



**FUDAN
MICRO**

上海復旦微電子集團股份有限公司

Shanghai Fudan Microelectronics Group Company Limited*
(a joint stock limited company incorporated in the People's Republic of China)
(Stock Code: 1385)

2023

INTERIM REPORT

Contents

	Pages
PRINCIPAL ACCOUNTING DATA AND KEY FINANCIAL INDICATORS	2
MANAGEMENT DISCUSSION AND ANALYSIS	4
FINANCIAL STATEMENTS	
Consolidated Balance Sheet (Unaudited)	21
Balance Sheet of the Parent Company (Unaudited)	23
Consolidated Income Statement (Unaudited)	25
Income Statement of the Parent Company (Unaudited)	27
Consolidated Cash Flows Statement (Unaudited)	28
Cash Flows Statement of the Parent Company (Unaudited)	30
Consolidated Statement of Changes in Owners' Equity (Unaudited)	32
Statement of Changes in Owners' Equity of the Parent Company (Unaudited)	33
Notes to Financial Statements	34
OTHER INFORMATION	93

Principal Accounting Data and Key Financial Indicators

The board of directors (the “Board”) of Shanghai Fudan Microelectronics Group Company Limited (the “Company”) is pleased to announce the unaudited consolidated results of the Company and its subsidiaries (the “Group”) for the half-year ended 30 June 2023 together with the comparative figures for the corresponding period in 2022 or as at 31 December 2022 as follows:

KEY ACCOUNTING DATA

	Half-year ended 30 June	
	2023	2022
	RMB0'000	RMB0'000
	(Unaudited)	(Unaudited)
Revenue	179,622.93	170,233.34
Net profits attributable to the shareholders of the Company	44,927.08	53,053.15
Net profits attributable to the shareholders of the Company after deducting non-recurring profit or loss	41,499.14	51,894.80
Net cash flows (used in)/generated from operating activities	(109,043.92)	32,910.72

	As at	As at
	30 June 2023	31 December 2022
	RMB0'000	RMB0'000
	(Unaudited)	(Audited)
Net assets attributable to the shareholders of the Company	493,152.35	453,123.04
Total assets	784,339.29	611,088.81

Principal Accounting Data and Key Financial Indicators

KEY FINANCIAL INDICATORS

	Half-year ended 30 June	
	2023	2022
	RMB	RMB
	(Unaudited)	(Unaudited)
Basic earnings per share (RMB/share)	0.55	0.65
Diluted earnings per share (RMB/share)	0.55	0.65
Basic earnings per share after deducting non-recurring profit or loss (RMB/share)	0.51	0.64
Weighted average return on net asset (%)	9.39	15.57
Weighted average return on net asset after deducting non-recurring profit or loss (%)	8.67	15.23
Percentage of research and development investment of revenue (%)	32.74	23.42

During 1 January 2023 and 30 June 2023 (the “Reporting Period”), the Group achieved an revenue of approximately RMB1.796 billion, representing an increase of approximately 5.52% over the same period in 2022; the comprehensive gross profit margin was 67.10%, representing an increase of 2.10 percentage points over the same period in 2022; net profit attributable to owners of the parent company of approximately RMB449 million, representing a decrease of approximately 15.32% over the same period in 2022; and net profit attributable to owners of the parent company after deducting non-recurring profit or loss of approximately RMB415 million, representing a decrease of approximately 20.03% over the same period in 2022. As of 30 June 2023, the total assets of the Group were approximately RMB7.843 billion, representing an increase of approximately 28.35% over the beginning of the Reporting Period; net assets attributable to shareholders of the parent company were approximately RMB4.932 billion, representing an increase of approximately 8.83% over the beginning of the Reporting Period.

The changes of the above-mentioned major accounting data and financial indicators was mainly caused by the following factors:

- (1) Benefited from the Group’s comprehensive product lines and strong business resilience, in particular, the increase in sales of FPGA and other products and non-volatile memory product lines, which led to the growth of the Group’s overall revenue;
- (2) Benefiting from products structure adjustment, the increased sales percentage of high-reliability products and launches of new products, the comprehensive gross profit margin increased by 2.10 percentage points over the same period in 2022, gross profit increased by approximately RMB98,860,100 over the same period in 2022;
- (3) In order to maintain and enhance the Group’s core competitiveness, the Group continued to maintain the high intensity of research and development investment which amounted to approximately RMB588 million for the half-year ended 30 June 2023, representing an increase of 47.54% over the same period in 2022, of which the increase in research and development expenses amounted to approximately RMB154 million, which was mainly attributable to the growth in the costs of materials and processing fees, depreciation and amortisation, and technical service fees of the research and development projects;
- (4) Changes of net cash flow (used in)/from operating activities were mainly attributable to the significant increase in payments to suppliers as a result of spare of inventories by the Group, and the slowdown of cash receipt from sales of goods due to changes in the structure of product sales and customers.

Management Discussion and Analysis

(I) INDUSTRY AND PRINCIPAL BUSINESS

1. Industry Development

The Group is mainly engaged in the design, development and testing of large integrated circuits. According to the “Classification of Industries of the National Economy (GB/T 4754-2017)” the Company is under the industry of “C Manufacturing Industry – C39 Computer, Communication and Other Electronic Equipment Manufacturing Industry”.

In the first half of 2023, the semiconductor industry remained in the downward phase of the industry cycle, especially the weak demand for consumption electronics, which had a significant impact on the industry. According to the National Bureau of Statistics of the PRC, the cumulative IC production in the PRC from January to June was 165.73 billion pieces, decreased by 3.0% over the same period of last year. The representative cumulative production of smartphone production in the first half of the year was 507.47 million units, decreased by 9.1% over the same period of last year; the cumulative production of micro-computer equipments production in the first half of the year was 162.49 million units, decreased by 25% over the same period of last year.

Although the impact of the consumption downturn on the semiconductor industry has been severe, signs of industry recovery are beginning to emerge. In particular, the industries represented by high-end manufacturing and high-tech applications began to grow, with the manufacturing of intelligent vehicle-mounted equipment, intelligent unmanned aerial vehicles, and other intelligent consumption equipment grew by 36.3%, 12.5%, and 20.0% respectively. From the point of view of product, industrial control computers and systems, virtual reality equipment and other product production were also increased by 34.1% and 58.0%, the aforementioned development of related industries will strongly support the gradual recovery of the semiconductor industry. The World Semiconductor Trade Statistics (WSTS) also issued a forecast in May 2023, predicting that the global semiconductor market will experience a 10.3% decline in 2023, however, the semiconductor market is expected to have a strong recovery in 2024, with an estimated growth of 11.8%.

2. Analysis of Principal Business, Products and Industry Position

The Group is engaged in the design, development and testing of large integrated circuits as well as provision of system solutions to customers. The Group has established and improved product lines such as security and identification IC chips, non-volatile memory, smart meter ASIC chips, FPGA chips and testing services for IC products, and the products are widely used in numerous fields such as finance, social security, urban public transportation, electronic certificates, mobile payment, anti-counterfeiting traceability, smart phones, security monitoring, industrial control, signal processing and smart computing. The main products of the Group include security and identification IC chips, non-volatile memory, smart meter ASIC chips, FPGA chips and other products. The details of each product are as follows:

Management Discussion and Analysis

(I) INDUSTRY AND PRINCIPAL BUSINESS *(Continued)*

2. Analysis of Principal Business, Products and Industry Position *(Continued)*

a) *Security and identification IC chips*

The Group's security and identification product line has a wide range of products, including RFID and sensor chips series, composed by logic encryption card chips, HF/UHF TAG chips, NFC TAG/channel chips, UHF reader/writer chips and temperature measurement chips; and intelligent identification device product series, mainly composed by contactless reader/writer chips and TSI touch chips. Security and identification products are widely used in the fields of identification, financial payment, intelligent connection, anti-counterfeiting and traceability, cold chain management, industrial control, and automotive electronics. In addition, we provide complete solutions to customers based on various types of consumer, industrial and automotive chips. During the Reporting Period, the product line consolidated its traditional areas while also expanded into new applications areas at the same time, and new products and applications represented by ultra-high-frequency EPC labels, anti-counterfeiting security chips and automotive readers and writers were recognised by customers. During the Reporting Period, the product line achieved revenue of approximately RMB410 million (2022: RMB461 million).

b) *Non-volatile memory*

The Group has formed three major product lines, namely EEPROM, NOR Flash and NAND Flash, established a complete niche non-volatile memory product architecture, and research and development reserves for various technology platforms including FLOTOX, ETOX and SONOS. By the development of a new process design platform, development of a series of new products, and the direction of expansion of the large-capacity system-level memory products, we will continue to enhance our capabilities and optimise product performance and cost advantages. The Group's comprehensive memory product line, combined with its FPGA, MCU, security and identification product lines, meets the needs of commercial, high industrial specification and automotive customers, providing one-stop solutions for applications such as industrial control instrumentation, medical, communications, automotive and consumption electronics. During the Reporting Period, this product line fully leveraged the Group's advantages of stable and reliable performance of memory products and wide range of applications, and maintained growth during the downturn of the industry. In the field of technology, we have been actively pursuing the research and development of high-performance industrial specification and automotive products and the development of system-level memory products, in order to further consolidating the competitiveness of the Group's memory products. During the Reporting Period, the product line achieved revenue of approximately RMB588 million (2022: RMB487 million).

c) *Smart meter ASIC chips*

The Group's smart meter product line covers smart meter MCUs and general-purpose MCUs. Smart meter MCU is the core component of electronic energy meter smart meter, which can realise the functions of electricity consumption information measurement, automatic reading and information transmission for industrial and domestic users. The low-power-consumption and general-purpose MCU products can be applied in many fields such as smart meters, smart water, gas and heat meters, smart homes, and Internet of Things.

Management Discussion and Analysis

(I) INDUSTRY AND PRINCIPAL BUSINESS *(Continued)*

2. Analysis of Principal Business, Products and Industry Position *(Continued)*

c) *Smart meter ASIC chips (Continued)*

The Group's smart meter product line already has FM330x/331x/33A0xx/33A0xxB series smart meter MCU chips, FM33LG0xx, FM33LC0xx, FM33LE0xx, FM33FR0xx, FM33LF0xx series ultra-low power consumption MCU chips, as well as FM38025T high-precision real-time clock chips, FM320x series power carrier chips Chip and MCU core series products cover from 8-bit computer, 16-bit computer to 32-bit ARM Cortex M0+ platform, and the embedded storage capacity ranges from 64K to the highest 512K, which realizes the platformization and serialization of products, and is widely used in smart meters, water, gas and heat meters, smart home, healthcare, smart home appliances, vehicle body and comfort systems. During the Reporting Period, the department increased investment in the research and development of automotive, smart home appliances and industrial control products, and launched a number of products in order to prepare the technical and product reserves for the rebound of the industry in advance. During the Reporting Period, the product line achieved revenue of approximately RMB113 million (2022: RMB276 million).

d) *FPGA chips and other products*

The Group is one of the leading companies in FPGA technology in the PRC. FPGA has the programmability and flexibility of software, making them an ideal solution in areas such as 5G communications and artificial intelligence, which have more frequent iterative upgrade cycles and greater technological uncertainty.

The Group's FPGA product line has a series of ultra-large scale heterogeneous fusion programmable logic device series. The Group is the first in the PRC which has successfully developed 100 million-gate FPGA and heterogeneous fusion programmable system-on-chip (PSoC) chips, as well as field programmable artificial intelligence (FPAI) chips with field programmable gate array (FPGA) and artificial intelligence (AI) for AI applications. The product line is currently advancing a new generation of FPGA based on the advanced 1xnm FinFET process, providing low-cost, low-power consumption, high-performance, and high-reliability product series for application scenarios such as computer vision, machine learning, and high-speed digital processing, targeting industry sectors such as intelligent cockpits, video surveillance, medical imaging, and network communications. Other products are mainly smart appliance chips, which have good applications in areas such as leakage protection devices and household appliances. During the Reporting Period, the product line achieved revenue of approximately RMB586 million (2022: RMB378 million).

Management Discussion and Analysis

(II) CORE TECHNOLOGY AND RESEARCH AND DEVELOPMENT PROGRESS

Core technology and its leading advancements and changes during the Reporting Period

(a) *Security and identification IC chips*

After years of continuous research and development and technology accumulation, the Group's security and identification product line has formed relatively obvious technical and research and development advantages in the two key technical fields of radio frequency and security. Based on the accumulation of radio frequency chip design technology for many years, further research to form a new generation of NFC technology to support more types of NFC devices, and at the same time, launched UHF RFID technology with sensing characteristics, and the performance and reliability of our products have been recognised by our customers in small batch trials, which is expected to provide more opportunities in the fast-developing field of UHF RFID applications.

Based on the above technologies, the security chip product line has launched a number of IoT security chips, optimising the balance between security and low-power technologies to meet the needs of low-power security applications for the IoT. In addition, the product line has also made a technological deployment in the field of sensing, and intends to combine the Group's security and radio frequency technology strengths, and is launching security chips, sensing chips and radio frequency chips with matching security solutions actively.

(b) *Non-volatile memory*

The product series continues to expand its coverage to provide more complete one-stop solutions for industrial control instrumentation, medical, communication, automotive and other applications.

In the EEPROM field, we are promoting the application of our high-performance industrial and automotive products in low-voltage, low-power consumption, high-performance industrial and automotive applications, in order to upgrade our existing product lines. In the NOR FLASH field, we continue to optimise the array structure, high-voltage solutions, erasure algorithms, and the spectrum of low-voltage, high-speed and high-capacity product platforms and NOR platforms are in progress. And we will form a comprehensive product pattern with multiple suppliers, multiple device structures, voltages and reliability levels to fully satisfy the customer's sub-divided needs. In the SLC NAND field, the Group is also advancing the design and mass production of products based on the new process standard.

In terms of application expansion, the memory product line is highly concerned about the development of automotive-grade, high-performance memory products. The Group's automotive memory product assessment system is being gradually improved, and the production and quality systems continue to be expanded and optimised, which EEPROM and NOR products passing the AEC-Q100 assessment, and the assessment of NAND automotive-grade products is in progress. The business department has invested a great effort in the development of system-level memory products. In response to customer needs, the department has been researching and exploring a series of high-performance eMMC products that meet the needs of customers, in order to further enrich the application areas of the Group's memory products.

Management Discussion and Analysis

(II) CORE TECHNOLOGY AND RESEARCH AND DEVELOPMENT PROGRESS

(Continued)

Core technology and its leading advancements and changes during the Reporting Period

(Continued)

(c) Smart meter ASIC chips

The Group is currently researching and implementing embedded flash memory technology, low-power clock technology, low-power consumption power management technology, built-in true random number generator, AES encryption computing unit and ECC/RSA public key cryptography algorithm acceleration engine in the area of smart meter MCU technology.

During the Reporting Period, the Group's MCU products have completed the development and flow of 12-inch 55nm and 90nm embedded flash memory process platforms and promoted productization actively. In the future, the Group will realise a complete layout of 12-inch and 8-inch process platforms to further enrich its products line-up and expand its market share in key industries such as public utilities, industrial control, smart home appliances and automobiles.

(d) FPGA chips and other products

FPGA product line has successfully broken through the ultra-large-scale FPGA architecture technology, programmable device compiler technology, multi-protocol ultra-high-speed serial transceiver technology, heterogeneous intelligent computing architecture technology, high-reliability programmable device technology and full-flow EDA technology for ultra-large-scale programmable devices, forming a clear technological cluster advantage in the field of FPGA and PSoC, and building core technological barriers to consolidate our competitive advantages.

During the reporting period, FPGA products based on the above technologies have been applied in usage in volume, and have received favourable market feedback and economic benefits. The development of the new generation of billion-gate FPGA products is underway, and its performance in all aspects will be significantly improved compared to the previous generation of products. The Group's PSoC products have also been successfully mass-produced and are being used in volume by a number of customers. At the same time, a new generation of heterogeneous intelligent PSoC product – FPAI, which is configured with APU, GPU, VPU, eFPGA, and AI engines, has also been successfully released, which will further enrich the Group's spectrum of programmable product series, and continue to satisfy the needs of customers in various application areas.

Management Discussion and Analysis

(III) ANALYSIS ON THE CORE COMPETITIVENESS

As a light-asset enterprise under Fabless mode, the Company builds its core competitiveness on the design and research and development business of integrated circuits. In order to ensure the Group's continuous innovation ability, the Group continues to invest in product research and development, talent team construction, quality and services, domestic and foreign markets and consolidating the supply chain, to strengthen the Group's operation base and build a barrier of entry for corporate development.

1. Multi-level product research and development system and profound technology accumulation have formed comprehensive product lines

The Group has continued to focus on the design and research and development of integrated circuits and has established a multi-level research and development system ranging from technology pre-research, product design, engineering realisation and application development, and has accumulated comprehensive industry experience and key product technologies. After more than 20 years of development, the Group has formed comprehensive product lines, including security and identification chips, non-volatile memory, smart meter chips, FPGA and other products, IC testing services. The products are widely used in finance, social security, urban public transport, electronic certificate, mobile payment, anti-counterfeiting and traceability, smart phone, security monitoring, industrial control, signal processing, intelligent computing and many other fields.

Under the above research and development system, the Group designs and updates the products required for its daily operation, plans ahead for the future trend of the market, and makes corresponding technical reserves for the iteration and expansion of its products in the future. The effective operation of the multi-level research and development mechanism ensures the Group's sustainable competitiveness in the future market.

The Group considers great importance to investment in research and development of products and technologies. During the Reporting Period, the Group invested RMB588,143,800 in research and development, accounted for 32.74% of its revenue, which was at a relatively high level.

2. Good talent training mechanism and incentive mechanism have formed a research and development team with profound professional background

Integrated circuit design is a technology intensive industry. The Group attaches great importance to the construction of talent echelon. At present, it has research and development teams for product and system definition, digital and analog circuit design and verification, testing and engineering implementation, system solutions, etc., forming a diversified and multi-level Research and development talent echelon.

3. High quality control system

The Group considers great importance to the quality control of products from research and development to delivery, and has established a high quality control system. The Group has passed ISO9001, QC080000, ISO14001 and ISO45001 quality control system certification and participated in the formulation of a number of national and industrial standards. After years of market verification, the Group's products have been recognized by numerous well-known manufacturers at domestic and oversea market, and the market share of many products ranks in the forefront of the industry.

Management Discussion and Analysis

(III) ANALYSIS ON THE CORE COMPETITIVENESS *(Continued)*

4. Business expansion mode with both localization and internationalization

While continuing to promote the rapid development of domestic business, the Group takes initiative to participate in international market with the development goal of building a platform with international competitiveness. The Company was successfully listed in Hong Kong in year 2000 which has international information disclosure channels and comprehensive experience in communication with international investors. In addition, the Group has also set up subsidiaries and branches in the United States, Singapore, China Hong Kong, China Taiwan and other countries and regions to strengthen the linkage with international industry giants, in-depth understand the development trends of technologies in the industry, and cultivate and enhance the Group's international market influence and brand awareness.

5. Deep supply chain collaboration model

The outsourced suppliers selected by the Group are mainly world-known companies and domestic leading listed companies in the PRC, with advanced technological standards and sufficient capacity reserves. As a large-scale integrated circuit design enterprise, the Group has diversified products and wide application fields. It has a strong ability to resist cyclical fluctuations, and can continuously and stably generate demands for tape-out, packaging, testing, etc. It effectively guarantees the turnover efficiency and operating efficiency of upstream and downstream enterprises, and enhances the Group's position in the industrial chain.

6. Have a good brand image and market reputation

The Group has been innovating for more than 20 years continuously, entering new application fields, and has won many honors in the industry through abundant products, stable and highly reliable quality, and honest and mutually beneficial business quality. The Company has won the scientific and technological progress awards issued by the Shanghai Municipal People's Government for many times.

(IV) MANAGEMENT DISCUSSION AND ANALYSIS

During the Reporting Period, due to factors such as the weak consumption market and the industry's capacity and inventory turnover cycle, the IC industry had yet to show obvious signs of rapid recovery, which brought greater challenges to the Group's operations. Facing of the industry downturn and the objective situation of intensified competition, the Group did a good job in the sales and services of its existing products, had still maintained a greater intensity of investment in research and development, and has set its targets on new products and applications in advance, to plan for the long-term development of the Group.

