,558,985	2012.03.28	USA
111	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US9,595,457	2008.12.12	USA
112	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US9,633,833	2009.03.31	USA
113	Issuer	METHODS AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATES	Invention	US9,666,426	2011.06.24	USA
114	Issuer	NOZZLE FOR STRESS-FREE POLISHING METAL LAYERS ON SEMICONDUCTOR WAFERS	Invention	US9,724,803	2012.03.30	USA
115	Issuer	METHOD AND APPARATUS FOR PULSE ELECTROCHEMICAL POLISHING	Invention	US9,865,476	2012.05.24	USA
116	Issuer	METHODS AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFERS	Invention	US10,020,208	2008.12.12	USA
117	Issuer and NOMURA MICRO SCIENCE CO., LTD.	WASHING HYDROGEN WATER PRODUCING METHOD AND PRODUCING APPARATUS	Invention	US10,059,911	2016.07.14	USA
118	Issuer	METHOD AND APPARATUS FOR UNIFORMLY METALLIZATION ON SUBSTRATE	Invention	US10,113,244	2013.04.22	USA
119	Issuer	APPARATUS AND METHOD FOR CLEANING SEMICONDUCTOR WAFER	Invention	US10,141,205	2014.09.26	USA
120	Issuer	METHOD FOR PROCESSING INTERCONNECTION STRUCTURE FOR MINIMIZING BARRIER SIDEWALL RECESS	Invention	US10,217,662	2015.08.12	USA
121	Issuer	APPARATUS AND METHOD FOR PLATING AND/OR POLISHING WAFER	Invention	US10,227,705	2013.05.09	USA
122	Issuer	METHOD AND APPARATUS FOR CLEANING SEMICONDUCTOR WAFER	Invention	US10,297,472	2012.11.28	USA
123	Issuer	SUBSTRATE SUPPORTING APPARATUS	Invention	US10,410,906	2012.11.27	USA
124	Issuer	BARRIER LAYER REMOVAL METHOD AND SEMICONDUCTOR STRUCTURE FORMING METHOD	Invention	US10,453,743	2014.10.17	USA

Schedule II: Important Trademarks

1. Major Trademarks Owned in Mainland China by the Issuer and its Holding Subsidiaries

S/N	Owner	International Classification	Trademark	Application No./Registration No.	Registration Date	Expiry Date
1	Issuer	Class 7	盛美	13396066	2015.08.28	2025.08.27
2	Issuer	Class 7	UltraSFP	12186123	2014.08.07	2024.08.06
3	Issuer	Class 7	UltraECP	12186124	2014.08.07	2024.08.06

4	Issuer	Class 7	UltraC	12186125	2014.08.07	2024.08.06
5	Issuer	Class 7	UltraC SAPS	12186126	2014.08.07	2024.08.06
6	Issuer	Class 7	ACMECP	12186127	2014.09.07	2024.09.06
7	Issuer	Class 7	C _{BC}	13396065	2015.08.21	2025.08.20
8	Issuer	Class 7	C _{PRR}	13396064	2015.03.14	2025.03.13
9	Issuer	Class 7	C _{SAPS}	13396063	2015.03.14	2025.03.13
10	Issuer	Class 7	C _{TSV}	13396062	2015.03.14	2025.03.13
11	Issuer	Class 7	C _{TW}	13396061	2015.08.28	2025.08.27
12	Issuer	Class 7	CSAPS	13396060	2016.01.07	2026.01.06
13	Issuer	Class 7	Ultra C TEBO	20518382	2017.08.28	2027.08.27
14	Issuer	Class 7	C _{TEBO}	20518381	2017.10.21	2027.10.20

2. Major Trademarks Owned Outside Mainland China by the Issuer and its Holding Subsidiaries

S/N	Owner	International Classification	Trademark	Application No./Registration No.	Registration Date	Expiry Date	Registration Place
1	Issuer	Class 7	Ultra C TEBO	107059018/1986040	2018.09.11	2029.05.15	Taiwan, China
2	Issuer	Class 7	UltraSFP	107059019/1980974	2018.09.11	2029.04.15	Taiwan, China
3	Issuer	Class 7	UltraC	107059021/1980975	2018.09.11	2029.04.15	Taiwan, China
4	Issuer	Class 7	UltraC SAPS	107059022/1980976	2018.09.11	2029.04.15	Taiwan, China
5	Issuer	Class 7	UltraSFP	International Registration No.: 1467252	2019.01.02	2029.01.02	Singapore
6	Issuer	Class 7	UltraECP	International Registration No.: 1467249	2019.01.02	2029.01.02	Singapore
7	Issuer	Class 7	UltraC	International Registration No.: 1467242	2019.01.02	2029.01.02	Singapore
8	Issuer	Class 7	Ultra C TEBO	International Registration No.: 1467241	2019.01.02	2029.01.02	Singapore