In the first half of 2023, the Group achieved (1) an revenue of approximately RMB1.796 billion, representing an increase of approximately 5.52% over the same period in 2022; (2) net profit attributable to owners of the parent company of approximately RMB449 million, representing a decrease of approximately 15.32% over the same period in 2022; (3) net profit attributable to owners of the parent company after deducting non-recurring profit or loss of approximately RMB415 million, representing a decrease of approximately 20.03% over the same period in 2022, and (4) the comprehensive gross profit margin was 67.10%, representing an increase of 2.10 percentage points over the same period in 2022; The Group's investment in research and development amounted to RMB588 million, accounting for 32.74% of revenue, representing an increase of 47.54% over the same period in 2022. Details are as follows:

Management Discussion and Analysis

(IV) MANAGEMENT DISCUSSION AND ANALYSIS *(Continued)*

- Security and identification:** During the Reporting Period, the product line achieved revenue of approximately RMB410 million. Under the situation of the semiconductor market downturn, the Group established its brand advantages and achieved stable sales growth by developing customers and making timely adjustments to its competitive strategies actively. Logical encryption cards, RFID chips, and non-contact readers and writers continued to maintain their industry leading position and market share in the PRC. In terms of traditional products, the financial IC card and social security card have maintained close co-operation with major suppliers to maintain a stable supply. In terms of expanding new applications, we have launched UHF EPC labels and achieved mass production of 10 million units, and made breakthroughs in anti-counterfeit security chips and automotive readers and writers in a number of projects.
- Non-volatile memory:** During the Reporting Period, the product line achieved revenue of approximately RMB588 million. In the first half of 2023, the memory market was at the bottom of the cycle. Benefiting from the wide range of applications of the Group's memory products and the timely adjustment of the product structure in response to market demand, the product line maintained a relatively good growth trend. The product line has done a good job in the sales and service of existing products, and strengthened the promotion in the CCM and instrumentation industries. The delivery of NOR FLASH products has maintained growth, and the application of automotive regulations has also gradually increased. On the other hand, we enhance our internal strength, develop new products, and actively promote the development of niche non-volatile memory based on new technology platforms, including four product series, namely, EEPROM, NOR Flash, NAND Flash, and system-level memory products, which provide a variety of wide-capacity ranges, various adaptive interfaces, high-reliability, low-power consumption, good compatibility, and low-cost product series targeting the application areas of automotive electronics, consumption electronics, computers, network communications, industrial electronics, and security monitoring.
- Smart meter:** The product line mainly includes: smart meter MCUs, general-purpose low-power-consumption MCUs, etc. During the Reporting Period, the product line achieved revenue of approximately RMB113 million. The Group's smart meter MCUs continue to maintain a leading market share in single-phase smart meter MCUs in the State Grid and Southern Power Grid. In the first half of the year, the grid system and consumption markets were in an inventory-digesting cycle, which, with weak market demand, caused a severe challenge to MCU sales in the areas of smart water, gas and heat metering, smart home, and Internet of Things. The business department has increased its research and development investment in products for automotive, smart home appliances and industrial control, launching the FM33FG0xxA series of automotive MCUs, the FM33LF0xx series of low-power MCUs for BLDC motor applications, and the FM33FK50xx series of high-performance MCUs based on Arm China Star cores, to enhance the Group's strengths in the MCU business.

Management Discussion and Analysis

(IV) MANAGEMENT DISCUSSION AND ANALYSIS *(Continued)*

- FPGA and other products:** During the Reporting Period, the product line achieved revenue of approximately RMB586 million. The Group's FPGA product line has successfully broken through key technologies such as ultra-large-scale FPGA architecture, programmable device compiler, multi-protocol ultra-high-speed serial transceiver, heterogeneous smart computing architecture, high-reliability programmable devices, full-flow EDA for ultra-large-scale programmable devices, etc., and has formed a clear technological advantage in the field of FPGA, built up core technological barriers, and consolidated competitive advantages. The Group is now able to provide 10 million-gate and 100 million-gate FPGA and PSoC with full-flow in-house intellectual property supporting EDA tool Procise™. The Group has formed a comprehensive FPGA product spectrum on the 28nm process, and its series of products have been widely applied in the communication field, industrial control field and high reliability field, which provided sufficient technical accumulation and market advantages for the development and industrialisation of new generation FPGA products. In the smart appliance chip business, the Group is actively promoting the Group's A-type, A-type + DC 6mA and B-type residual current protection technology solutions, which are widely used in various charging devices and charging piles in domestic and overseas applications using charging mode 2 and charging mode 3.
- Testing services:** During the Reporting Period, this product line achieved revenue of approximately RMB100 million after consolidation and elimination. Sino IC Technology Co., Ltd. (上海華嶺集成電路技術股份有限公司) ("Sino IC"), our subsidiary, has carried out integrated circuit test research and development in the PRC at the early stage, and has formed many technical achievements in the fields such as product test solution, mass production test automation and test informatization, and undertaken several major national science and technology special projects and provincial and ministerial level research projects. In 2023, Sino IC established a dedicated test line for automotive, achieved mass production of both wafer KGD test and high-reliability chip test methods, and actively launched the research and development of millimetre-wave communication chips, high-calculation chips, chiplet chip test solutions and complete sets of engineering technologies.

(V) RISK FACTORS

1. Risk of slower growth in the IC industry

The Group is principally engaged in the integrated circuit design business and the development of the Group is highly correlated with the downstream industrial development. Since the second half of 2022, factors such as the structural easing of production capacity and the digestion of prior-period inventories have resulted in a downward trend in demand for certain chips represented by consumption electronics products. Although the Group's product lines cover a wide range of application, including industrial grade products, consumption, and high reliability, and are more resistant to volatility, any industry-wide growth slowdown may adversely affect the Group's results.

Management Discussion and Analysis

(V) RISK FACTORS *(Continued)*

2. Risk of the international trading environment has significant impact on the Group's operations

In recent years, the uncertainty of the international trade environment has increased, and anti-globalization trade has further spread. Some countries have adopted trade protection measures and have repeatedly taken long-arm jurisdictional measures, which have had an impact on the PRC's integrated circuit industry. The integrated circuit industry has typical characteristics of global division of labor and cooperation. If there are major adverse changes in the international trade environment, the trade friction between countries and regions further escalates, and global trade protectionism continues to heat up, the production and operation of upstream and downstream companies in the integrated circuit industry chain may be adversely affected, resulting in an increase in upstream and downstream transaction costs in the industry chain, which may adversely affect the operation of the Group.

3. Risk of new product development and technology iteration

The integrated circuit design industry in which the Group operates is a typical technology-intensive industry, where technology upgrades and product iterations are fast. At the same time, chip products have high technical barriers and the advantages of first-mover companies are obvious. The Group will face the risk of being seized by competitors for market share if the Group misjudges the market demand in the follow-up research and development process or the research and development progress becomes slow. In addition, high-end chip research and development has the characteristics of long development cycle, large capital investment, and high research and development risk. During the research and development process, some key technologies may be failed to break through or product performance, parameters, yield, etc. which may not meet the needs of the market and there is risk of failure of research and development and falling behind next-generation technology.

4. Risk of falling of product selling price and gross profit margin

Benefiting from the industry boom and the technological advantages formed by the Group's long-term accumulation, the Group maintains a high level of gross profit margin currently. The average selling price and comprehensive gross profit margin of the Group's main products will face the risk of continuous decline if the Group cannot take effective measures to consolidate and enhance the competitiveness of its products which due to the advancement of technology, the increase in the prices of labor and raw materials, the decline of the Group's product bargaining power, or the major changes in the industry in the future, which will result in the Group being in a disadvantageous position in the fierce market competition and reducing the sustainable profitability.

5. Risk of high supplier concentration and price fluctuations of raw materials

The Group operates in the Fabless mode. The Group mainly focus in design and sale of integrated circuits. The production process such as wafer manufacturing, packaging and testing are mainly completed by professional wafer foundries and packaging and testing manufacturers. The concentration of this industry is relatively high, and accordingly the concentration of the Group's suppliers is also relatively high. At the same time, due to industry fluctuations and changes in production capacity, raw material prices will also become fluctuate. The aforementioned factors have a direct impact on the profitability of the Group.

Management Discussion and Analysis

(V) RISK FACTORS *(Continued)*

6. Risk of structural fluctuations in production capacity

The Group operates in a Fabless mode and has established long-term cooperative relations with major wafer manufacturers and packaging and testing manufacturers in the industry. With years of stable cooperation, comprehensive product lines and growing business volume, the Group can obtain a certain capacity guarantee. During the Reporting Period, although the production capacity in some areas of the industry had increased, the production capacity of high-end products required by the Group still needs to be further expanded. If the production capacity cannot meet the needs of the Group's business development, it will have impact on the Group's business.

7. Risk of intellectual property and legal

Chip design is a technology-intensive industry, and the final chip product is highly complex. Therefore, even if the Group has taken strict intellectual property protection measures and quality control measures, etc., it is still unable to eliminate legal risks completely that caused by intellectual property disputes, technology licensing risks (EDA design tools, IP core licensing, etc.) and disputes caused by product quality defects.

8. Risk of impairment of inventories

The inventories of the Group mainly include chips and wafers which were affected by factors such as increasing competition for sales in the chip market and tightening supply of production capacity from major foundries. To safeguard the supply chain, the Group has invested more resources in spare of inventories during the Reporting Period. At the end of the Reporting Period, the carrying amount of the inventories of the Group was approximately RMB2,848.2452 million, accounting for 50.08% of the corresponding total current assets at the end of the period. The Group makes corresponding impairment provisions every year according to the amount of the net realizable value of inventories lower than the cost. At the end of the Reporting Period, the balance of inventory impairment provisions of the Group was approximately RMB247.0688 million, and the proportion of inventory impairment provisions was 7.98%. In the event that there are changes in market demand, intensified market competition or accelerated product replacement due to technical repetitive computing, the risk of impairment of inventories may increase, which will have an adverse impact on the operating results of the Group.

9. Financial risks associated with Research and Development

The Group attaches great importance to the independent research and development of core technologies. During the Reporting Period, the research and development investment was about RMB588 million, representing 32.74% of revenue during the Reporting Period, and the research and development investment intensity was relatively high. If the intangible assets formed by the development expenditure are provided and amortized, or the development expenditure is written off or the intangible assets are impaired, it may have a greater impact on the profit of the Group.

10. Risk of collection of accounts receivable and notes receivable

At the end of the Reporting Period, the carrying amount of the Group's accounts receivable was approximately RMB1,269.6582 million, and the carrying amount of notes receivable was approximately RMB224.4228 million. The total carrying amounts of accounts receivable and notes receivable accounts for 83.18% of revenue. If the macroeconomic situation, industry development prospects and other factors change in the future adversely, and there are major difficulties of customer's operating conditions, the Group may face the risk of increasing bad debt losses due to uncollectible accounts receivable and notes receivable.

Management Discussion and Analysis

(VI) MAIN OPERATION SITUATION IN THE REPORTING PERIOD

Main business analysis

1. Analysis of changes in financial statements related items

Item	Half-year ended 30 June		RMB0'000
	2023	2022	Change (%)
Revenue	179,622.93	170,233.34	5.52
Cost of sales	59,090.72	59,587.15	-0.83
Selling expenses	12,223.47	9,774.98	25.05
Administrative expenses	7,402.59	5,986.12	23.66
Finance expenses	(786.30)	(430.28)	82.74
Research and development expenses	52,760.36	37,378.25	41.15
Credit impairment losses	(1,343.88)	(554.53)	142.35
Asset impairment losses	(5,204.85)	(4,184.20)	24.39
Net cash flow (used in)/from operating activities	(109,043.92)	32,910.72	N/A
Net cash flows used in investing activities	(30,741.33)	(14,743.85)	108.50
Net cash flow from/(used in) financing activities	101,485.09	(8,238.19)	N/A

Reasons for changes in revenue: mainly attributable to the growth in sales of the Group's FPGA and non-volatile memory product lines due to the Group's comprehensive product lines and strong competitiveness, despite the industry cyclical fluctuations and the divergence in market demand, which led to a slight increase in the Group's overall revenue.

Reasons for changes in cost of sales: mainly attributable to the structural differentiation of the Group's product lines and the growth in sales of high margin products, which resulted in decrease of cost of sales.

Reasons for changes in selling expenses: mainly attributable to the increase in staff remuneration as a result of the increase in headcount and wage increase due to the expansion of the Group's operation scale, as well as the increase in selling expenses as a result of the enhancement of market development and customer services during the Reporting Period.

Reasons for changes in administrative expenses: mainly attributable to the expansion of the Group's operation scale and the increase in investment in human resources and workplace.

Reasons for changes in finance expenses: mainly attributable to the increase in gains on exchange difference generated by the Group.

Reasons for changes in research and development expenses: mainly attributable to the increase in staff remuneration during the Reporting Period as a result of reasonable salary increment to maintain the Group's competitiveness in research and development. At the same time, the Group also increased its investment in research and development projects, which resulted in an increase in material and processing costs, depreciation and amortisation, and technical service costs.

Management Discussion and Analysis

(VI) MAIN OPERATION SITUATION IN THE REPORTING PERIOD *(Continued)*

Main business analysis *(Continued)*

1. Analysis of changes in financial statements related items (Continued)

Reasons for changes in credit impairment losses: mainly attributable to the prolonged aging of receivables from some of the Group's customers.

Reasons for changes in asset impairment losses: mainly attributable to the weak market demand for consumption electronic products resulted in decrease in demand and price of some of the Group's chips products and thus leading to increase of provision of impairment of inventories and the Group recorded impairment loss on certain intangible assets and knowhow. For the Reporting Period, the Group recorded impairment loss on inventories of RMB43,394,874.45 and impairment loss on intangible assets of RMB8,653,659.15. Inventories are stated at the lower of cost and net realizable value, which are written down below cost to net realizable value if the cost is higher than the net realizable value.

Reasons for changes in net cash flow (used in)/from operating activities: mainly attributable to the significant increase in payments to suppliers as a result of the Group's spare of inventories; and there were changes in the structure of product sales and customers, which resulted in a slowdown of cash receipt from sales of goods.

Reasons for changes in net cash flow used in investing activities: mainly attributable to the decrease in cash received from the disposal of investments in the current period due to the fact that some of the Group's deposits were redeemed at maturity in previous period and no longer repurchased in order to meet the Group's working capital requirements.

Reasons for changes in net cash flow from/(used in) financing activities: mainly attributable to the increase in short-term and long-term borrowings to meet the Group's working capital requirements.

Management Discussion and Analysis

(VI) MAIN OPERATION SITUATION IN THE REPORTING PERIOD *(Continued)*

Main business analysis *(Continued)*

2. Analysis of assets and liabilities status

Status of assets and liabilities

Item	30 June 2023	Balance as at 30 June 2023 as a percentage of total assets (%)	31 December 2022	Balance as at 31 December 2022 as a percentage of total asset (%)	RMBO'000
					Change in balance as at the end of the Reporting Period as compared with last year (%)
Cash at bank and on hand	78,757.69	10.04	119,082.83	19.49	-33.86
Financial assets held for trading	5,811.50	0.74	8,016.80	1.31	-27.51
Accounts receivable	126,965.82	16.19	73,020.43	11.95	73.88
Prepayment	27,890.88	3.56	47,470.22	7.77	-41.25
Inventories	284,824.52	36.31	148,326.45	24.27	92.03
Other current assets	12,022.57	1.53	1,372.88	0.22	775.72
Construction in progress	49,774.22	6.35	19,377.64	3.17	156.86
Intangible assets	13,345.89	1.70	8,575.06	1.40	55.64
Other non-current assets	11,781.87	1.50	18,281.72	2.99	-35.55
Short-term borrowings	58,300.00	7.43	5,400.00	0.88	979.63
Accounts payable	30,096.68	3.84	20,118.25	3.29	49.60
Contract liabilities	17,810.48	2.27	21,040.23	3.44	-15.35
Other payables	29,015.10	3.70	7,233.56	1.18	301.12
Non-current liabilities due within one year	5,742.38	0.73	1,518.14	0.25	278.25
Long-term borrowings	45,623.70	5.82	-	-	N/A

Reasons for changes in cash at bank and on hand: mainly attributable to the increase in the Group's spare of inventories of certain products and the significant increase in payment for purchases, which resulted in a decrease in cash at bank and on hand.

Reasons for changes in financial assets held for trading: mainly attributable to the maturity of structured deposits purchased by the Group

Reasons for changes in accounts receivable: mainly attributable to the increase in the proportion of sales of the Group's highly reliable products and the longer settlement cycle of customers of highly reliable products, resulting in the increase in accounts receivable.

Reasons for changes in prepayment: mainly attributable to the completion of delivery of the Group's prepaid orders and the better credit limits granted by the relevant suppliers during the Reporting Period.

Reasons for changes in inventories: mainly attributable to the increase in the Group's spare of inventories for FPGA and other products.

Management Discussion and Analysis

(VI) MAIN OPERATION SITUATION IN THE REPORTING PERIOD *(Continued)*

Main business analysis *(Continued)*

2. *Analysis of assets and liabilities status (Continued)*

Status of assets and liabilities (Continued)

Reasons for changes in other current assets: mainly attributable to the increase of not yet deducted input tax and prepaid income tax which arising from the purchase of equipment by the Group.

Reasons for changes in construction in progress: mainly attributable to the increase in production equipments which had not yet been checked and accepted by the subsidiary, Sino IC, and the delivery of the Lin-Gang factories which transferred to construction in progress during the Reporting Period.

Reasons for changes in intangible assets: mainly attributable to the conversion of some of the Group's capitalised items to intangible assets when they reached their pre-determined useable condition and the increase in the acquisition of software and IP.

Reasons for changes in other non-current assets: mainly attributable to the transfer of prepayments to construction in progress upon the delivery of the Lin-Gang factories of Sino IC was completed during the Reporting Period.

Reasons for changes in short-term borrowings: mainly attributable to the increase in required working capital as a result of the Group's spare of inventories of FPGA and other products, which resulted in addition of short-term bank loans.

Reasons for changes in accounts payable: mainly attributable to the increase in purchases as a result of the expansion of the Group's operation scale and spare of inventories during the Reporting Period, as well as the increase in credit limits offered by certain suppliers.

Reasons for changes in contract liabilities: mainly attributable to the completion of product deliveries for some of the Group's contracts and then recognized as revenue.

Reasons for changes in other payable: mainly attributable to the fact that during the Reporting Period, the Company had not yet paid the dividend for the year 2022, which resulted in an increase in dividend payable; and the completion of delivery of the Lin-Gang factories of Sino IC but the settlement of the final instalment of the house payment was still outstanding.

Reasons for changes in non-current liabilities due within one year: mainly attributable to the increase in the Group's working capital requirements as a result of spare of inventories of certain products, which led to a corresponding increase in long-term borrowings due within one year.

Reasons for changes in long-term borrowings: mainly attributable to the increase in the Group's working capital requirements as a result of the spare of inventories of certain products, which led to an increase in bank financing.

Management Discussion and Analysis

USE OF PROCEEDS

- A. On 28 October 2022, the subsidiary of the Company, Sino IC, completed public offering and listing on the Beijing Stock Exchange. Sino IC offered to the public 40,000,000 RMB ordinary shares, with aggregate nominal value RMB40,000,000, for an issuance price of RMB13.50 per share. The total amount raised was RMB540,000,000 and the actual net proceeds after deducting issuing expenses (tax not inclusive) was RMB507,600,000 which the proceeds will be invested in the IC testing industrialisation project and the construction of research and development center project before 30 September 2023.

As at 30 June 2023, the balance of fund raising amounted to RMB44,531,010.14, the use of proceeds and balance of funds were:

	RMB
Balance of special account for fund raising as at 31 December 2022, including cash management products	222,192,779.93
Less: Expenditures of fund raising projects	178,865,823.01
Add: Accumulated interest income net of charges	1,204,053.22
Balance of special account for fund raising as at 30 June 2023, including cash management products	44,531,010.14

- B. For year 2021, the Company had its first initial public offering of A shares in the PRC and listed on the Shanghai Stock Exchange upon completion of issuance. The Company offered to the public for 120,000,000 RMB ordinary shares of RMB0.1 each for an issuance price of RMB6.23 per share. The total amount raised was RMB747,600,000 and the actual net proceeds after deducting issuing expenses (tax not inclusive) was RMB680,282,800.

On 27 August 2021, the Board has approved:

1. the Proposal on the Replacement of Self-raised Funds Invested in Advance with Proceeds from the Issuance (關於使用募集資金置換預先投入的自籌資金的議案), which agreed the Company to replace the self-raised funds invested in advance in investment projects with proceeds from the Issuance amounting to RMB374,561,298.30, and the replacement of self-raised funds used in advance for the payment of issuance expenses with proceeds from the Issuance amounting to RMB5,730,425.73. In aggregate, the Company will replace self-raised funds invested in advance with proceeds amounting to RMB380,291,724.03.
2. the Proposal on Using Part of the Over-raised Proceeds to Permanently Supplement Working Capital (關於使用部分超募資金永久補充流動資金的議案), which agreed the Company to use part of the over-raised proceeds of RMB24 million for permanent supplement of working capital, which the proposal was approved by the second extraordinary general meeting in 2021.

Management Discussion and Analysis

USE OF PROCEEDS (Continued)

B. (Continued)

On 15 August 2022, the Board has approved:

The Proposal on Using Temporarily Idle Proceeds for Cash Management (關於使用暫時閒置募集資金進行現金管理的議案), which agreed the Company to use the idle proceeds for cash management under the condition that it does not affect the progress of the investment plan of the proceeds, does not affect the normal production and operation of the Company, and ensures the safety of funds. The Company can use the temporarily idle proceeds of not exceeding RMB160 million (inclusive) to purchase investment products with high security, good liquidity, and capital protection agreements (including but not limited to purchasing principal-guaranteed wealth management products, structured deposits, large deposit certificates, time deposits, call deposits and income certificates). The period of use is valid within 27 August 2022 to 26 August 2023. Within the aforesaid limit and period of use, the amounts can be used on a rolling basis.

On 17 January 2023, the Board has approved:

the Proposal on Using Part of the Over-raised Proceeds to Permanently Supplement Working Capital (關於使用部分超募資金永久補充流動資金的議案), which agreed the Company to use part of the over-raised proceeds of RMB24 million for permanent supplement of working capital, which the proposal was approved by the 2022 annual general meeting.

As at 30 June 2023, the balance of fund raising amounted to RMB54,899,793.15, the use of proceeds and balance of funds were:

	RMB
Balance of special account for fund raising as at 31 December 2022, including cash management products	160,972,522.22
Less: Expenditures of fund raising projects-	
Reserve for technology research and development	83,534,764.69
Permanently Supplement Working Capital	24,000,000.00
Add: Accumulated income from cash management of fund raising	1,091,616.44
Accumulated interest income net of charges	370,419.18
Balance of special account for fund raising as at 30 June 2023, including cash management products	54,899,793.15

In accordance with the approval for revision of use of proceeds from fund raising on the extraordinary general meeting of the Company held on 28 September 2020, the Company will keep the expected timetable to use the unutilized balance for the purpose of “Reserve for technology research and development” within two years after the listing date of A shares (4 August 2021).

Consolidated Balance Sheet (Unaudited)

30 June 2023

Item	Note	RMB	
		30 June 2023 (unaudited)	31 December 2022 (audited)
Current assets:			
Cash at bank and on hand	(4)	787,576,869.38	1,190,828,339.52
Financial assets held for trading	(5)	58,115,038.36	80,167,958.90
Notes receivable	(6)	224,422,813.03	252,144,057.13
Accounts receivable	(7)	1,269,658,247.05	730,204,276.92
Receivables for financing	(8)	80,075,652.66	81,708,392.03
Prepayments	(9)	278,908,803.25	474,702,228.34
Other receivables	(10)	20,654,077.68	20,352,381.01
Inventories	(11)	2,848,245,225.26	1,483,264,548.04
Other current assets	(12)	120,225,691.42	13,728,762.53
Total current assets		5,687,882,418.09	4,327,100,944.42
Non-current assets:			
Long-term equity investments	(13)	40,351,201.24	42,508,902.76
Investment in other equity instruments	(14)	34,752,412.68	33,902,315.43
Investment properties	(15)	121,067,047.16	122,687,909.50
Fixed assets	(16)	755,285,149.91	694,446,705.71
Construction in progress	(17)	497,742,240.18	193,776,441.01
Right-of-use assets	(18)	38,233,178.04	41,886,980.15
Intangible assets	(19)	133,458,948.89	85,750,633.28
Development costs	(20)	344,977,716.55	316,521,697.31
Long-term prepaid expenses	(21)	68,204,806.58	66,244,507.84
Deferred income tax assets	(22)	3,619,004.59	3,243,844.60
Other non-current assets	(23)	117,818,744.73	182,817,172.08
Total non-current assets		2,155,510,450.55	1,783,787,109.67
Total assets		7,843,392,868.64	6,110,888,054.09
Current liabilities:			
Short-term borrowings	(24)	583,000,000.00	54,000,000.00
Accounts payable	(25)	300,966,831.95	201,182,480.44
Contract liabilities	(26)	178,104,803.84	210,402,283.73
Employee benefits payables	(27)	175,061,480.32	192,340,093.25
Taxes payables	(28)	18,160,922.95	10,735,058.29
Other payables	(29)	290,150,992.61	72,335,632.38
Non-current liabilities due within one year	(30)	57,423,821.80	15,181,384.65
Other current liabilities	(31)	155,651,350.13	147,699,399.83
Total current liabilities		1,758,520,203.60	903,876,332.57

Consolidated Balance Sheet (Unaudited)

30 June 2023

Item	Note	RMB	
		30 June 2023 (unaudited)	31 December 2022 (audited)
Non-current liabilities:			
Long-term borrowings	(32)	456,237,024.37	–
Lease liabilities	(33)	27,644,151.47	33,162,705.60
Deferred income	(34)	28,670,733.39	16,548,141.05
Deferred income tax liabilities	(22)	4,131,577.32	4,131,496.92
Total non-current liabilities		516,683,486.55	53,842,343.57
Total liabilities		2,275,203,690.15	957,718,676.14
Owners' equity (or shareholders' equity):			
Paid-in capital (or share capital)	(35)	81,665,650.00	81,665,650.00
Capital reserve	(36)	1,682,299,956.25	1,622,905,978.93
Other comprehensive income	(37)	15,561,561.88	13,684,518.28
Surplus reserve	(38)	40,832,825.00	40,832,825.00
Undistributed profit	(39)	3,111,163,522.62	2,772,141,379.40
Total owners' equity attributable to the parent company (or shareholders' equity)		4,931,523,515.75	4,531,230,351.61
Minority interest		636,665,662.74	621,939,026.34
Total owners' equity (or shareholders' equity)		5,568,189,178.49	5,153,169,377.95
Total liabilities and owners' equity (or shareholders' equity)		7,843,392,868.64	6,110,888,054.09

Balance Sheet of the Parent Company (Unaudited)

30 June 2023

Item	Note	RMB	
		30 June 2023 (unaudited)	31 December 2022 (audited)
Current assets:			
Cash at bank and on hand		462,994,764.74	680,733,206.51
Financial assets held for trading		34,215,038.36	80,167,958.90
Notes receivable		207,357,865.63	236,424,721.49
Accounts receivable	(67)1	1,249,007,500.77	690,793,776.30
Receivables for financing		76,073,036.55	73,301,943.39
Prepayments		276,807,092.62	473,146,424.02
Other receivables	(67)2	4,040,454.21	4,839,855.49
Inventories		2,854,219,354.99	1,480,135,764.37
Other current assets		87,288,323.64	759,429.46
Total current assets		5,252,003,431.51	3,720,303,079.93
Non-current assets:			
Long-term equity investments	(67)3	130,550,194.01	132,677,564.53
Investment in other equity instruments		27,526,636.02	27,526,636.02
Investment properties		121,067,047.16	122,687,909.50
Fixed assets		522,511,846.51	511,061,173.99
Construction in progress		19,487,250.36	30,792,034.96
Right-of-use assets		14,991,187.20	14,293,613.60
Intangible assets		133,236,648.03	85,445,571.92
Development costs		348,243,855.57	319,784,468.41
Long-term prepaid expenses		44,751,104.59	46,899,190.10
Other non-current assets		12,002,299.04	803,874.28
Total non-current assets		1,374,368,068.49	1,291,972,037.31
Total assets		6,626,371,500.00	5,012,275,117.24
Current liabilities:			
Short-term borrowings		583,000,000.00	54,000,000.00
Accounts payable		327,766,374.19	218,480,732.01
Contract liabilities		176,028,780.52	208,945,883.83
Employee benefits payables		167,848,551.12	178,831,572.88
Taxes payables		17,670,628.34	10,593,506.93
Other payables		142,408,948.93	35,884,287.10
Non-current liabilities due within one year		47,177,416.73	5,424,494.65
Other current liabilities		129,316,486.00	117,787,219.89
Total current liabilities		1,591,217,185.83	829,947,697.29

Balance Sheet of the Parent Company (Unaudited)

30 June 2023

Item	Note	RMB	
		30 June 2023 (unaudited)	31 December 2022 (audited)
Non-current liabilities:			
Long-term borrowings		456,237,024.37	–
Lease liabilities		9,412,900.15	10,056,349.03
Deferred income		22,305,621.29	8,725,902.31
Deferred tax liabilities		4,128,995.40	4,128,995.40
Total non-current liabilities		492,084,541.21	22,911,246.74
Total liabilities		2,083,301,727.04	852,858,944.03
Owners' equity (or shareholders' equity):			
Paid-in capital (or share capital)		81,665,650.00	81,665,650.00
Capital reserve		1,495,827,530.50	1,436,433,553.18
Other comprehensive income		14,898,539.22	14,898,539.22
Surplus reserve		40,832,825.00	40,832,825.00
Undistributed profit		2,909,845,228.24	2,585,585,605.81
Total owners' equity (or shareholders' equity)		4,543,069,772.96	4,159,416,173.21
Total liabilities and owners' equity (or shareholders' equity)		6,626,371,500.00	5,012,275,117.24

Consolidated Income Statement (Unaudited)

For the half-year ended 30 June 2023

Item	Note	RMB	
		Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Total Revenue	(40)	1,796,229,282.46	1,702,333,354.86
Including: Revenue		1,796,229,282.46	1,702,333,354.86
Total cost of sales		1,311,295,313.34	1,136,161,435.26
Including: Cost of sales	(40)	590,907,243.07	595,871,463.68
Business taxes and surcharges	(41)	4,386,875.58	13,199,289.69
Selling expenses	(42)	122,234,659.43	97,749,760.73
Administrative expenses	(43)	74,025,934.77	59,861,206.32
Research and development expenses	(44)	527,603,643.01	373,782,494.19
Finance expenses	(45)	(7,863,042.52)	(4,302,779.35)
Including: Interest expenses		7,602,536.08	2,255,619.55
Interest income		8,533,982.05	7,515,651.26
Add: Other income	(46)	47,082,873.71	24,206,240.47
Investment income	(47)	1,292,302.72	865,001.98
Including: Investment losses from associates and joint venture		(2,408,697.28)	(3,055,355.07)
(Losses)/Gains from changes in fair value	(48)	(1,651,438.35)	1,039,641.10
Credit impairment losses	(49)	(13,438,831.17)	(5,545,285.19)
Assets impairment losses	(50)	(52,048,533.60)	(41,841,987.73)
Gains/(Losses) on disposal of assets	(51)	369,250.51	(4,605.35)
Operating profits		466,539,592.94	544,890,924.88
Add: Non-operating income	(52)	0.41	21,222.51
Total profits		466,539,593.35	544,912,147.39
Less: Income tax expenses	(53)	2,542,186.23	3,354,847.47
Net profits		463,997,407.12	541,557,299.92

Consolidated Income Statement (Unaudited)

For the half-year ended 30 June 2023

Item	Note	RMB	
		Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Net profits attributable to shareholders of the parent company		449,270,770.72	530,531,484.80
Gains or losses of minority interests		14,726,636.40	11,025,815.12
Net other comprehensive income after tax		1,877,043.60	1,660,114.21
Net other comprehensive income after tax attributable to owners of the parent company		1,877,043.60	1,660,114.21
Other comprehensive income that will be reclassified to profit or loss		1,877,043.60	1,660,114.21
Other comprehensive income can be classified as profit or loss under the equity method		326,243.37	–
Exchange differences arising from translation of foreign currency denominated financial statements		1,550,800.23	1,660,114.21
Total comprehensive income		465,874,450.72	543,217,414.13
Total comprehensive income attributable to owners of the parent company		451,147,814.32	532,191,599.01
Total comprehensive income attributable to minority interests		14,726,636.40	11,025,815.12
Earnings per share:			
Basic earnings per share (RMB/share)		0.55	0.65
Diluted earnings per share (RMB/share)		0.55	0.65

Income Statement of the Parent Company (Unaudited)

For the half-year ended 30 June 2023

Item	Note	RMB	
		Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Revenue	(67)4	1,685,223,765.99	1,599,895,619.52
Less: Cost of sales	(67)4	564,367,325.01	549,125,754.48
Business taxes and surcharges		4,011,808.44	13,124,746.88
Selling expenses		118,414,239.10	95,478,860.80
Administrative expenses		47,416,156.94	39,019,883.98
Research and development expenses		490,876,257.27	360,922,249.34
Finance costs		(5,390,416.00)	(2,961,339.33)
Including: Interest expenses		6,696,154.77	1,380,463.77
Interest income		6,041,127.86	5,922,731.33
Add: Other income		33,038,922.24	20,561,228.31
Investment income	(67)4	731,782.91	795,151.98
Including: Investment losses from associates and joint venture		(2,127,370.52)	(3,125,205.07)
(Losses)/Gains from changes in fair value		(1,651,438.35)	1,039,641.10
Credit impairment losses		(13,550,996.68)	(5,138,506.85)
Assets impairment losses		(50,010,745.57)	(41,841,987.73)
Gains/(Losses) on disposal of assets		422,330.15	(5,284.97)
Operating profits		434,508,249.93	520,595,705.21
Total profits		434,508,249.93	520,595,705.21
Net profits		434,508,249.93	520,595,705.21
Net other comprehensive income after tax		–	–
Total comprehensive income		434,508,249.93	520,595,705.21

Consolidated Cash Flows Statement (Unaudited)

For the half-year ended 30 June 2023

Item	Note	RMB	
		Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Cash flow (used in)/generated from operating activities:			
Cash received from sale of goods and rendering of services		1,289,225,761.05	1,735,470,045.19
Receipts of taxes and surcharges refunds		23,622,238.59	9,022,427.25
Cash received relating to other operating activities	(54)	62,049,125.61	6,210,752.69
Sub-total of cash inflow from operating activities		1,374,897,125.25	1,750,703,225.13
Cash paid for purchase of goods and services received		1,769,894,205.02	816,845,082.90
Cash paid to and on behalf of employees		507,826,611.09	417,164,869.35
Payments of taxes and surcharges		37,760,861.04	128,123,315.29
Cash paid relating to other operating activities	(54)	149,854,635.01	59,462,795.92
Sub-total of cash outflow from operating activities		2,465,336,312.16	1,421,596,063.46
Net cash flow (used in)/generated from operating activities		(1,090,439,186.91)	329,107,161.67
Net cash flow used in investing activities			
Cash received from disposal of investments		41,988,303.44	190,682,321.76
Cash received from return on investments		3,701,000.00	1,039,788.75
Net cash recovered from disposal of fixed assets, intangible assets and other long-term assets		247,349.85	6,000.00
Cash received relating to other investing activities	(54)	2,821,201.61	6,277,029.76
Sub-total of cash inflow from investing activities		48,757,854.90	198,005,140.27
Cash paid to acquire fixed assets, intangible assets and other long-term assets		356,171,193.91	345,443,590.67
Sub-total of cash outflow from investing activities		356,171,193.91	345,443,590.67
Net cash flow used in investing activities		(307,413,339.01)	(147,438,450.40)

Consolidated Cash Flows Statement (Unaudited)

For the half-year ended 30 June 2023

Item	Note	RMB	
		Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Cash flow generated from/(used in) financing activities:			
Cash received from borrowings		1,065,776,042.57	–
Sub-total of cash inflow from financing activities		1,065,776,042.57	–
Cash repayments of borrowings		35,539,018.20	74,730,406.29
Cash paid for distribution of dividends, profit or interest expenses		6,301,911.31	549,359.63
Cash paid relating to other financing activities	(55)	9,084,223.33	7,102,087.03
Sub-total of cash inflow from financing activities		50,925,152.84	82,381,852.95
Net cash flow generated from/(used in) financing activities		1,014,850,889.73	(82,381,852.95)
Effect of changes in foreign exchange rate on cash and cash equivalents		(1,486,615.28)	(2,617,014.62)
Net (decrease)/increase in cash and cash equivalents		(384,488,251.47)	96,669,843.70
Add: Balance of cash and cash equivalents at the beginning of the period		1,120,286,945.68	415,755,306.55
Balance of cash and cash equivalents at the end of the period		735,798,694.21	512,425,150.25

Cash Flows Statement of the Parent Company (Unaudited)

For the half-year ended 30 June 2023

Item	RMB	
	Half-year ended 30 June	
	2023 (unaudited)	2022 (unaudited)
Cash flow (used in)/generated from operating activities:		
Cash received from sale of goods and rendering of services	1,175,587,119.49	1,577,076,360.96
Receipts of taxes and surcharges refunds	17,522,741.52	9,022,427.25
Cash received relating to other operating activities	50,721,324.72	4,949,696.59
Sub-total of cash inflow from operating activities	1,243,831,185.73	1,591,048,484.80
Cash paid for purchase of goods and services received	1,828,701,537.87	766,829,115.47
Cash paid to and on behalf of employees	438,480,450.58	368,407,487.87
Payments of taxes and surcharges	31,780,036.01	121,017,925.65
Cash paid relating to other operating activities	131,668,069.45	49,501,842.06
Sub-total of cash outflow from operating activities	2,430,630,093.91	1,305,756,371.05
Net cash flow (used in)/generated from operating activities	(1,186,798,908.18)	285,292,113.75
Cash flow used in investing activities:		
Cash received from disposal of investments	65,854,835.11	142,648,388.58
Cash received from return on investments	2,859,153.43	–
Net cash recovered from disposal of fixed assets, intangible assets and other long-term assets	226,136.68	–
Cash received relating to other investing activities	2,821,201.61	6,242,710.09
Sub-total of cash inflow from investing activities	71,761,326.83	148,891,098.67
Cash paid to acquire fixed assets, intangible assets and other long-term assets	102,055,334.34	264,106,792.35
Sub-total of cash outflow from investing activities	102,055,334.34	264,106,792.35
Net cash flow used in investing activities	(30,294,007.51)	(115,215,693.68)

Cash Flows Statement of the Parent Company (Unaudited)

For the half-year ended 30 June 2023

Item	RMB	
	Half-year ended 30 June 2023 (unaudited)	2022 (unaudited)
Cash flow generated from/(used in) financing activities:		
Cash received from borrowings	1,065,776,042.57	–
Sub-total of cash inflow from financing activities	1,065,776,042.57	–
Cash repayments of borrowings	35,539,018.20	74,730,406.29
Cash paid for distribution of dividends, profit or interest expenses	6,301,911.31	549,359.63
Cash paid relating to other financing activities	3,383,901.17	3,097,879.23
Sub-total of cash outflow from financing activities	45,224,830.68	78,377,645.15
Net cash flow generated from/(used in) financing activities	1,020,551,211.89	(78,377,645.15)
Effect of changes in foreign exchange rate on cash and cash equivalents	(2,433,519.30)	(3,195,152.25)
Net (decrease)/increase in cash and cash equivalents	(198,975,223.10)	88,503,622.67
Add: Balance of cash and cash equivalents at the beginning of the period	610,191,812.67	254,334,093.91
Balance of cash and cash equivalents at the end of the period	411,216,589.57	342,837,716.58

Consolidated Statement of Changes in Owners' Equity (Unaudited)

For the half-year ended 30 June 2023

Item	Owners' equity attributable to the Parent Company						Minority interest	Total owners' equity
	Paid-in capital (or share capital)	Capital reserve	Other comprehensive income	Surplus reserve	Undistributed profit	Subtotal		
At 31 December 2022 and at 1 January 2023	81,665,650.00	1,622,905,978.93	13,684,518.28	40,832,825.00	2,772,141,379.40	4,531,230,351.61	621,939,026.34	5,153,169,377.95
Increase/decrease in the current period	-	59,393,977.32	1,877,043.60	-	339,022,143.22	400,293,164.14	14,726,636.40	415,019,800.54
Total comprehensive income	-	-	1,877,043.60	-	449,270,770.72	451,147,814.32	14,726,636.40	465,874,450.72
Capital contribution and withdrawal by owners	-	59,393,977.32	-	-	-	59,393,977.32	-	59,393,977.32
Amount of share-based payment included in owners' equity	-	59,393,977.32	-	-	-	59,393,977.32	-	59,393,977.32
Profit distribution to owners (or shareholders)	-	-	-	-	(110,248,627.50)	(110,248,627.50)	-	(110,248,627.50)
At 30 June 2023	81,665,650.00	1,682,299,956.25	15,561,561.88	40,832,825.00	3,111,163,522.62	4,931,523,515.75	636,665,662.74	5,568,189,178.49

For the half-year ended 30 June 2022

Item	Owners' equity attributable to the Parent Company						Minority interest	Total owners' equity
	Paid-in capital (or share capital)	Capital reserve	Other comprehensive income	Surplus reserve	Undistributed profit	Subtotal		
At 31 December 2021 and at 1 January 2022	81,450,200.00	1,259,212,929.93	10,509,082.70	40,725,100.00	1,748,348,393.72	3,140,245,706.35	226,656,840.15	3,366,902,546.50
Increase/decrease in the current period	-	73,698,643.14	1,660,114.21	-	477,588,854.80	552,947,612.15	11,025,815.12	563,973,427.27
Total comprehensive income	-	-	1,660,114.21	-	530,531,484.80	532,191,599.01	11,025,815.12	543,217,414.13
Capital contribution and withdrawal by owners	-	73,698,643.14	-	-	-	73,698,643.14	-	73,698,643.14
Amount of share-based payment included in owners' equity	-	73,698,643.14	-	-	-	73,698,643.14	-	73,698,643.14
Profit distribution to owners (or shareholders)	-	-	-	-	(52,942,630.00)	(52,942,630.00)	-	(52,942,630.00)
At 30 June 2022	81,450,200.00	1,332,911,573.07	12,169,196.91	40,725,100.00	2,225,937,248.52	3,693,193,318.50	237,682,655.27	3,930,875,973.77

Statement of Changes in Owners' Equity of the Parent Company (Unaudited)

For the half-year ended 30 June 2023

Item	Paid-in capital (or share capital)	Capital reserve	Other comprehensive income	Surplus reserve	Undistributed profit	RMB Total owners' equity
At 31 December 2022 and at 1 January 2023	81,665,650.00	1,436,433,553.18	14,898,539.22	40,832,825.00	2,585,585,605.81	4,159,416,173.21
Increase/decrease in the current period	-	59,393,977.32	-	-	324,259,622.43	383,653,599.75
Total comprehensive income	-	-	-	-	434,508,249.93	434,508,249.93
Capital contribution and withdrawal by owners	-	59,393,977.32	-	-	-	59,393,977.32
Amount of share-based payment included in owners' equity	-	59,393,977.32	-	-	-	59,393,977.32
Profit distribution to owners (or shareholders)	-	-	-	-	(110,248,627.50)	(110,248,627.50)
At 30 June 2023	81,665,650.00	1,495,827,530.50	14,898,539.22	40,832,825.00	2,909,845,228.24	4,543,069,772.96

For the half-year ended 30 June 2022

Item	Paid-in capital (or share capital)	Capital reserve	Other comprehensive income	Surplus reserve	Undistributed profit	RMB Total owners' equity
At 31 December 2021 and at 1 January 2022	81,450,200.00	1,248,298,324.62	14,120,625.68	40,725,100.00	1,535,601,355.62	2,920,195,605.92
Increase/decrease in the current period	-	73,698,643.14	-	-	467,653,075.21	541,351,718.35
Total comprehensive income	-	-	-	-	520,595,705.21	520,595,705.21
Capital contribution and withdrawal by owners	-	73,698,643.14	-	-	-	73,698,643.14
Amount of share-based payment included in owners' equity	-	73,698,643.14	-	-	-	73,698,643.14
Profit distribution to owners (or shareholders)	-	-	-	-	(52,942,630.00)	(52,942,630.00)
At 30 June 2022	81,450,200.00	1,321,996,967.76	14,120,625.68	40,725,100.00	2,003,254,430.83	3,461,547,324.27

Notes to Financial Statements

For the half-year ended 30 June 2023

(1) BASIC INFORMATION ON THE COMPANY

Company overview

Shanghai Fudan Microelectronics Group Company Limited (the “Company”) was established by way of promotion upon approval of the Shanghai Municipal People’s Government on 4 June 1998 (Hu Fu Ti Gai Shen [1998] No. 050). The promoters include Shanghai Commercial and Invest (Group) Corporation, Shanghai Fuxin Van Gogh Integrated Circuit Technology Co., Ltd., Shanghai Pacific Commercial Trust Co., Ltd., Shanghai Gaozhan Business Consultancy Co., Ltd., Ningbo Lirong Co., Ltd., the Staff Shareholding Association of Shanghai Fudan Microelectronics Group Company Limited, and natural persons Jiang Guoxing and Shi Lei. The Company was registered with the Shanghai Administration for Industry and Commerce on 10 July 1998, and obtained the business license with the number of 3100001005424 with registered capital RMB10,000,000.00.

On 4 August 2000, the Company was listed on the GEM of The Stock Exchange of Hong Kong Limited (the “Stock Exchange”). H Shares issued by the Company commenced trading on the Main Board of the Stock Exchange since 8 January 2014. A Shares were listed on the Shanghai Stock Exchange (the “SSE”) since 4 August 2021.

The principal activities of the Company and its subsidiaries (hereinafter collectively referred to as the “Group”) include the design, development and sale of integrated circuit products; and integrated circuit product testing services.

The financial statements have been approved by a resolution of the board of directors of the Company on 28 August 2023.

The scope of consolidation in the consolidated financial statements is determined on the basis of control.

(2) BASIS OF PREPARATION OF FINANCIAL STATEMENTS

Basis of preparation

The financial statements have been prepared in accordance with the “Accounting Standards for Business Enterprises – Basic Standards” promulgated by the Ministry of Finance and the specific accounting standards, application guidelines, interpretations and other relevant regulations subsequently announced and revised (collectively “Accounting Standards for Business Enterprises” or “ASBEs”).

The financial statements are presented on a going concern basis.

Except for certain financial instruments, the financial statements have been prepared under the pricing principle of historical cost. If the assets are impaired, corresponding provisions for impairment shall be made according to relevant regulations.

Going concern

There is no event or circumstance of the Company which casts material doubts to the going concern abilities for the 12 months from the end of the Reporting Period.

Notes to Financial Statements

For the half-year ended 30 June 2023

(3) PRINCIPAL ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

The Group has formulated specific accounting policies and accounting estimates according to the characteristics of its actual production and operation, which is mainly embodied in the impairment of financial instruments, depreciation of fixed assets, amortization of intangible assets, eligibility of the development costs for capitalisation and recognition and measurement of revenue.

1. Statement of compliance with the Accounting Standards for Business Enterprises

The financial statements prepared by the Company are in accordance with the requirements of the ASBEs, and gives a true and complete view on information including the financial position, the operating results, changes in owners' equity and cash flows of the Company. The unaudited interim financial statements should be read in conjunction with the annual financial statements for the year ended 31 December 2022, which have been prepared in accordance with the ASBEs.

2. Accounting period

The Company adopts the Gregorian calendar year as its accounting year, commencing from 1 January to 31 December.

3. Functional currency

The functional currency of the Company is Renminbi.

4. Principal Accounting Policies

The accounting policies used in the preparation of the unaudited interim financial statements are consistent with those used in the preparation of the Group's annual financial statements for the year ended 31 December 2022. The unaudited interim financial statements should be read in conjunction with the annual financial statements for the year ended 31 December 2022, which have been prepared in accordance with the ASBEs.

5. Tax

1. Main types of taxes and corresponding tax rates

Tax type	Tax basis	Tax rate
Value-added tax ("VAT")	The output tax is calculated on the income from the sale of goods and taxable services that calculated in accordance with the provisions of the tax law. The value added tax payable is the difference between the output tax and the input tax allowed to be deducted for the period	13%, 6%
Urban maintenance and construction tax	Turnover tax paid	7%
Corporate income tax ("CIT")	Taxable profit	29.84%, 25%, 16.5%, 15%, 10%
Property tax	It is paid at 1.2% of the original value of the property after deducting 30% or 10%.	1.2%

Notes to Financial Statements

For the half-year ended 30 June 2023

(3) PRINCIPAL ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

(Continued)

5. Tax (Continued)

1. Main types of taxes and corresponding tax rates (Continued)

Information on income tax rates of taxpayers with various CIT rates:

Name of taxpayer	Income tax rate (%)
The Company	Except for the companies mentioned in Notes (3), 5, 2 which enjoy preferential income tax policies, other subsidiaries in PRC paid 25% of taxable income.
Shanghai Fudan Microelectronics (Hong Kong) Limited	The first HK\$2 million of assessable profits of is taxed at 8.25% and the remaining assessable profits are taxed at 16.5% since 2018.
Fudan Microelectronics (USA) Inc.	21% of the federation corporate income tax rate of the U.S.A. and 8.84% of the local tax rate.

2. Tax preferential benefits

- (a) According to the “Corporate income tax Law of the People’s Republic of China” and the “Administrative Measures for the Recognition of High-tech Enterprises” that have been implemented since 1 January 2008, the high-tech enterprises supported by the state are subject to a reduced corporate income tax rate of 15%. The Company and Sino IC obtained the High-tech Enterprise Certificate (Certificate No. GR202031002423) and (Certificate No. GRGR202031000027) respectively in 2020 with a valid period of three years. Thus, the Company and Sino IC paid CIT at the tax rate of 15%.
- (b) Pursuant to the “Circular of the State Council on Printing and Issuing Certain Policies for Promoting the High-Quality Development of IC Industry and Software Industry in the New Period” (Guo Fa [2020] No. 8) and the “Announcement of the Ministry of Finance, the State Administration of Taxation, the National Development and Reform Commission, and the Ministry of Industry and Information Technology on Policies for Promoting the High-Quality Development of the Integrated Circuit Industry and the Software Industry with regard to Corporate Income Tax” (Announcement No. 45 of the Ministry of Finance, the State Administration of Taxation, the National Development and Reform Commission and the Ministry of Industry and Information Technology of 2020), the document requires that “key integrated circuit design enterprises and software enterprises encouraged by the Country shall be exempted from CIT for the first year to the fifth year starting from the year of profitability, and shall be subject to a reduction of CIT to 10% in the succeeding years”. The Company has compared the criteria for assessing the application requirements of key IC design enterprises with the Company’s situation on a case-by-case basis and met the criteria of the list of key IC design enterprises, and thus 10% tax rate was used to calculate and pay CIT during the Reporting Period.

Notes to Financial Statements

For the half-year ended 30 June 2023

(3) PRINCIPAL ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

(Continued)

5. Tax (Continued)

2. Tax preferential benefits (Continued)

- (c) In accordance with the requirements under the Circular of the Ministry of Finance and the State Administration of Taxation on the Value-added Tax Policy of Software Products (Cai Shui [2011] No. 100), the Company is entitled to the policies of recovery upon payment of VAT for software products.

(4) CASH AT BANK AND ON HAND

Item	30 June 2023	31 December 2022
Cash on hand	29,719.35	45,887.35
Deposits with banks	787,547,150.03	1,190,782,452.17
Total	787,576,869.38	1,190,828,339.52
Including: Total overseas deposits	33,491,680.40	21,150,180.78

Note: As at 30 June 2023, the Group's non-cash and cash equivalent time deposits and accrued interest on time deposits are RMB51,778,175.17. Bank current deposits generate interest income at the interest rate of bank current deposits. The term of short-term time deposits ranges from 7 days to 12 months which depending on the cash needs of the Group, and interest income is obtained at the corresponding bank time deposit rates.

(5) FINANCIAL ASSETS HELD FOR TRADING

Item	30 June 2023	31 December 2022
Financial assets at fair value through current profit or loss	58,115,038.36	80,167,958.90
– debt instrument investments	58,115,038.36	80,167,958.90

At 30 June 2023, the debt instrument investments of RMB58,115,038.36 held by the Group were all structured deposits (31 December 2022: RMB80,167,958.90).

Notes to Financial Statements

For the half-year ended 30 June 2023

(6) NOTES RECEIVABLE

1. Notes receivable by portfolio

Item	RMB	
	30 June 2023	31 December 2022
Bank acceptance notes	29,301,597.06	44,206,905.70
Commercial acceptance notes	195,121,215.97	207,937,151.43
Total	224,422,813.03	252,144,057.13

2. Disclosure under the methods of provision for bad debts by portfolio

Category	30 June 2023					31 December 2022				
	Book balance		Provision for bad and doubtful debts		Carrying amounts	Book balance		Provision for bad and doubtful debts		Carrying amounts
	Amount	Percentage (%)	Amount	Percentage of provision (%)		Amount	Percentage (%)	Amount	Percentage of provision (%)	
Bad debt provision made by portfolio										
Of which:										
Bank acceptance notes portfolio	29,301,597.06	12.75	-	-	29,301,597.06	44,206,905.70	17.25	-	-	44,206,905.70
Commercial acceptance notes portfolio	200,496,072.37	87.25	5,374,856.40	2.68	195,121,215.97	212,028,645.42	82.75	4,091,493.99	1.93	207,937,151.43
Total	229,797,669.43	100.00	5,374,856.40		224,422,813.03	256,235,551.12		4,091,493.99		252,144,057.13

3. Provision for bad debts

Category	RMB		
	At 31 December 2022 and at 1 January 2023	Change during the period Provision	30 June 2023
Commercial acceptance notes	4,091,493.99	1,283,362.41	5,374,856.40
Total	4,091,493.99	1,283,362.41	5,374,856.40

Notes to Financial Statements

For the half-year ended 30 June 2023

(7) ACCOUNTS RECEIVABLE

1. An ageing analysis based on the invoice date is as follows:

Ageing	RMB 30 June 2023
Within 1 year	1,152,926,495.83
1 to 2 years	129,143,515.31
2 to 3 years	8,769,450.98
3 to 4 years	1,528,401.72
4 to 5 years	765,632.64
Over 5 years	5,143,621.32
Total	1,298,277,117.80

2. Disclosure under the methods of provision for bad debts by portfolio

Category	30 June 2023					31 December 2022				
	Book balance		Provision for bad and doubtful debts		Carrying amounts	Book balance		Provision for bad and doubtful debts		Carrying amounts
	Amount	Percentage (%)	Amount	Percentage of provision (%)		Amount	Percentage (%)	Amount	Percentage of provision (%)	
Bad debt allowance provided by portfolio which:										
Highly Reliable Product										
Sales Portfolio	1,038,778,959.51	80.01	13,751,802.91	1.32	1,025,027,156.60	462,229,531.89	61.90	4,980,898.80	1.08	457,248,633.09
Industrial Sales Portfolio	215,716,390.08	16.62	13,499,602.79	6.26	202,216,787.29	235,327,373.81	31.52	10,002,872.63	4.25	225,324,501.18
Testing Services Portfolio	43,781,768.21	3.37	1,367,465.05	3.12	42,414,303.16	49,110,773.21	6.58	1,479,630.56	3.01	47,631,142.65
Total	1,298,277,117.80	100.00	28,618,870.75	2.20	1,269,658,247.05	746,667,678.91	100.00	16,463,401.99	2.20	730,204,276.92

3. Provision for bad debts

Category	At 31 December 2022 and at 1 January 2023		Change during the period			30 June 2023
			Provision	Recovery or reversal	Write-off or cancellation	
Bad debt provision	16,463,401.99	12,155,468.76	–	–	–	28,618,870.75
Total	16,463,401.99	12,155,468.76	–	–	–	28,618,870.75

Notes to Financial Statements

For the half-year ended 30 June 2023

(7) ACCOUNTS RECEIVABLE (Continued)

4. Five largest accounts receivable by debtors at the end of the period

Entity name	Book balance	Percentage of balance of accounts receivable (%)	RMB
			Provision for bad debts
First	387,982,500.00	29.88	–
Second	77,164,868.90	5.94	977,220.89
Third	61,612,800.00	4.75	–
Forth	58,292,160.00	4.49	2,236,796.00
Fifth	49,957,300.00	3.85	1,276,448.00
Total	635,009,628.90	48.91	4,490,464.89

(8) RECEIVABLES FOR FINANCING

Item	RMB	
	30 June 2023	31 December 2022
Bank acceptance notes	80,075,652.66	81,708,392.03
Total	80,075,652.66	81,708,392.03

Notes receivable that were endorsed or discounted but not yet due at the balance sheet date were as follows:

Item	30 June 2023		31 December 2022	
	Termination of confirmation	Non-termination confirmation	Termination of confirmation	Non-termination confirmation
Bank acceptance notes	7,517,478.20	–	36,113,749.15	–

Notes to Financial Statements

For the half-year ended 30 June 2023

(9) PREPAYMENTS

1. Prepayments by ageing

Ageing	30 June 2023		31 December 2022		RMB
	Amount	Percentage (%)	Amount	Percentage (%)	
	Within 1 year	276,758,113.95	99.23	467,802,626.73	98.55
1 to 2 years	1,996,663.81	0.72	6,899,601.61	1.45	
2 to 3 years	154,025.49	0.05	–	–	
Total	278,908,803.25	100.00	474,702,228.34	100.00	

2. Five largest prepayments by debtor at the end of the period

Entity name	Book balance	RMB
		Percentage of balance of prepayments (%)
First	98,270,880.00	35.24
Second	65,361,804.87	23.44
Third	61,121,229.24	21.92
Forth	17,444,798.44	6.26
Fifth	9,525,900.00	3.42
Total	251,724,612.55	90.28

(10) OTHER RECEIVABLES

Item	RMB	
	30 June 2023	31 December 2022
Other receivables	20,654,077.68	20,352,381.01
Total	20,654,077.68	20,352,381.01

Notes to Financial Statements

For the half-year ended 30 June 2023

(10) OTHER RECEIVABLES *(Continued)*

Other receivables

1. *By ageing*

Ageing	RMB 30 June 2023
Within 1 year	3,449,833.27
1 to 2 years	14,621,773.81
2 to 3 years	1,307,321.10
Over 3 years	1,275,149.50
Total	20,654,077.68

2. *By nature*

Nature	RMB 30 June 2023	31 December 2022
Deposit guarantee	18,045,449.25	17,443,458.91
Payment on behalf	1,589,261.00	1,139,096.00
Reserve fund	54,000.00	54,000.00
Others	965,367.43	1,715,826.10
Total	20,654,077.68	20,352,381.01

3. *Five largest other receivables by debtor at the end of the period*

Entity name	Nature of the receivable	RMB 30 June 2023	Ageing	Percentage of total other receivables at the end of the period (%)
First	Deposits	13,303,335.64	1-2 years	64.41
Second	Deposits	1,221,057.12	Within 1 year	5.91
Third	Security deposits	737,117.50	1-2 years, 2-3 years, over 3 years	3.57
Forth	Others	547,639.78	Within 1 year	2.65
Fifth	Payments on behalf	500,000.00	1-2 years	2.42
Total		16,309,150.04		78.96

Notes to Financial Statements

For the half-year ended 30 June 2023

(11) INVENTORIES

1. Inventories by category

Item	30 June 2023			31 December 2022			RMB
	Book balance	inventory/contract performance cost	Carrying amounts	Book balance	inventory/contract performance cost	Carrying amounts	
Raw materials	971,167,485.62	25,689,580.29	945,477,905.33	336,443,161.24	35,803,055.12	300,640,106.12	
Work-in-progress	1,237,796,792.57	117,519,635.45	1,120,277,157.12	832,093,996.87	89,816,100.19	742,277,896.68	
Finished goods	886,349,711.60	103,859,548.79	782,490,162.81	522,486,575.22	82,140,029.98	440,346,545.24	
Total	3,095,313,989.79	247,068,764.53	2,848,245,225.26	1,691,023,733.33	207,759,185.29	1,483,264,548.04	

As at 30 June 2023, the Group did not have inventories used for pledge or guarantee purposes (31 December 2022: Nil).

2. Provision for impairment of inventory and contract performance cost

Item	At 31 December 2022 and at 1 January 2023	Increase during the period	Decrease during the period	Write-back or write-off	30 June 2023
Raw materials	35,803,055.12	–	10,113,474.83	10,113,474.83	25,689,580.29
Work-in-progress	89,816,100.19	29,063,901.64	1,360,366.38	1,360,366.38	117,519,635.45
Finished goods	82,140,029.98	24,479,184.08	2,759,665.27	2,759,665.27	103,859,548.79
Total	207,759,185.29	53,543,085.72	14,233,506.48	14,233,506.48	247,068,764.53

The circumstances leading to provision and write-back

	Basis for determining net realizable value	Reasons for provision or write-back
Raw materials	The estimated selling price of the finished products minus the estimated costs to be incurred to complete, the estimated selling expenses and related taxes	The factors of the previous provision of inventories were disappeared
Work-in-progress	The estimated selling price of the finished products minus the estimated costs to be incurred to complete, the estimated selling expenses and related taxes	Provision of impairment of inventories due to the costs exceed net realizable value
Finished goods	The estimated selling price of the finished goods minus the estimated selling expenses and related taxes	Provision of impairment of inventories due to the costs exceed net realizable value

Notes to Financial Statements

For the half-year ended 30 June 2023

(12) OTHER CURRENT ASSETS

Item	30 June 2023	31 December 2022
Amortized expenses	1,412,369.28	775,523.42
Equipments to be returned	–	3,443,834.00
Input VAT to be deducted	98,621,053.16	2,949,529.95
Prepaid corporate income tax	20,192,268.98	6,559,875.16
Total	120,225,691.42	13,728,762.53

(13) LONG-TERM EQUITY INVESTMENTS

Investee	31 December 2022	Increase or decrease during the period		Closing balance of provision for impairment	30 June 2023
		Investment profit or loss recognized with the equity method	Others		
Associates					
Shanghai Xihongqiao Navigation Technology Co., Ltd	3,534,127.27	7,374.99	–	–	3,541,502.26
Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	37,009,469.14	(1,598,103.74)	–	(24,933,174.46)	10,478,190.94
Shanghai Fudan Sci-Tech. Park Venture Investment Co., Ltd	16,632,738.69	(523,425.59)	–	–	16,109,313.10
Shanghai Haojun Venture Capital Partnership (Limited Partnership)	9,598,096.76	(13,216.18)	–	–	9,584,880.58
Spear Innovations Oy Ltd	667,645.36	43,241.28	(73,572.28)	–	637,314.36
Total	67,442,077.22	(2,084,129.24)	(73,572.28)	–	40,351,201.24

Notes to Financial Statements

For the half-year ended 30 June 2023

(14) INVESTMENTS IN OTHER EQUITY INSTRUMENTS

Item	30 June 2023	31 December 2022
Shanghai Fudan Communication Co., Ltd.	27,526,636.02	27,526,636.02
Etopus Technology, Inc	3,612,900.00	3,187,850.00
ScaleFlux, Inc	3,612,876.66	3,187,829.41
Total	34,752,412.68	33,902,315.43

(15) INVESTMENT PROPERTIES

Item	RMB Buildings and structures
Original book value 31 December 2022 and 30 June 2023	125,119,202.98
Accumulated depreciation	
31 December 2022	2,431,293.48
Increase during the period	1,620,862.34
Provision	1,620,862.34
30 June 2023	4,052,155.82
Carrying amounts	
30 June 2023	121,067,047.16
31 December 2022	122,687,909.50

Notes to Financial Statements

For the half-year ended 30 June 2023

(16) FIXED ASSETS

Item	30 June 2023	31 December 2022
Fixed assets	755,285,149.91	694,446,705.71
Total	755,285,149.91	694,446,705.71

Fixed assets status

Item	Buildings and structures	Machinery and equipment	Motor vehicles	Electronics and other equipment	Total
Original book value					
31 December 2022	424,289,593.73	836,803,005.84	9,104,671.09	61,523,402.82	1,331,720,673.48
Increase during the period	–	88,240,352.12	880,957.58	34,170,718.50	123,292,028.20
Additions	–	1,730,614.90	880,957.58	22,160,935.46	24,772,507.94
Transfer from construction in progress	–	86,509,737.22	–	12,004,922.42	98,514,659.64
Exchange realignment	–	–	–	4,860.62	4,860.62
Decrease during the period	–	3,309,642.30	208,000.00	12,120.00	3,529,762.30
Disposal or written off	–	3,309,642.30	208,000.00	12,120.00	3,529,762.30
30 June 2023	424,289,593.73	921,733,715.66	9,777,628.67	95,682,001.32	1,451,482,939.38
Accumulated depreciation					
31 December 2022	39,883,949.47	562,063,707.00	6,939,465.04	28,386,846.26	637,273,967.77
Increase during the period	5,132,538.00	51,304,436.15	355,584.99	4,561,592.35	61,354,151.49
Provision	5,132,538.00	51,304,436.15	355,584.99	4,557,626.19	61,350,185.33
Exchange realignment	–	–	–	3,966.16	3,966.16
Decrease during the period	–	2,167,132.25	199,680.00	63,517.54	2,430,329.79
Disposal or written off	–	2,167,132.25	199,680.00	63,517.54	2,430,329.79
30 June 2023	45,016,487.47	611,201,010.90	7,095,370.03	32,884,921.07	696,197,789.47
Carrying amounts					
30 June 2023	379,273,106.26	310,532,704.76	2,682,258.64	62,797,080.25	755,285,149.91
31 December 2022	384,405,644.26	274,739,298.84	2,165,206.05	33,136,556.56	694,446,705.71

Notes to Financial Statements

For the half-year ended 30 June 2023

(17) CONSTRUCTION IN PROGRESS

Item	30 June 2023	31 December 2022
Construction in progress	497,742,240.18	193,776,441.01
Total	497,742,240.18	193,776,441.01

Construction in progress status

Item	30 June 2023			31 December 2022		
	Book balance	Provision for impairment	Carrying amounts	Book balance	Provision for impairment	Carrying amounts
Equipment to be commissioned	249,102,704.33	–	249,102,704.33	176,065,273.02	–	176,065,273.02
Buildings and leasehold improvement	248,639,535.85	–	248,639,535.85	17,711,167.99	–	17,711,167.99
Total	497,742,240.18		497,742,240.18	193,776,441.01		193,776,441.01

Changes in the current period of important projects under construction

Item	RMB				
	At 31 December 2022 and at 1 January 2023	Increase during the period	Transferred to fixed assets during the period	Decrease during the period	30 June 2023
Equipment to be commissioned	176,065,273.02	171,552,090.95	98,514,659.64	–	249,102,704.33
Buildings and leasehold improvement	17,711,167.99	239,964,446.17	–	9,036,078.31	248,639,535.85
Total	193,776,441.01	411,516,537.12	98,514,659.64	9,036,078.31	497,742,240.18

Note: Buildings and leasehold improvement are the factories in Lin-Gang purchased by Sino IC which have not yet started operation.

Notes to Financial Statements

For the half-year ended 30 June 2023

(18) RIGHT-OF-USE ASSETS

Item	RMB Buildings and structures
Original book value	
31 December 2022	80,302,250.07
Increase during the period	4,482,017.26
Exchange realignment	76,480.57
Lease	4,405,536.69
30 June 2023	84,784,267.33
Accumulated depreciation	
31 December 2022	38,415,269.92
Increase during the period	8,135,819.37
Provision	8,135,819.37
30 June 2023	46,551,089.29
Carrying amounts	
30 June 2023	38,233,178.04
31 December 2022	41,886,980.15

Notes to Financial Statements

For the half-year ended 30 June 2023

(19) INTANGIBLE ASSETS

Item	Software use right	Patent technologies	RMB Total
Original book value			
31 December 2022	106,279,489.06	536,299,535.72	642,579,024.78
Increase during the period			
Additions	36,442,323.92	55,891,229.59	92,333,553.51
In-house research and development	36,442,323.92	–	36,442,323.92
	–	55,891,229.59	55,891,229.59
30 June 2023	142,721,812.98	592,190,765.31	734,912,578.29
Accumulated amortisation			
31 December 2022	80,215,291.16	381,732,882.03	461,948,173.19
Increase during the period			
Provision	12,164,488.92	23,807,089.83	35,971,578.75
	12,164,488.92	23,807,089.83	35,971,578.75
30 June 2023	92,379,780.08	405,539,971.86	497,919,751.94
Provision for impairment			
31 December 2022	–	94,880,218.31	94,880,218.31
Increase during the period			
Provision	–	8,653,659.15	8,653,659.15
	–	8,653,659.15	8,653,659.15
30 June 2023	–	103,533,877.46	103,533,877.46
Carrying amounts			
30 June 2023	50,342,032.90	83,116,915.99	133,458,948.89
31 December 2022	26,064,197.90	59,686,435.38	85,750,633.28

At the end of the period, the intangible assets formed through in-house research and development of the Group accounted for 62.28% of the balance of intangible assets.

Notes to Financial Statements

For the half-year ended 30 June 2023

(20) DEVELOPMENT COSTS

RMB

Item	At 31 December 2022 and at 1 January 2023	Increase during the period	Decrease during the period		30 June 2023
		In-house development expenses	Recognized as intangible assets	Included in profit or loss	
Security and identification IC chips	58,851,886.12	24,958,968.31	12,681,400.50	–	71,129,453.93
Non-volatile memory	41,842,215.17	13,733,031.07	9,561,085.24	–	46,014,161.00
Smart Meter chips	24,091,133.08	9,180,585.02	–	15,588,882.98	17,682,835.12
FPGA and other products	191,736,462.94	52,063,547.41	33,648,743.85	–	210,151,266.50
Total	316,521,697.31	99,936,131.81	55,891,229.59	15,588,882.98	344,977,716.55

The Group considers the commencement of capitalization of Development costs by holding a project review meeting for development expenditure projects and passing the review. The internal review meeting mainly considers whether the Company has the technical reserve to complete the development expenditure project, whether the development expenditure project can subsequently result in products, whether there is a future market for the products resulting from the development expenditure project, and whether the Company has sufficient resources to complete the development expenditure project. Through the internal review meeting, it is shown that the development expenditure project meets the conditions for the capitalization of development expenditure in the ASBEs.

(21) LONG-TERM PREPAID EXPENSES

RMB

Item	At 31 December 2022 and at 1 January 2023	Increase during the period	Amortised during the period	30 June 2023
Leasehold improvements of offices and factories	66,244,507.84	10,389,124.33	8,428,825.59	68,204,806.58
Total	66,244,507.84	10,389,124.33	8,428,825.59	68,204,806.58

Notes to Financial Statements

For the half-year ended 30 June 2023

(22) DEFERRED INCOME TAX ASSETS/DEFERRED INCOME TAX LIABILITIES

1. Deferred income tax assets before offsetting

Item	30 June 2023		31 December 2022	
	Deductible	Deferred	Deductible	Deferred
	temporary differences	income tax assets	temporary differences	income tax assets
Provision for impairment of assets	2,355,261.36	353,289.20	1,635,010.00	245,251.50
Unrealised profits of intra-group transactions	9,886,411.75	1,482,961.76	1,746,221.13	261,933.17
Deductible losses	–	–	3,980,140.89	597,021.13
Government grants	32,237,012.10	4,835,551.82	37,048,571.14	5,557,285.67
Accrued expenses	2,409,500.00	361,425.00	1,407,094.70	211,064.21
Lease liabilities	26,555,227.45	3,983,284.12	30,767,898.55	4,615,184.78
Total	73,443,412.66	11,016,511.90	76,584,936.41	11,487,740.46

2. Deferred income tax liabilities before offsetting

Item	30 June 2023		31 December 2022	
	Taxable	Deferred	Taxable	Deferred
	temporary differences	income tax Liabilities	temporary differences	income tax Liabilities
Fair value change of other equity instrument investments	27,526,636.02	4,131,577.32	27,526,636.02	4,128,995.40
Depreciation of fixed assets	–	–	15,160.73	2,501.52
Right-of-use assets	22,524,810.63	3,378,721.59	26,630,991.51	3,994,648.73
Additional deduction for innovation inputs of high-tech enterprises	26,791,904.79	4,018,785.72	28,328,314.20	4,249,247.13
Total	76,843,351.44	11,529,084.63	82,501,102.46	12,375,392.78

Notes to Financial Statements

For the half-year ended 30 June 2023

(22) DEFERRED INCOME TAX ASSETS/DEFERRED INCOME TAX LIABILITIES *(Continued)*

3. Deferred income tax assets or liabilities presented at net amount after offsetting:

Item	30 June 2023		31 December 2022	
	Offset amount of deferred income tax assets and Liabilities	Remaining deferred income tax assets or liabilities after offset	Offset amount of deferred income tax assets and Liabilities	Remaining deferred income tax assets or liabilities after offset
Deferred income tax assets	(7,397,507.31)	3,619,004.59	(8,243,895.86)	3,243,844.60
Deferred income tax liabilities	(7,397,507.31)	4,131,577.32	(8,243,895.86)	4,131,496.92

4. Details of unrecognised deferred income tax assets

Item	RMB	
	30 June 2023	31 December 2022
Deductible temporary differences	84,812,428.40	748,895,105.85
Deductible losses	19,588,916.46	42,440,501.86
Total	104,401,344.86	791,335,607.71

5. Deductible losses that are not recognized for deferred income tax assets will expire in the following years

Year	RMB	
	30 June 2023	31 December 2022
2023	1,200,928.90	1,200,928.90
2024	2,593,017.71	2,593,017.71
2025	3,022,915.63	29,374,661.89
2026	2,185,126.52	2,174,356.32
2027	10,586,927.70	7,097,537.04
Total	19,588,916.46	42,440,501.86

Notes to Financial Statements

For the half-year ended 30 June 2023

(23) OTHER NON-CURRENT ASSETS

Item	30 June 2023			31 December 2022		
	Book balance	Provision for impairment	Carrying amounts	Book balance	Provision for impairment	Carrying amounts
Prepaid plant	–	–	–	133,899,851.00	–	133,899,851.00
Prepaid equipment	37,589,003.45	–	37,589,003.45	22,687,579.80	–	22,687,579.80
Prepayment for public housing acquisition	77,865,060.90	–	77,865,060.90	23,865,060.90	–	23,865,060.90
Rental deposit	2,364,680.38	–	2,364,680.38	2,364,680.38	–	2,364,680.38
Total	117,818,744.73		117,818,744.73	182,817,172.08		182,817,172.08

(24) SHORT-TERM BORROWINGS

Item	30 June 2023		31 December 2022	
Unsecured borrowings		583,000,000.00		50,000,000.00
Bill discounting		–		4,000,000.00
Total		583,000,000.00		54,000,000.00

As at 30 June 2023, annual interest rate for the above unsecured borrowings is ranged from 2.60% to 3.10% (31 December 2022: 2.8%).

(25) ACCOUNTS PAYABLE

An ageing analysis based on the invoice date is as follows:

Ageing	30 June 2023		31 December 2022	
Within 1 year		279,844,935.50		187,918,075.41
1 to 2 years		17,904,658.36		13,264,405.03
Over 2 years		3,217,238.09		–
Total		300,966,831.95		201,182,480.44

Accounts payable are non-interest-bearing and are generally settled on terms of within 3 months. As at 30 June 2023, the Group had no significant accounts payable aged over 1 year (31 December 2022: Nil).

Notes to Financial Statements

For the half-year ended 30 June 2023

(26) CONTRACT LIABILITIES

Item	30 June 2023	31 December 2022
Contract payment in advance	178,104,803.84	210,402,283.73
Total	178,104,803.84	210,402,283.73

Reason and the amount of significant change of carrying amount during the Reporting Period:

Item	Amount of change	Reason of change
Contract payment in advance	(32,297,479.89)	The decrease was due to the completion of some contracts and product deliveries and then recognized as revenue
Total	(32,297,479.89)	

(27) EMPLOYEE BENEFITS PAYABLES

1. Employee benefits payable

Item	At 31 December 2022 and at 1 January 2023	Increase during the period	Decrease during the period	30 June 2023
Short-term employee benefits	187,115,902.82	457,863,299.45	475,581,566.25	169,397,636.02
Post-employment – Defined contribution plan	5,224,190.43	35,433,249.96	34,993,596.09	5,663,844.30
Total	192,340,093.25	493,296,549.41	510,575,162.34	175,061,480.32

Notes to Financial Statements

For the half-year ended 30 June 2023

(27) EMPLOYEE BENEFITS PAYABLES (Continued)

2. Short-term employee benefits

Item	RMB			
	At 31 December 2022 and at 1 January 2023	Increase during the period	Decrease during the period	30 June 2023
Salary, bonus, allowances and subsidies	145,592,764.22	418,851,019.28	437,275,593.76	127,168,189.74
Employee welfare	–	838,022.75	838,022.75	–
Social insurance	3,241,879.92	22,224,642.70	21,962,731.08	3,503,791.54
Including:				
Medical insurance	2,790,330.01	21,348,568.42	21,022,390.67	3,116,507.76
Work injury insurance	312,192.42	838,469.42	827,440.32	323,221.52
Maternity insurance	139,357.49	37,604.86	112,900.09	64,062.26
Housing funds	2,028,448.55	15,261,495.23	14,697,283.47	2,592,660.31
Labour union funds and employee education funds	36,252,810.13	688,119.49	807,935.19	36,132,994.43
Total	187,115,902.82	457,863,299.45	475,581,566.25	169,397,636.02

3. Defined contribution plan

Item	RMB			
	31 December 2022 and 1 January 2023	Increase during the period	Decrease during the period	30 June 2023
Basic pensions	4,986,819.40	34,363,482.58	33,938,273.21	5,412,028.77
Unemployment insurance	237,371.03	1,069,767.38	1,055,322.88	251,815.53
Total	5,224,190.43	35,433,249.96	34,993,596.09	5,663,844.30

Notes to Financial Statements

For the half-year ended 30 June 2023

(28) TAXES PAYABLES

Item	30 June 2023	31 December 2022
VAT	1,245,544.95	792,819.31
CIT	203,733.62	–
Individual income tax	14,736,959.74	7,952,129.32
City maintenance and construction tax	87,188.15	371,564.49
Stamp duties	838,326.79	569,375.47
Property tax	1,042,086.75	1,042,086.75
Land-use tax	7,082.95	7,082.95
Total	18,160,922.95	10,735,058.29

(29) OTHER PAYABLES

Item	30 June 2023	31 December 2022
Dividend payable for ordinary shares	110,248,627.50	–
Other payables	179,902,365.11	72,335,632.38
Total	290,150,992.61	72,335,632.38

Other payables – others by nature of payment

Item	30 June 2023	31 December 2022
Payable equipment expenses	163,628,136.02	57,591,981.23
Disability deposit	8,071,642.60	8,071,642.60
Collection and payment of behalf	4,786,270.31	3,903,219.18
Others	3,416,316.18	2,768,789.37
Total	179,902,365.11	72,335,632.38

Notes to Financial Statements

For the half-year ended 30 June 2023

(30) NON-CURRENT LIABILITIES DUE WITHIN ONE YEAR

Item	30 June 2023	31 December 2022
Current portion of long-term borrowings	41,000,000.00	–
Current portion of lease liabilities	16,423,821.80	15,181,384.65
Total	57,423,821.80	15,181,384.65

(31) OTHER CURRENT LIABILITIES

Item	30 June 2023	31 December 2022
Accrued expenses	14,281,150.46	19,767,122.35
Government grants	106,047,225.00	101,583,000.00
Output tax to be transferred	22,820,496.47	26,349,277.48
Adjustments to outstanding bills endorsed or discounted	12,502,478.20	–
Total	155,651,350.13	147,699,399.83

(32) LONG-TERM BORROWINGS

Item	30 June 2023	31 December 2022
Unsecured borrowings	497,237,024.37	–
Less: Long-term borrowings due within one year	(41,000,000.00)	–
Total	456,237,024.37	–

As at 30 June 2023, annual interest rate for the above unsecured borrowings is ranged from 2.90% to 3.45% (31 December 2022: Nil).

Notes to Financial Statements

For the half-year ended 30 June 2023

(33) LEASE LIABILITIES

Item	30 June 2023	31 December 2022
Lease liabilities	44,067,973.27	48,344,090.25
Less: Lease liabilities due within one year	(16,423,821.80)	(15,181,384.65)
Total	27,644,151.47	33,162,705.60

(34) DEFERRED INCOME

Deferred income status

Item	At 31 December 2022 and at 1 January 2023	Increase during the period	Decrease during the period	30 June 2023
Government grants related to assets	12,167,055.33	–	2,306,660.57	9,860,394.76
Government grants related to revenue	4,381,085.72	24,751,132.08	10,321,879.17	18,810,338.63
Total	16,548,141.05	24,751,132.08	12,628,539.74	28,670,733.39

(35) PAID-IN CAPITAL (OR SHARE CAPITAL)

Item	At 31 December 2022 and at 1 January 2023	Change in the period	30 June 2023
Share capital	81,665,650.00	–	81,665,650.00

Notes to Financial Statements

For the half-year ended 30 June 2023

(36) CAPITAL RESERVE

Item	RMB		
	At 31 December 2022 and at 1 January 2023	Increase during the period	30 June 2023
Capital premium (share capital premium)	1,322,349,375.18	–	1,322,349,375.18
Other capital reserve	300,556,603.75	59,393,977.32	359,950,581.07
Total	1,622,905,978.93	59,393,977.32	1,682,299,956.25

Changes of capital reserve was mainly due to the Company's implementation of the Type II restricted share equity incentive and recognized incentive expenses over the waiting period.

(37) OTHER COMPREHENSIVE INCOME

Item	RMB				30 June 2023
	At 31 December 2022 and at 1 January 2023	Amount before income tax in the period	Amount for the period Prior period included in other comprehensive income which transferred to profit or loss for the current period	Attributable to the parent company, after tax	
Changes in the fair value of other equity instrument investments	14,572,295.85	–	–	–	14,572,295.85
Differences on translation of foreign currency financial statements	(887,777.57)	1,550,800.23	326,243.37	1,877,043.60	989,266.03
Total other comprehensive income	13,684,518.28	1,550,800.23	326,243.37	1,877,043.60	15,561,561.88

Notes to Financial Statements

For the half-year ended 30 June 2023

(38) SURPLUS RESERVE

Item	RMB	
	At 31 December 2022 and at 1 January 2023	30 June 2023
Statutory surplus reserve	40,832,825.00	40,832,825.00
Total	40,832,825.00	40,832,825.00

According to the Company Law and the Articles of Association of the Company, the Company appropriates 10% of the net profit to the statutory surplus reserve. If the accumulated amount of statutory surplus reserve is more than 50% of the company's registered capital, it can no longer be withdrawn.

The Company can withdraw the discretionary surplus reserve after the withdrawn of statutory surplus reserve. Upon approval, the discretionary surplus reserve can be used to make up for losses in previous years or to increase share capital.

(39) UNDISTRIBUTED PROFIT

Item	RMB	
	Half-year ended 30 June 2023	Year ended 31 December 2022
Closing balance of undistributed profits for the prior period before adjustment	2,772,141,379.40	1,748,348,393.72
Opening balance of undistributed profits after adjustment	2,772,141,379.40	1,748,348,393.72
Add: net profits attributable to owners of the Parent Company for the period	449,270,770.72	1,076,843,340.68
Less: transfer statutory surplus reserve	–	107,725.00
Less: dividend payable for ordinary shares	110,248,627.50	–
Less: distributions to owners	–	52,942,630.00
Closing balance of undistributed profits	3,111,163,522.62	2,772,141,379.40

Notes to Financial Statements

For the half-year ended 30 June 2023

(40) REVENUE AND COST OF SALES

1. Revenue and Cost of sales

Item	Half-year ended 30 June				RMB
	2023		2022		
	Income	Cost	Income	Cost	
Principal businesses	1,788,552,626.26	585,994,549.00	1,688,115,777.22	591,643,843.91	
Other businesses	7,676,656.20	4,912,694.07	14,217,577.64	4,227,619.77	
Total	1,796,229,282.46	590,907,243.07	1,702,333,354.86	595,871,463.68	

2. Revenue generated from contracts

Contract classification	Design and sales of integrated circuits		Integrated Circuit Testing Service	Total	RMB
Types of products					
Security and identification chips	410,260,234.45		–	410,260,234.45	
Non-volatile memory	587,505,441.76		–	587,505,441.76	
Smart meter chips	112,809,376.11		–	112,809,376.11	
FPGA and other products	585,982,699.56		–	585,982,699.56	
Integrated circuit testing service		–	99,671,530.58	99,671,530.58	
Sort by place of business					
PRC	1,594,425,278.45		95,234,014.39	1,689,659,292.84	
Others	102,132,473.43		4,437,516.19	106,569,989.62	
Sort by time of products transfer					
Revenue recognised at a certain point of time					
Sales of products	1,696,557,751.88		–	1,696,557,751.88	
Provision of services		–	99,671,530.58	99,671,530.58	
Total	1,696,557,751.88		99,671,530.58	1,796,229,282.46	

The information related to the performance obligations of the Group is as follows:

Sale of IC products

Fulfill performance obligations when delivering products to customers. Usually, the payment obligation is performed after the customer received the products, and the Group gives different credit arrangements to different customers.

Testing services

The customer usually pays the contract price after the service is completed and the customer received the tested product.

Notes to Financial Statements

For the half-year ended 30 June 2023

(41) BUSINESS TAXES AND SURCHARGES

Item	RMB	
	Half-year ended 30 June 2023	2022
City maintenance and construction tax	540,071.52	6,447,363.50
Education surcharge	–	2,763,155.79
Local education surcharge	–	1,842,103.74
Property tax	2,140,728.80	793,007.38
Land use tax	15,018.80	5,918.87
Vehicle and vessel use tax	2,030.00	720.00
Stamp duty	1,689,026.46	1,347,020.41
Total	4,386,875.58	13,199,289.69

(42) SELLING EXPENSES

Item	RMB	
	Half-year ended 30 June 2023	2022
Employee remuneration	80,961,466.97	66,424,017.52
Share-based payment expenses	13,472,674.56	14,750,226.74
Property rental expenses	354,100.83	619,740.58
Consulting service fee	4,808,042.40	4,613,207.53
Office expenses	5,078,728.21	1,538,222.91
Sample expenses	2,326,495.36	812,771.87
Transportation and travel expenses	3,891,200.35	1,541,831.89
Business promotion expenses	333,915.77	121,139.41
Entertainment expenses	4,535,666.89	2,301,919.29
Transportation costs	1,655,002.60	1,871,552.60
Depreciation and amortization	3,283,544.94	3,041,514.67
Others	1,533,820.55	113,615.72
Total	122,234,659.43	97,749,760.73

Notes to Financial Statements

For the half-year ended 30 June 2023

(43) ADMINISTRATIVE EXPENSES

Item	RMB	
	Half-year ended 30 June	
	2023	2022
Employee remuneration	41,155,171.99	36,584,649.51
Repairs and maintenance	3,418,098.36	2,140,652.91
Depreciation and amortization	6,460,758.70	8,151,866.12
Consulting service fee	3,970,726.49	2,472,646.31
Office expenses	10,128,672.37	4,861,418.55
Share-based payment expenses	743,173.14	1,423,195.24
Travelling expenses	1,230,850.74	523,907.53
Entertainment expenses	1,201,925.88	832,747.72
Security fund for the disabled	–	178.04
Others	5,716,557.10	2,869,944.39
Total	74,025,934.77	59,861,206.32

(44) RESEARCH AND DEVELOPMENT EXPENSES

Item	RMB	
	Half-year ended 30 June	
	2023	2022
Employee remuneration	292,940,146.74	225,573,621.87
Share-based payment expenses	44,830,446.30	56,664,563.30
Material and processing expenses	112,425,466.91	55,370,105.69
Depreciation and amortization	56,685,693.72	31,254,787.84
Technical services expenses	14,050,501.22	180,274.61
Office expenses	1,054,831.65	737,506.65
Travel expenses	1,119,834.04	215,016.58
Others	4,496,722.43	3,786,617.65
Total	527,603,643.01	373,782,494.19

Notes to Financial Statements

For the half-year ended 30 June 2023

(45) FINANCIAL EXPENSES

Item	RMB	
	Half-year ended 30 June 2023	2022
Interest expense	6,301,911.31	956,740.19
Less: interest income	(8,533,982.05)	(7,515,651.26)
Exchange gains and losses	(7,058,839.53)	792,877.50
Bank charges	127,242.98	164,374.86
Interest on lease liabilities	1,300,624.77	1,298,879.36
Total	(7,863,042.52)	(4,302,779.35)

(46) OTHER INCOME

Item	RMB	
	Half-year ended 30 June 2023	2022
Government grants (Note)	43,436,241.13	21,548,583.82
Refund of commission for paying individual income tax	1,463,399.86	963,944.64
Other subsidies	2,183,232.72	1,693,712.01
Total	47,082,873.71	24,206,240.47

Note: Details of government grants included in other gains are set out in note (58) of the financial statements.

(47) INVESTMENT INCOME

Item	RMB	
	Half-year ended 30 June 2023	2022
Loss on long-term equity investments under the equity method	(2,084,910.79)	(3,055,355.07)
Investment loss on disposal of investments in other equity instruments	(323,786.49)	–
Investment income from held-for-trading financial assets during the period of holding	3,701,000.00	3,920,357.05
Total	1,292,302.72	865,001.98

Notes to Financial Statements

For the half-year ended 30 June 2023

(48) (LOSSES)/GAINS FROM CHANGES IN FAIR VALUE

Item	RMB	
	Half-year ended 30 June 2023	2022
Financial assets held for trading	(1,651,438.35)	1,039,641.10
Total	(1,651,438.35)	1,039,641.10

(49) CREDIT IMPAIRMENT LOSSES

Item	RMB	
	Half-year ended 30 June 2023	2022
Impairment loss on bad debts of notes receivable	(1,283,362.41)	(68,581.41)
Impairment loss on bad debts of accounts receivable	(12,155,468.76)	(5,476,703.78)
Total	(13,438,831.17)	(5,545,285.19)

(50) ASSET IMPAIRMENT LOSSES

Item	RMB	
	Half-year ended 30 June 2023	2022
Impairment loss on inventory and contract performance cost	(43,394,874.45)	(41,574,560.57)
Impairment loss on intangible assets	(8,653,659.15)	(267,427.16)
Total	(52,048,533.60)	(41,841,987.73)

(51) GAINS/(LOSSES) ON DISPOSAL OF ASSETS

Item	RMB	
	Half-year ended 30 June 2023	2022
Gains/(Losses) on disposal of fixed assets	369,250.51	(4,605.35)
Total	369,250.51	(4,605.35)

Notes to Financial Statements

For the half-year ended 30 June 2023

(52) NON-OPERATING INCOME

Item	Half-year ended 30 June		RMB
	2023	2022	Amount included in current non-recurring profit or loss
Others	0.41	21,222.51	–
Total	0.41	21,222.51	–

(53) INCOME TAX EXPENSES

1. Table of income tax expenses

Item	Half-year ended 30 June		RMB
	2023	2022	
Current income tax expense	2,917,346.22	3,644,731.41	
Deferred income tax expense	(375,159.99)	(289,883.94)	
Total	2,542,186.23	3,354,847.47	

2. Reconciliation of accounting profits and income tax

Item	RMB
	Half-year ended 30 June 2023
Total profits	466,539,593.35
Income tax expense calculated at statutory/applicable tax rate	46,653,959.34
Impact of different tax rates applied to subsidiaries	665,177.67
Impact of non-deductible costs, expenses and losses	1,243,024.25
Tax impact of utilisation of unrecognized deductible losses of deferred tax assets in previous years	(4,553,159.24)
Effect of deductible temporary differences or deductible losses that have not recognized for deferred income tax assets during the period	11,532,097.76
Deduction of research & development expenses	(52,952,910.88)
Others	(46,002.67)
Income tax expense	2,542,186.23

Notes to Financial Statements

For the half-year ended 30 June 2023

(54) ITEMS IN THE CASH FLOW STATEMENT

1. Cash received relating to other operating activities

Item	RMB	
	Half-year ended 30 June 2023	2022
Grants received	54,155,357.08	3,076,960.77
Interest income	5,712,780.44	3,133,791.92
Others	2,180,988.09	–
Total	62,049,125.61	6,210,752.69

2. Cash paid relating to other operating activities

Item	RMB	
	Half-year ended 30 June 2023	2022
Cash out	149,854,635.01	59,181,265.90
Others	–	281,530.02
Total	149,854,635.01	59,462,795.92

3. Cash received relating to other investing activities

Item	RMB	
	Half-year ended 30 June 2023	2022
Time deposits interest	2,821,201.61	6,277,029.76
Total	2,821,201.61	6,277,029.76

(55) CASH PAID RELATING TO OTHER FINANCING ACTIVITIES

Item	RMB	
	Half-year ended 30 June 2023	2022
Rent and interest paid	9,084,223.33	6,102,087.03
Listing expenses of subsidiaries	–	1,000,000.00
Total	9,084,223.33	7,102,087.03

Notes to Financial Statements

For the half-year ended 30 June 2023

(56) SUPPLEMENTARY INFORMATION OF THE CASH FLOW STATEMENT

1. Supplementary information of the cash flow statement

Supplementary information	RMB	
	Half-year ended 30 June 2023	2022
Net profit adjusted to cash flows of operating activities:		
Net profit	463,997,407.12	541,557,299.92
Add: Provision for impairment of assets	52,048,533.60	41,841,987.73
Provision for credit impairment	13,438,831.17	5,545,285.19
Depreciation of fixed assets, depletion of oil and gas assets and depreciation of productive biological assets	61,350,185.33	54,975,688.47
Depreciation of investment property	1,620,862.34	–
Amortization of right-of-use assets	8,135,819.37	7,601,301.58
Amortization of intangible assets	35,971,578.75	25,392,350.21
Amortization of long-term prepaid expenses	8,428,825.59	7,066,898.40
(Gains)/Losses from disposal of fixed assets, intangible assets and other long-term assets	(369,250.51)	4,605.35
Losses/(Gains) on changes in fair value	1,651,438.35	(1,039,641.10)
Finance expenses	(6,267,949.75)	490,774.83
Investment income	(1,292,302.72)	(865,001.98)
Increase in deferred income tax assets	(375,159.99)	(450,945.68)
Increase in deferred income tax liabilities	80.40	105.26
Increase in inventories	(1,404,290,256.46)	(207,159,587.19)
Increase in operating receivables	(469,847,155.17)	(494,696,277.09)
Increase in operating payables	85,965,348.35	275,143,674.63
Others	59,393,977.32	73,698,643.14
Net cash flows (used in)/from operating activities	(1,090,439,186.91)	329,107,161.67
Net changes in cash and cash equivalents:		
Closing balance of cash	735,798,694.21	512,425,150.25
Less: Opening balance of cash	1,120,286,945.68	415,755,306.55
Net (decrease)/increase in cash and cash equivalents	(384,488,251.47)	96,669,843.70

2. Composition of cash and cash equivalents

Item	RMB	
	30 June 2023	31 December 2022
Cash	735,798,694.21	1,120,286,945.68
Including: Cash on hand	29,719.35	45,887.35
Other cash readily available for payment	735,768,974.86	1,120,241,058.33
Closing balance of cash and cash equivalents	735,798,694.21	1,120,286,945.68

Notes to Financial Statements

For the half-year ended 30 June 2023

(56) SUPPLEMENTARY INFORMATION OF THE CASH FLOW STATEMENT

(Continued)

2. Composition of cash and cash equivalents (Continued)

Note: As at the end of June 2023, closing balance of cash and cash equivalents in the cash flow statement is RMB735,798,694.21, and the closing balance of cash at bank and on hand on the balance sheet is RMB787,576,869.38, with a difference of RMB51,778,175.17, which is due to the fact that the RMB51,778,175.17 of fixed deposits and interest that do not meet the definition of cash and cash equivalents were deducted from “balance of cash and cash equivalents at the end of the period” in cash flow statement.

(57) MONETARY ASSETS IN FOREIGN CURRENCY

Item	Balance of foreign currency as at 30 June 2023	Conversion rate	Dollar Balance converted to RMB as at 30 June 2023
Cash			
Including: USD	28,158,440.39	7.2258	203,467,258.57
HKD	9,318,607.50	0.9220	8,591,533.45
NTD	701,667.00	0.2323	162,997.24
SGD	69,778.79	5.3442	372,911.81
Accounts receivable			
Including: USD	5,722,070.50	7.2258	41,346,537.02
HKD	7,677,299.33	0.9220	7,078,286.53
Accounts payable			
Including: USD	12,432,821.66	7.2258	89,837,082.75
HKD	35,343,450.45	0.9220	32,585,816.79

(58) GOVERNMENT GRANTS

Information about government grants

Category	Amount	Item presented	RMB Amount included in the current profit or loss
Government grants for chip design	11,171,413.10	Other income	11,171,413.10
Government grants for testing services	11,652,126.64	Other income	11,652,126.64
Other government grants	20,612,701.39	Other income	20,612,701.39
Total	43,436,241.13		43,436,241.13

Notes to Financial Statements

For the half-year ended 30 June 2023

(59) INTERESTS IN OTHER ENTITIES

1. Interests in subsidiaries

(a) Composition of the Group

Name of subsidiaries	Operating place	Registered place	Business nature	Shareholding percentage (%)		Manner
				Direct	Indirect	
Sino IC Technology Co., Ltd. (“Sino IC”) (note 1)	Shanghai	Shanghai	IC products test	42.75	–	Established
Shanghai Fudan Microelectronics (Hong Kong) Limited	Hong Kong	Hong Kong	Investment and trading of IC products	100.00	–	Established
Fudan Microelectronics (USA) Inc	United States	United States	Trading of IC products	100.00		Established
Shenzhen Fudan Microelectronics Company Limited	Shenzhen	Shenzhen	Trading of IC products	100.00	–	Established
Beijing Fudan Microelectronics Technology Co., Ltd.	Beijing	Beijing	Trading of IC products	100.00	–	Established
Shanghai Fuwei Xunjie Digital Technology Co., Ltd. (“Fuwei Xunjie”) (note 2)	Shanghai	Shanghai	Technology services and technology development	40.85		Established

Note 1: The Company originally held 50.29% shares of Sino IC. On 28 October 2022, additional shares of Sino IC were issued to the public and the Company’s shares of Sino IC was reduced to 42.75%. Management believes that the Company still has control over Sino IC because the Company is the largest single shareholder of Sino IC and the other shares are widely held by numerous other shareholders.

Note 2: The Company has entered into a concert party agreement with another shareholder of Fuwei Xunjie (holding 15% shares of Fuwei Xunjie), which stipulates that in exercising the voting rights of Fuwei Xunjie shareholders’ meeting and board of directors’ motions, the other party guarantees to be consistent with the Company in exercising the voting rights, and through the agreement arrangement is able to exercise control over Fuwei Xunjie’s financial and operating decisions and include Fuwei Xunjie in the scope of consolidation.

(b) Significant non-wholly-owned subsidiaries

Name of subsidiaries	Percentage of minority shareholding (%)	Profits or loss attributable to the minority shareholders	Dividends declared to distribute to the minority shareholders	RMB
				Balance of minority interests as at 30 June 2023
Sino IC Technology Co., Ltd.	57.25%	19,267,639.35	–	606,036,950.45

Notes to Financial Statements

For the half-year ended 30 June 2023

(59) INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(c) Main financial information of significant non-wholly-owned subsidiaries

Sino IC Technology Co., Ltd.

Item	RMB	
	30 June 2023	31 December 2022
Current assets	424,567,174.08	569,437,448.64
Non-current assets	863,864,004.37	576,029,260.97
Total assets	1,288,431,178.45	1,145,466,709.61
Current liabilities	192,706,572.85	87,985,560.26
Non-current liabilities	23,301,129.37	29,626,655.45
Total liabilities	216,007,702.22	117,612,215.71

Item	RMB	
	Half-year ended 30 June 2023	2022
Revenue	152,292,043.01	124,231,347.45
Net profit	44,568,982.33	23,531,717.72
Total comprehensive income	44,568,982.33	23,531,717.72
Cash flow from operating activities	86,321,412.32	58,070,925.49

2. Interests in joint ventures or associates

(a) Significant joint ventures or associates

Name of joint venture or associated company	Place of principal operation	Place of registration	Nature of business	Shareholding percentage (%)		Accounting treatment method on investment in joint venture or associates
				Direct	Indirect	
Associates						
Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	Shanghai	Shanghai	IC design	21.25	–	Equity method
Shanghai Fudan Sci-Tech Park Venture Investment Co., Ltd	Shanghai	Shanghai	Equity investment	20.00	–	Equity method
Shanghai Haojun Venture Capital Partnership (Limited Partnership)	Shanghai	Shanghai	Equity investment	23.58	–	Equity method

Notes to Financial Statements

For the half-year ended 30 June 2023

(59) INTERESTS IN OTHER ENTITIES *(Continued)*

2. Interests in joint ventures or associates *(Continued)*

(b) Major financial information of significant associates

	30 June 2023/Half-year ended 30 June 2023		31 December 2022/Half-year ended 30 June 2022	
	Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	Shanghai Haojun Venture Capital Partnership (Limited Partnership)	Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	Shanghai Haojun Venture Capital Partnership (Limited Partnership)
Current assets	52,700,450.54	11,884,153.12	65,946,926.15	32,371,213.37
Non-current assets	6,134,805.29	32,000,000.00	7,648,719.05	12,000,000.00
Total assets	58,835,255.83	43,884,153.12	73,595,645.20	44,371,213.37
Current liabilities	4,616,121.77	345,000.00	11,656,023.17	79,500.00
Non-current liabilities	5,110,000.00	–	5,110,000.00	–
Total liabilities	9,726,121.77	345,000.00	16,766,023.17	79,500.00
Equity attributable to shareholders of the parent company	49,109,134.06	43,539,153.12	56,829,622.03	43,576,213.37
Share of net assets calculated according to shareholding ratio	10,435,690.99	9,591,675.43	12,076,294.68	9,598,096.76
Adjustment:				
– Others	26,424,827.62	(6,794.85)	–	–
Book value of equity investment in associates	36,860,518.61	9,584,880.58	12,076,294.68	9,598,096.76
Revenue	1,983,982.16	–	3,053,208.05	–
Net profit	(7,520,488.17)	(59,991.76)	(11,656,732.30)	(1,043,495.17)
Total comprehensive income	(7,520,488.17)	(59,991.76)	(11,656,732.30)	(1,043,495.17)

RMB

Notes to Financial Statements

For the half-year ended 30 June 2023

(59) INTERESTS IN OTHER ENTITIES *(Continued)*

2. Interests in joint ventures or associates *(Continued)*

(b) Major financial information of significant associates (Continued)

	30 June 2023/ Half-year ended 30 June 2023	RMB 31 December 2022/ Half-year ended 30 June 2022
	Shanghai Fudan Sci-Tech Park Venture Investment Co., Ltd	
Current assets	26,445,399.28	28,803,520.69
Non-current assets	51,285,725.87	51,299,884.27
Total assets	77,731,125.15	80,103,404.96
Current liabilities	5,239,451.81	5,256,080.87
Total liabilities	5,239,451.81	5,256,080.87
Equity attributable to shareholders of the parent company	72,491,673.34	74,847,324.09
Share of net assets calculated according to shareholding ratio	14,498,334.67	16,632,738.69
Adjustment – Others	1,610,978.43	–
Book value of equity investment in associates	16,109,313.10	16,632,738.69
Revenue	600,000.00	1,650,000.00
Net profit	(2,355,650.75)	(1,214,400.67)
Total comprehensive income	(2,355,650.75)	(1,214,400.67)

Notes to Financial Statements

For the half-year ended 30 June 2023

(60) RISKS RELATED TO FINANCIAL INSTRUMENTS

The Group is exposed to various types of risks from financial instruments in day-to-day operation, mainly including credit risk, liquidity risk and market risk (including foreign exchange risk, interest rate). The major financial instruments of the Group primarily include cash and bank balances, equity investments, borrowings, notes receivable, accounts receivable and accounts payable, etc. Risks in connection with such financial instruments, and the risk management strategies adopted by the Group to mitigate such risks are summarized as follows.

1. Credit risk

The Group only has trade with recognized third party with good credit standing. Based on the Group's policies, customers who conduct credit transaction will be subject to credit review. In addition, the Group will continuously monitor balance of accounts receivable to ensure that the Group will not be exposed to significant risk of bad debts. For transactions that are not settled in the functional currency of the relevant business unit, the Group does not provide credit transaction conditions unless specifically approved by the Group's credit control department.

Since counterparties of cash and bank balances, bank acceptance notes receivables and structured deposits are banks with good reputation and high credit ratings, credit risk arising from these financial instruments is insignificant.

Other financial assets of the Group include commercial acceptance notes receivables, accounts receivable, borrowings and other receivables, etc. Credit risk from such financial assets is from default of counterparties, and its maximum risk exposure is equivalent to the carrying amount of such instruments.

The Group's maximum credit risk exposure at each balance sheet date is the total amount charged to customers less the amount of impairment allowances.

Since the Group only trades with recognized third parties with good credit standing, no guarantee is required. Credit risk concentration is managed based on customer/counterparty, geographical region and industry sector. As at 30 June 2023, the Group is exposed to certain credit risk concentration, as 48.91% (31 December 2022: 35.77%) of accounts receivable are from top five customers. The Group does not hold any security or other credit increment over the balances of accounts receivable.

Criteria for judging significant increases in credit risk

The Group will evaluate whether credit risk in connection with financial instruments is increased significantly from initial recognition on each balance sheet date. When determining whether credit risk is increased significantly after initial recognition, the Group will consider obtaining reasonable information with supporting basis without paying extra cost or efforts, including qualitative and quantitative analysis over the historical data of the Group, external credit risk ratings and forward-looking information. Based on a single financial instrument or group of financial instruments with similar credit risk characteristics, the Group will determine estimated changes in default risks of financial instruments during the period of existence, by comparing the default risk of financial instruments on the balance sheet date and that upon initial recognition.

Notes to Financial Statements

For the half-year ended 30 June 2023

(60) RISKS RELATED TO FINANCIAL INSTRUMENTS *(Continued)*

1. Credit risk *(Continued)*

Criteria for judging significant increases in credit risk (Continued)

When one or more of the following quantitative and qualitative standards is triggered, credit risk in connection with financial instrument is increased significantly:

- (1) For quantitative standards, the probability of default in the remaining existence period after the reporting date is increased to a certain proportion as compared with that upon initial recognition;
- (2) For qualitative standards, there are significant adverse changes in operation or financial position of debtors and early-warning customer list;
- (3) For upper limit indicator, the debtor's contractual payments (including principal and interest) are more than 30 days overdue.

Definition of credit-impaired assets

To determine whether there is credit impairment, the defining standards adopted by the Group are consistent with the objective of internal credit risk management for related financial instruments, by reference to the quantitative and qualitative indicators. When debtors are evaluated for credit impairment, the following factors will be taken into account:

- (1) significant financial difficulty of issuers or debtors
- (2) breach of contract by debtors, such as default or overdue payment in interest or principal repayment;
- (3) a concession granted by the creditor to the debtor due to economic or contractual considerations related to the debtor's financial difficulty, which will not be granted under any other circumstances;
- (4) possible bankruptcy or other financial reorganization of the debtors;
- (5) disappearance of an active market for the financial asset due to financial difficulty of the issuer or the debtor;
- (6) purchase or creation of a financial asset at significant discount reflecting the fact of credit loss.

Credit impairment of financial assets may be a joint result of multiple events, rather than a single identifiable event.

Notes to Financial Statements

For the half-year ended 30 June 2023

(60) RISKS RELATED TO FINANCIAL INSTRUMENTS *(Continued)*

1. Credit risk *(Continued)*

Parameters for measurement of expected credit losses

Impairment loss provision for different assets is measured based on 12 months or the whole existence period depending on whether there is a significant increase in credit risk and whether credit impairment is provisioned. Key parameters for measurement of expected credit losses include default probability, loss rate and risk exposure. The Group will take into account qualitative analysis on historical statistical data, such as counterparty rating, way of guarantee and types of collateral and way of repayment, etc. and forward-looking information to build default probability, loss rate and risk exposure model.

Relevant definitions are as follows:

- (1) Default probability refers to the possibility that the debtor will not be able to fulfil its obligations of repayment over the next 12 months or throughout the entire remaining lifetime. Default probability of the Group is adjusted based on the migration rate model with reference to forward-looking information to reflect the debtor's default probability under the current macroeconomic environment;
- (2) Loss rate is the expectation made for the degree of estimated loss suffered by the Group. The loss rate varies depending on the counterparty rating, method and priority for recourse and way of guarantee. Loss rate is the percentage of estimated loss of risk exposure, and calculated based on a period of next 12 months or the whole period of existence;
- (3) Risk exposure is the amount that the Group should be compensated in the next 12 months or the remaining existence period upon default.

Forward-looking information will be involved in both the evaluation of significantly increased credit risk and the calculation of expected credit losses. By analysis of historical data, the Group identified the key economic indicators affecting the credit risk and the expected credit loss of each business type.

The impact of these economic indicators on probability of default and loss given default varies for different business types. In this process, the Group applies expert judgment, forecasts these economic indicators every year according to the results of expert judgment, and determines the impact of these economic indicators on the probability of default and loss given default through analysis.

Refer to Note (6), (7) and (10) for the information on Group's credit risk exposure from notes receivable, accounts receivable, and other receivables.

Notes to Financial Statements

For the half-year ended 30 June 2023

(60) RISKS RELATED TO FINANCIAL INSTRUMENTS *(Continued)*

2. Liquidity risk

The Group uses a revolving liquidity planning tool to manage the risk of funding shortfalls. This tool considers both the maturity of its financial instruments and the expected cash flows generated from the Group's operations.

The Group's objective is to maintain a balance between continuity and flexibility of funding through the use of financing including bank borrowings and other interest-bearing borrowings.

The tables below summarise the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

RMB				
30 June 2023				
Item	Within 1 year	1-3 years	Over 3 years	Total
Short-term borrowings	583,000,000.00	–	–	583,000,000.00
Accounts payable	300,966,831.95	–	–	300,966,831.95
Others payables	290,150,992.61	–	–	290,150,992.61
Non-current liabilities				
due within one year	57,423,821.80	–	–	57,423,821.80
Long-term borrowings	–	456,237,024.37	–	456,237,024.37
Lease liabilities	–	24,975,626.08	2,668,525.39	27,644,151.47
Total	1,231,541,646.36	481,212,650.45	2,668,525.39	1,715,422,822.20

RMB				
31 December 2022				
Item	Within 1 year	1-3 years	Over 3 years	Total
Short-term borrowings	55,404,333.33	–	–	55,404,333.33
Accounts payable	201,182,480.44	–	–	201,182,480.44
Others payables	72,335,632.38	–	–	72,335,632.38
Non-current liabilities				
due within one year	17,283,958.98	–	–	17,283,958.98
Lease liabilities	–	31,253,360.27	4,096,037.02	35,349,397.29
Total	346,206,405.13	31,253,360.27	4,096,037.02	381,555,802.42

Notes to Financial Statements

For the half-year ended 30 June 2023

(60) RISKS RELATED TO FINANCIAL INSTRUMENTS *(Continued)*

3. Market risk

- (1) Interest rate risk refers to the risk that the fair value or future cash flow of financial instruments will fluctuate due to changes in market interest rates. Interest-bearing financial instruments with fixed interest rates expose the Group to fair value interest rate risk, and interest-bearing financial instruments with floating interest rates expose the Group to cash flow interest rate risk. The Group determines the ratio of fixed interest rate and floating interest rate financial instruments according to the market environment, and maintains an appropriate financial instrument portfolio through regular review and monitoring.
- (2) Foreign exchange risk refers to the risk that the fair value or future cash flow of financial instruments will fluctuate due to changes in foreign exchange rates. The risk of exchange rate changes faced by the Group is mainly related to the Group's foreign currency monetary assets and liabilities. The Group operates in PRC and its main activities are denominated in RMB. Therefore, the market risk of foreign exchange changes undertaken by the Group is not significant.

For the details of the Group's foreign currency monetary assets and liabilities, please refer to the description in Note (57) to the financial statements.

(61) DISCLOSURE OF FAIR VALUE

1. Fair value of assets and liabilities measured at fair value at the end of the period

Item	Fair value as at 30 June 2023			Total
	Fair value measured at level 1	Fair value measured at level 2	Fair value measured at level 3	
Investment measured at continuous fair value				
Debt instruments	–	58,115,038.36	–	58,115,038.36
Others equity instrument	–	–	34,752,412.68	34,752,412.68
Receivables financing	–	80,075,652.66	–	80,075,652.66

Notes to Financial Statements

For the half-year ended 30 June 2023

(61) DISCLOSURE OF FAIR VALUE (Continued)

2. Qualitative and quantitative data on the valuation techniques used and important parameters for continuous and non-continuous second-level fair value measurement items

The Group's continuous second level fair value measurement items are mainly structured deposits and bank acceptance bills. The fair value adopts the expected yield and expected cash flow that can be obtained from similar products in the market, and is determined by discounting the interest rate determined based on the best estimate of the expected risk level.

3. Qualitative and quantitative data on the valuation techniques used and important parameters for continuous and non-continuous third-level fair value measurement items

Item	Valuation technique	Unobservable inputs	Range
Shanghai Fudan	Cash flow model	Sustainable growth rate	2.3%
Communication		Discount rate	14%
Company Limited		Liquidity discount	20%
		Minority interest discount	15%

4. Reconciliation of opening and closing balances and sensitivity analyses of unobservable inputs applied in the continuous third-level fair value measurement items

Reconciliation of continuous third-level fair value measurement items as follows:

	Balance at the beginning of the year	Exchange realignment	RMB Balance at the end of the period
Others equity instrument	33,902,315.43	850,097.25	34,752,412.68

Notes to Financial Statements

For the half-year ended 30 June 2023

(62) RELATED PARTIES AND RELATED PARTY TRANSACTIONS

1. Information on other related parties

Name of other related party	Relationship between the other related party with the Company
Fudan University	Shareholders who indirectly hold more than 5% of the Company's shares
Shanghai Fudan Communication Co., Ltd.	Company in which related natural persons serve as directors
Shanghai Fudan Science Park Co., Ltd.	Company in which related natural persons serve as Directors (not a related party since September 2022)
Shanghai Poyang Equity Investment Management Co., Ltd.	Subsidiary of associated companies

2. Information on related party transactions

(a) Related party transactions on purchase or sales of goods and provision or acceptance of services

Purchase of goods/services

Related party	Content of related party transactions	RMB	
		Half-year ended 30 June 2023	2022
Fudan University	Purchase of services (note)	194,174.76	–
Shanghai Fudan Communication Co., Ltd.	Purchase of services	471,698.11	–
Shanghai Fudan Sci-Tech. Park Venture Investment Co., Ltd	Purchase of services	–	409,735.99

Sales of goods/services

Related party	Content of related party transactions	RMB	
		Half-year ended 30 June 2023	2022
Fudan University	Sales of services (note)	61,320.75	46,226.42
Shanghai Fudan Communication Co., Ltd.	Sales of goods (note)	114,889,504.57	80,789,693.88
Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	Sales of goods	–	30,042.45
Spears Innovations Oy Ltd	Sales of goods	1,175,126.28	832,915.97

Notes to Financial Statements

For the half-year ended 30 June 2023

(62) RELATED PARTIES AND RELATED PARTY TRANSACTIONS *(Continued)*

2. Information on related party transactions *(Continued)*

(a) *Related party transactions on purchase or sales of goods and provision or acceptance of services (Continued)*

Note:

The independent non-executive directors of the Company have reviewed the connected transactions set out above and have confirmed that these connected transactions were entered into (i) in the ordinary and usual course of business of the Group; (ii) on normal commercial terms or on terms no less favourable to the Group than terms available to independent third parties; and (iii) in accordance with the relevant agreements governing them on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

(b) *Leases with related parties*

The Company as a lessee:

Name of lessor	Type of leased assets	RMB	
		Half-year ended 30 June 2023	2022
Shanghai Fudan Sci-Tech Park Venture Investment Co., Ltd			
Rental expenses	workplace	–	268,103.30
Committed finance costs for lease liabilities	workplace	–	15,584.55

(c) *Compensation of key management personnel*

Item	RMB'0,000	
	Half-year ended 30 June 2023	2022
Compensation of key management personnel	1,436.80	1,231.61

Notes to Financial Statements

For the half-year ended 30 June 2023

(62) RELATED PARTIES AND RELATED PARTY TRANSACTIONS *(Continued)*

2. Information on related party transactions *(Continued)*

(d) Amount due from or to related parties

Receivable items

Item	Related party	30 June 2023		31 December 2022	
		Carrying amount	Bad debt provision	Carrying amount	Bad debt provision
Accounts receivable	Spear Innovations Oy Ltd	523,319.68	–	819,176.25	–
Accounts receivable	Fudan University	30,000.00	–	–	–
Notes receivable	Shanghai Fudan Communication Co., Ltd.	40,030,961.50	–	72,023,108.64	–
Receivables financing	Shanghai Fudan Communication Co., Ltd.	–	–	445,000.00	–

Payable items

Item	Related party	RMB	
		30 June 2023	31 December 2022
Contract liabilities	Fudan University	23,400.00	23,400.00
Contract liabilities	Shanghai Fudan Communication Co., Ltd.	35,377,517.60	47,117,153.60
Other payables	Fudan University	388,349.51	1,747,572.81
Other payables	Shanghai Fudan Communication Co., Ltd.	943,396.22	1,179,245.28
Accounts payable	Shanghai Fudan Communication Co., Ltd.	–	1,000,000.00

Amount due to related parties are interest free, unsecured and with no fixed maturity date.

Notes to Financial Statements

For the half-year ended 30 June 2023

(63) GENERAL INFORMATION OF SHARE-BASED PAYMENT

1. General information of share-based payment

	RMB
Total amount of each equity instrument granted during the Reporting Period	–
Exercise price and the remaining contractual term of outstanding share options at the end of the period	RMB17.935 per share; 3.5 years

2. Equity settled share-based payments

	RMB
Method of determining the fair value as at the grant date	Estimated using the Black-Scholes option pricing model, combined with the terms and conditions of the grant of share options
Determination basis for the number of vesting equity instruments	The Company's financial performance indicators and personal performance indicators are assessed on an annual basis, and the number of incentive objects that achieve the assessment target is the basis for determination
Reasons for significant differences of estimate between the current period and the previous period	Nil
Accumulated amount of equity settled share-based payment recognized into capital reserves	225,873,206.30
Total expenses recognized for share-based payment settled in equity in the current period	59,393,977.32

(64) MATERIAL COMMITMENTS

	RMB	
	30 June 2023	31 December 2022
<hr/>		
Contracted, but not provided for:		
Payment for building of a subsidiary, Sino IC	133,899,851.00	148,677,301.70
Equipment and software	132,638,329.21	55,816,936.71
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Total capital commitments	266,538,180.21	204,494,238.41
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Notes to Financial Statements

For the half-year ended 30 June 2023

(65) PROFIT DISTRIBUTION

	RMB
Profit or dividend to be distributed	110,248,627.50
Approved profit or dividend to be distributed	110,248,627.50

The 2022 profit distribution plan was reviewed and approved at the 2022 annual general meeting on 2 June 2023, and a cash dividend of RMB110,248,627.50 (i.e., RMB1.35 for every 10 shares) was distributed to ordinary shares.

(66) SEGMENT INFORMATION

1. Determining basis and accounting policies of reporting segments

For management purposes, the Group is organised into business units based on their products and services and has two reportable segments as follows:

- (1) The design and sale of IC segment (“Design segment”) manufactures products including Security and Identification Chips, Non-Volatile Memory, Smart Meter Chips, FPGA and Other Products;
- (2) The IC testing services segment (“Testing segment”) provides testing services for IC chips and products.

Management monitors the results of the Group’s operating segments separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on reportable segment profit, which is measured consistently with the Group’s profit of continuing operation.

Intersegment sales and transfers are transacted with reference to the selling prices used for sales made to third parties at the then prevailing market prices.

2. Financial information of the reporting segments

			Eliminations	RMB
Item	Design Segment	Testing Segment	among segments	Total
Revenue	1,719,505,867.74	152,292,043.01	83,245,284.49	1,788,552,626.26
Cost of sales	589,164,907.96	70,769,933.24	73,940,292.20	585,994,549.00
Total assets	6,770,894,998.87	1,288,431,178.45	215,933,308.68	7,843,392,868.64
Total liabilities	2,127,345,160.85	216,007,702.22	68,149,172.92	2,275,203,690.15

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY

1. Accounts receivable

(a) An ageing analysis based on the invoice date is as follows:

Ageing	RMB 30 June 2023
Within 1 year	1,131,433,884.50
1 to 2 years	128,332,915.31
2 to 3 years	8,769,450.98
3 to 4 years	1,033,401.72
4 to 5 years	765,632.64
Over 5 years	5,143,621.32
Total	1,275,478,906.47

(b) *Disclosure under the methods of provision for bad debts by portfolio*

Type	30 June 2023					31 December 2022				
	Book balance		Bad debt provision		Carrying amounts	Book balance		Bad debt provision		Carrying amounts
	Amount	Percentage (%)	Amount	Percentage (%)		Amount	Percentage (%)	Amount	Percentage (%)	
Provision of bad debts by portfolio	1,275,478,906.47	100.00	26,471,405.70	2.08	1,249,007,500.77	704,997,547.73	100.00	14,203,771.43	2.01	690,793,776.30
Which:										
Highly Reliable										
Product Sales										
Portfolio	1,038,778,959.51	81.44	13,751,802.91	1.32	1,025,027,156.60	462,229,531.89	66.00	4,980,898.80	1.08	457,248,633.09
Industrial Sales										
Portfolio	204,113,992.51	16.00	12,719,602.79	6.23	191,394,389.72	227,958,545.99	32.00	9,222,872.63	4.05	218,735,673.36
Related party portfolio in the scope of consolidation	32,585,954.45	2.56	-	-	32,585,954.45	14,809,469.85	2.00	-	-	14,809,469.85
Total	1,275,478,906.47		26,471,405.70		1,249,007,500.77	704,997,547.73		14,203,771.43		690,793,776.30

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY *(Continued)*

1. Accounts receivable *(Continued)*

(b) Disclosure under the methods of provision for bad debts by portfolio *(Continued)*

Bad debt provision by portfolio:

Portfolio basis: credit risk

Item	30 June 2023		RMB
	Accounts receivable	Bad debt provision	Provision ratio (%)
Highly Reliable Product			
Sales Portfolio	1,038,778,959.51	13,751,802.91	1.32
Industrial Sales Portfolio	204,113,992.51	12,719,602.79	6.23
Related party portfolio in the scope of consolidation	32,585,954.45	–	–
Total	1,275,478,906.47	26,471,405.70	2.08

(c) Bad debt provision

Category	31 December 2022	Provision	Change for the Period			RMB
			Recovered or reversed	Write-off or cancellation	Other changes	30 June 2023
Bad debt provision	14,203,771.43	12,267,634.27	–	–	–	26,471,405.70
Total	14,203,771.43	12,267,634.27	–	–	–	26,471,405.70

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY *(Continued)*

1. Accounts receivable *(Continued)*

(d) *Five largest accounts receivable by debtors at the end of the period*

Name of entity	Book balance	Percentage to accounts receivables balance (%)	Bad debt provision
First	387,982,500.00	30.42	–
Second	77,164,868.90	6.05	977,220.89
Third	61,612,800.00	4.83	–
Forth	58,292,160.00	4.57	2,236,796.00
Fifth	49,957,300.00	3.92	1,276,448.00
Sub-total	635,009,628.90	49.79	4,490,464.89

2. Other receivables

Item	30 June 2023	31 December 2022
Other receivables	4,040,454.21	4,839,855.49
Total	4,040,454.21	4,839,855.49

(a) *Disclosure by ageing*

Ageing	RMB 30 June 2023
Within 1 year	1,484,253.68
1-2 years	131,231.37
2-3 years	1,204,721.10
Over 3 years	1,220,248.06
Total	4,040,454.21

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY *(Continued)*

2. Other receivables *(Continued)*

(b) Classified by the nature

Nature	RMB	
	30 June 2023	31 December 2022
Security deposit	2,169,916.90	2,014,659.59
Receipt or payment on behalf	1,589,261.00	1,139,096.00
Others	54,000.00	54,000.00
Reserve funds	227,276.31	1,632,099.90
Total	4,040,454.21	4,839,855.49

(c) Five largest other receivables by debtors at the end of the period

Name of entity	Nature	30 June 2023	Ageing	RMB	
				Percentage in the balance of other receivables (%)	Closing balance of bad debt provision
First	Deposit	737,117.50	1-2 years, 2-3 years, over 3 years	18.24	-
Second	Receipt or payment on behalf	500,000.00	1-2 years	12.37	-
Third	Deposit	350,518.62	Within 1 year, over 3 years	8.68	-
Forth	Receipt or payment on behalf	242,000.00	1-2 years, over 3 years	5.99	-
Fifth	Deposit	226,000.00	2-3 years	5.59	-
Total		2,055,636.12		50.87	-

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY *(Continued)*

3. Long-term equity investments

Item	30 June 2023			31 December 2022			RMB
	Book balance	Provision for impairment	Carrying amounts	Book balance	Provision for impairment	Carrying amounts	
Investments in subsidiaries	100,836,307.13	10,000,000.00	90,836,307.13	100,836,307.13	10,000,000.00	90,836,307.13	
Investments in associates and joint ventures	39,713,886.88	–	39,713,886.88	41,841,257.40	–	41,841,257.40	
Total	140,550,194.01	10,000,000.00	130,550,194.01	142,677,564.53	10,000,000.00	132,677,564.53	

(a) *Investments in subsidiaries*

Investee	RMB		
	31 December 2022	30 June 2023	Balance of provision for impairment as at 30 June 2023
Sino IC Technology Co., Ltd.	25,146,906.64	25,146,906.64	–
Shanghai Fudan Microelectronics (Hong Kong) Limited	40,262,700.49	40,262,700.49	–
Shenzhen Fudan Microelectronics Co., Ltd.	5,000,000.00	5,000,000.00	–
Beijing Fudan Microelectronics Technology Co., Ltd.	10,000,000.00	10,000,000.00	10,000,000.00
Shanghai Fuwei Xunjie Digital Technology Co., Ltd.	20,426,700.00	20,426,700.00	–
Total	100,836,307.13	100,836,307.13	10,000,000.00

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY (Continued)

3. Long-term equity investments (Continued)

(b) Investment in associates and joint ventures

Investee	At 31 December 2022	Increase or decrease during the period recognized with the equity method	RMB
			30 June 2023
Associates			
Shanghai West Hongqiao Navigation Technology Co., Ltd.	3,534,127.27	7,374.99	3,541,502.26
Shanghai Fukong Hualong Microsystem Technology Co., Ltd.	12,076,294.68	(1,598,103.74)	10,478,190.94
Shanghai Fudan Sci-Tech Park Venture Investment Co., Ltd	16,632,738.69	(523,425.59)	16,109,313.10
Shanghai Haojun Venture Capital Partnership (Limited Partnership)	9,598,096.76	(13,216.18)	9,584,880.58
Total	41,841,257.40	(2,127,370.52)	39,713,886.88

4. Revenue and Cost of sales

(a) Revenue and Cost of sales

Item	Half-year ended 30 June				RMB
	2023		2022		
	Revenue	Cost	Revenue	Cost	
Main business	1,676,915,243.23	559,454,630.94	1,585,678,041.88	544,898,134.71	
Others business	8,308,522.76	4,912,694.07	14,217,577.64	4,227,619.77	
Total	1,685,223,765.99	564,367,325.01	1,599,895,619.52	549,125,754.48	

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY (Continued)

4. Revenue and Cost of sales (Continued)

(b) Revenue generated from contracts

Contract classification	RMB	
	Design and sales of integrated circuits	Total
Types of products		
Security and Identification IC Chips	409,745,747.76	409,745,747.76
Non-volatile Memory	586,396,505.08	586,396,505.08
Smart meter chip	112,608,793.84	112,608,793.84
FPGA and other products	576,472,719.31	576,472,719.31
Place of business		
PRC	1,584,757,742.48	1,584,757,742.48
Others	100,466,023.51	100,466,023.51
Sort by time of products transfer		
Revenue recognised at a certain point of time		
Sales of products	1,685,223,765.99	1,685,223,765.99
Total	1,685,223,765.99	1,685,223,765.99

The information related to the performance obligations of the Group is as follows:

Sale of IC products

Fulfill performance obligations when delivering products to customers. Usually, the payment obligation is performed after the customer received the products, and the Group gives different credit arrangements to different customers.

(c) Investment income

Item	RMB	
	Half-year ended 30 June 2023	2022
Loss on long-term equity investments accounted with the equity method	(2,127,370.52)	(3,125,205.07)
Investment income on financial assets held for trading	2,859,153.43	3,920,357.05
Total	731,782.91	795,151.98

Notes to Financial Statements

For the half-year ended 30 June 2023

(67) NOTES TO THE MAIN ITEMS IN THE FINANCIAL STATEMENTS OF THE PARENT COMPANY *(Continued)*

5. Supplementary information

(a) *Statement of non-recurring profit or loss for the period*

Item	RMB Amount
Loss from disposal of non-current assets	369,250.51
Government grants recognized in profit or loss of the period (except for government grants which are closely related to the Company's operations, and granted in a fixed amount or quantity in conformity with the common standards of the State)	37,706,772.50
Except for the effective hedging business related to the normal operation of the Company, the fair value changes arising from the holding of financial assets held for trading, derivative financial assets, financial liabilities held for trading, and derivative financial liabilities, and the disposal of financial assets held for trading, derivative financial investment income from assets, financial liabilities held for trading, derivative financial liabilities and other debt investments	2,049,561.65
Non-operating income and expense other than the above-mentioned	0.41
Other profit/loss items conforming to definition of the non-recurring profit or loss	3,508,478.85
Less: Affected amount of income tax	2,203,849.04
Affected amount of minority interest (net of tax)	7,150,809.33
Total	34,279,405.55

(b) *Net return rate of assets and earnings per share*

Profit generated during the Reporting Period	Weighted average net return rate of assets (%)	Earnings per share		RMB
		Basic earnings per share	Diluted earnings per share	
Net profit attributable to ordinary shareholders of the Company	9.39	0.55		0.55
Net profit attributable to ordinary shareholders of the Company, net of non-recurring profit or loss	8.67	0.51		0.51

Other Information

EVENT AFTER THE REPORTING DATE

There is no significant subsequent event after the reporting date.

CONTINGENT LIABILITIES

As at 30 June 2023, the Group has no contingency that need to be disclosed (2022: Nil).

CHANGES IN DIRECTOR

After the Reporting Period, Ms. Liu Huayan has resigned as non-executive Director with effect from 11 July 2023.

INTERIM DIVIDEND

The Board does not recommend the payment of an interim dividend for the half-year ended 30 June 2023 (2022: nil).

SIGNIFICANT INVESTMENT, MATERIAL ACQUISITIONS OR DISPOSALS OF SUBSIDIARIES AND AFFILIATED COMPANIES

There was no significant investment and material acquisition or disposal of subsidiaries and affiliated companies during the six months ended 30 June 2023.

PLEDGE OF ASSETS

As at 30 June 2023, the Group did not have any pledge of assets (2022: fixed assets with carrying amounts RMB173,447,600.91 were pledged for the securities of bank borrowings which were fully repaid in Year 2022).

CAPITAL MANAGEMENT

The key objective of the Group's capital management is to ensure the Group's ability to operate on a going concern basis and maintain healthy capital ratios so as to support business growth and maximise shareholder value.

The Group manages its capital structure and makes adjustments in response to changes in economic conditions and risk characteristics of the underlying assets. To maintain or adjust the capital structure, the Group may adjust the distribution of profits to shareholders, return capital to shareholders or issue new shares. The Group is not constrained by any external mandatory requirements on capital. The capital structure of the Group consists of equity attributable to owners of the Company (comprising issued share capital and various reserves) and bank borrowings. There was no change in the Group's capital management objectives, policies or procedures from January to June of 2023 and year 2022.

The Group manages its capital with the gearing ratio. The gearing ratio of the Group, which is the total liabilities divided by the total liabilities and owner's equity as at 30 June 2023 is approximately 29.01% (2022: 15.67%).

Other Information

FINANCIAL RESOURCES AND LIQUIDITY

As at 30 June 2023, net assets of the Group amounted to RMB5,568,189,178.49 (2022: RMB5,153,169,377.95), representing an increase of approximately 8.05% over last year; of which current assets amounted to RMB5,687,882,418.09 (2022: RMB4,327,100,944.42), representing an increase of approximately 31.45% over last year; of which cash at bank and on hand amounted to RMB787,576,869.38 (2022: RMB1,190,828,339.52), representing a decrease of approximately 33.86% over last year.

The Group kept profiting for the past years, and thus profit, placement of shares and cash flows generated internally have been used to meet the operations and business development needs. The Company has completed in the issuance of A shares in 2021 and Sino IC completed public offering and listing on the Beijing Stock Exchange in 2022 which provided additional funds for the Group. The Group has also obtained bank borrowings from financial institutions to cope with daily operation and future development. The current cashflow is sufficient which attributable to the cautious treasury policy adopted by the Group. The Group may also obtain appropriate credit facilities from financial institutions when there is additional funding requirement for its business development in the future, including but not limited to bank borrowings, acceptance bills, discounted bills, trade finance and letters of credit, depending on the scale and duration of the funding requirements. The Group does not use any financial instruments for hedging purposes and does not have foreign currency net investments hedged by currency borrowings and other hedging instruments.

As at 30 June 2023, the Group had bank borrowings amounted to RMB1,080,237,024.37 (2022: RMB50,000,000.00).

FUTURE PLANS FOR MATERIAL INVESTMENTS OR CAPITAL ASSETS

Sino IC completed the public offering and listing on the Beijing Stock Exchange on 28 October 2022. The proceeds of offering were RMB540,000,000 and the actual net proceeds after deducting issuing expenses (tax not inclusive) was RMB507,600,000. As at 30 June 2023, the unutilised proceeds of Sino IC amounted to RMB44,531,010.14, which will be used in the investment of IC testing industrialisation project and the construction of research and development center project.

Save as mentioned above, there was no other specific plan for material investments or capital assets as at 30 June 2023.

HUMAN RESOURCES

As at 30 June 2023, the Group had a total of 1799 employees (31 December 2022: 1691). The employee remunerations (included directors' emoluments) were RMB493,296,549.41 for the 6 months ended 30 June 2023 (2022: RMB403,174,999.47). The remuneration package of the employees is determined by various factors such as their working experience and job performance, the market condition, industry practice and applicable employment law. Year-end bonus based on job performance will be paid to employees as recognition of and reward for their contributions.

Other Information

INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES AND DEBENTURES OF DIRECTORS AND SUPERVISORS AND CHIEF EXECUTIVE

At 30 June 2023, the interests or short positions of the directors and supervisors and chief executives of the Company in the share capital and underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the “SFO”)) (i) which were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which they were taken or deemed to have under such provisions of the SFO); or (ii) which were required to be entered in the register referred to therein pursuant to section 352 of the SFO; or (iii) which were required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by directors of Listed Companies contained in the Listing Rules, were as follows:

Long positions in A shares of the Company:

	Number of issued shares held, capacity and nature of interest				Total	Percentage of the Company's issued share capital
	Directly beneficially owned	Through spouse or minor children	Through controlled corporation			
Directors						
Mr. Jiang Guoxing	7,210,000	–	–		7,210,000	0.88
Mr. Shi Lei	7,210,000	–	–		7,210,000	0.88
	14,420,000	–	–		14,420,000	
Supervisor						
Ms. Zhang Yanfeng	–	–	220,500		220,500	0.03

Long positions in H shares of the Company:

	Number of issued shares held, capacity and nature of interest				Total	Percentage of the Company's issued share capital
	Directly beneficially owned	Through spouse or minor children	Through controlled corporation			
Supervisor						
Ms. Zhang Yanfeng	–	108,000	–		108,000	0.01

Save as disclosed above, as at 30 June 2023, none of the directors and supervisors and chief executives of the Company had or was deemed to have any interests or short positions in the Shares, underlying shares or debentures of the Company and its associated corporations (within the meaning of Part XV of the SFO) (i) which were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which they were taken or deemed to have under such provisions of the SFO); or (ii) which

Other Information

were required to be entered in the register referred to therein pursuant to section 352 of the SFO; or (iii) which were required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by directors of Listed Companies contained in the Listing Rules.

DIRECTORS' RIGHTS TO ACQUIRE SHARES OR DEBENTURES

At no time during the Reporting Period were rights to acquire benefits by means of the acquisition of shares in or debentures of the Company granted to any director or their respective spouse or minor children, or were any such rights exercised by them; or was the Company, or any of its subsidiaries a party to any arrangement to enable the directors to acquire such rights in any other body corporate.

INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES OF SUBSTANTIAL SHAREHOLDERS AND OTHER PERSONS

At 30 June 2023, so far as any Directors are aware, the interests and short positions owned by the following parties in the Shares or underlying shares of the Company which were required to be disclosed to the Company under Part XV of the SFO or were recorded in the register of interests required to be kept by the Company pursuant to section 336 of the SFO, were as follows:

Long and short positions in shares of the Company:

Name of shareholders	Note	Capacity and nature of interest	Number of Ordinary shares held	Class of shares	Percentage of shareholding on relevant class of shares	Percentage of the Company's issued share capital
Shanghai Fudan Fukong Technology Enterprise Holdings Limited ("Fudan Fukong")	(2)	Beneficially owned	109,620,000 (L)	A shares	20.59 (L)	13.42 (L)
Shanghai Commerce and Invest (Group) Corporation ("SCI")	(2)	Interest of corporation controlled	109,620,000 (L)	A shares	20.59 (L)	13.42 (L)
Bailian Group Company Limited ("Bailian Group")	(2)	Interest of corporation controlled	109,620,000 (L)	A shares	20.59 (L)	13.42 (L)
Shanghai Fudan Fangao IC Technology Co. Ltd. ("Fuxin Fangao")	(3)	Beneficially owned	106,730,000 (L)	A shares	20.05 (L)	13.07 (L)
Shanghai Fudan Asset Management Co., Ltd. ("Fudan Asset")	(3)	Interest of corporation controlled	106,730,000 (L)	A shares	20.05 (L)	13.07 (L)
Fudan University	(3)	Interest of corporation controlled	106,730,000 (L)	A shares	20.05 (L)	13.07 (L)
Shanghai Zhengben Corporate Management Consultant Partnership Enterprise (limited partnership) ("Shanghai Zhengben")	(4)	Beneficially owned	52,167,070 (L)	A shares	9.80 (L)	6.39 (L)
Shanghai Yikun Investment Consultant Partnership Enterprise ("Shanghai Yikun")	(4)	Interest of corporation controlled	56,138,784 (L)	A shares	10.55 (L)	6.87 (L)
Zhang Yong	(4)	Interest of corporation controlled	56,138,784 (L)	A shares	10.55 (L)	6.87 (L)
Shanghai Yexin Enterprise Management Co., Ltd. ("Shanghai Yexin")	(4)	Interest of corporation controlled	56,138,784 (L)	A shares	10.55 (L)	6.87 (L)
Ningbo Dingxian Investment Management Co., Ltd. ("Ningbo Dingxian")	(4)	Interest of corporation controlled	56,138,784 (L)	A shares	10.55 (L)	6.87 (L)
Tenbagger Capital Management Co., Ltd.		Investment manager	19,912,000 (L)	H shares	7.00 (L)	2.44 (L)
BlackRock, Inc.		Investment manager	14,897,829 (L)	H shares	5.24 (L)	1.82 (L)
			6,989,000 (S)	H shares	2.46 (S)	0.86 (S)

Other Information

Notes:

- (1) (L) – Long position
(S) – Short position
- (2) Bailian Group is a state-owned enterprise wholly owned by the Shanghai Municipal Government and wholly owned SCI, and SCI held 70.2% of the equity interest of Fudan Fukong. Accordingly, each of SCI and Bailian Group is deemed to be interested in Fudan Fukong's interest in the Company.
- (3) Fuxin Fangao is a state-owned enterprise wholly owned by Fudan Asset and Fudan Asset is wholly owned by Fudan University.
- (4) Zhang Yong held 95% of the equity interest in Shanghai Yikun, and Shanghai Yikun held 99.81% of the equity interest in Shanghai Zhengben. Accordingly, each of Shanghai Yikun and Zhang Yong is deemed to be interested in Shanghai Zhengben's interest in the Company. Shanghai Yikun and Zhang Yong further held the Company's interest through another controlled corporation (the "Controlled Corporation"). Shanghai Yexin is a general partner of Shanghai Zhengben and the Controlled Corporation and indirectly controls the voting shares of Shanghai Zhengben and the Controlled Corporation in the Company. Ningbo Dingxian held 100.00% of equity interest of Shanghai Yexin, therefore, each of Shanghai Yexin and Ningbo Dingxian is deemed to be interested in the Company's interest held by Shanghai Zhengben and the Controlled Corporation.

Save as disclosed above, as at 30 June 2023, no person, other than the directors and supervisors of the Company, whose interests are set out in the section headed "Interests and short positions in shares and underlying shares and debentures of directors and supervisors and chief executives" above, had registered an interest or short position in the shares or underlying shares of the Company that was required to be disclosed to the Company under Part XV of the SFO or to be recorded in the register of interests required to be kept by the Company pursuant to section 336 of the SFO.

2021 A SHARES TYPE II RESTRICTED SHARE INCENTIVE SCHEME

The Company implemented the 2021 A Shares Type II Restricted Share Incentive Scheme (the "Scheme") on 6 December 2021 (the "Grant Date") for the purpose of motivating and rewarding persons who contribute to the operations of the Group. Eligible persons include those persons, other than directors and senior management, whom the Board of Directors considers to be in need of incentives. The Scheme is valid for a maximum period of 60 months from the Grant Date of the A Shares Type II restricted shares (the "restricted shares") to the date when all the restricted shares granted to the incentive recipients vest or lapse. As at 30 June 2023, the remaining life of the Scheme is 3.5 years.

The total number of underlying shares involved in this Scheme during the entire validity period is 10,000,000 shares, which does not exceed 20.00% of shares of the Company in aggregate at the time of submitting this scheme to the shareholders' meeting, which represent 1.22% of the issued shares at the date of this report. The cumulative number of shares of the Company granted to any one incentive recipient under this Scheme during the entire validity period does not exceed 1.00% of the total number of shares of the Company. The Company granted 8,934,000 restricted shares to the incentive recipients on 6 December 2021 (the "first grant") and then granted 1,066,000 restricted shares to the incentive recipients on 28 October 2022 (the "reservation grant").

The grant price of the restricted shares under the first grant is RMB18.00 per Share, i.e., the incentive recipients who have satisfied the conditions of grant and conditions of vesting can subscribe for the restricted shares to be issued by the Company to them at the price of RMB18.00 per A Share. Grant price was adjusted to RMB17.935 per Share after distribution of cash dividend to shareholder in 2022. The pricing method for the restricted shares grant price under the Scheme is self-pricing.

The Company did not grant any restricted shares during the Reporting Period (2022: Nil), of which the Group recognized share option expenses of RMB59,393,977.32 in the Reporting Period (2022: RMB73,496,110.30).

As at 30 June 2023, the fair value of the 2021 restricted share incentive scheme granted by the Company is RMB368,615,624.00 (31 December 2022: RMB368,615,624.00).

Other Information

The fair value of equity-settled restricted share incentive scheme granted at the grant date has been estimated using the Black-Scholes option pricing model, taking into account the terms and conditions of the share options granted. The following table presents the input variables for the model used for first grant:

	First vesting period	Second vesting period	Third vesting period	Fourth vesting period
Dividend Ratio (%)	0.25	0.25	0.25	0.25
Historical volatility (%)	35.0845	40.4499	38.0941	38.7671
Risk-free interest rate (%)	2.2550	2.5364	2.6240	2.6907
Expected maturity of share options (years)	1	2	3	4
Weighted average share price (RMB)	32.37	32.92	33.45	34.12

The following table presents the input variables of the model used for the reservation grant:

	First vesting period	Second vesting period	Third vesting period
Dividend Ratio (%)	0.18	0.18	0.18
Historical volatility (%)	33.7762	34.4808	38.7623
Risk-free interest rate (%)	1.7551	2.0886	2.2573
Expected maturity of share options (years)	1	2	3
Weighted average share price (RMB)	76.97	77.22	77.53

The other characteristics of the share options granted are not taken into account in the calculation of the fair value.

Movements of restricted shares for the Reporting Period

Name or category of participants	Grant date	Number of restricted shares				As at		Grant price
		As at 1 January 2023 (Share)	Granted (Share)	Vested (Share)	Lapsed (Share)	30 June 2023 (Share)	Vesting period	
Employee (total 590 employee)	6/12/2021 and 28/10/2022	7,537,750	-	-	-	7,537,750	6/12/2022 to 6/12/2026	RMB17.935
Total		7,537,750	-	-	-	7,537,750		

Other Information

The Scheme is valid for five years from the date of grant of the restricted shares. The granted restricted shares of the first grant will be exercised in four batches of 25%, 25%, 25% and 25% of the exercise ratio from the date of grant after a 12-month exercise restriction period, and the granted restricted shares of the reservation grant will be exercised in three batches of 30%, 30% and 40% of the exercise ratio from the date of grant after a 12-month exercise restriction period, provided that the exercise conditions are met, and the incentive recipients can exercise the restricted shares during the exercise period in accordance with the exercise price determined in the Scheme.

As at 30 June 2023, the Company had 7,537,750 restricted shares issued and outstanding under the Scheme, which represented approximately 0.92% of the Company's issued shares at that date. Based on the capital structure of the Company, if all the restricted shares issued and outstanding are exercised, 7,537,750 additional ordinary shares of the Company will be issued, increasing the share capital by RMB753,775 and the share premium by RMB134,435,771.25 of the Company (before deduction of issue expenses).

DIRECTORS' INTERESTS IN COMPETING BUSINESS

During the half-year ended 30 June 2023, none of the directors of the Company had an interest in a business which competes or is likely to compete, either directly or indirectly, with the businesses of the Group, as defined in the Listing Rules.

CORPORATE GOVERNANCE

In the opinion of the directors, the Company has complied with the code provisions set out in the Corporate Governance Code contained in Appendix 14 of the Listing Rules throughout the half-year ended 30 June 2023.

CODE OF CONDUCT REGARDING SECURITIES TRANSACTIONS BY DIRECTORS

The Company has adopted a code of conduct on terms no less exacting than the model code of securities transactions by directors of listed issuers as set out in Appendix 10 of the Listing Rules. Having made specific enquiry to all directors, the directors have complied with such code of conduct and the required standard of dealings throughout the half-year ended 30 June 2023.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

During the half-year ended 30 June 2023, neither the Company, nor any of its subsidiaries purchased, redeemed or sold any of the Company's listed securities.

Other Information

AUDIT COMMITTEE

The Company has an audit committee which was established with written terms of reference in compliance with the Listing Rules and Corporate Governance Code and Corporate Governance Report as set out in Appendix 14 of the Listing Rules. The primary duties of the audit committee are to review and supervise the financial reporting process and internal control system of the Group. At the date of this report, the audit committee comprises three independent non-executive directors Mr. Cao Zhongyong, Mr. Cai Minyong and Mr. Wang Pin. The Group's unaudited financial statements for the half-year ended 30 June 2023 have been reviewed by the committee, who were of the opinion that such statements complied with the applicable accounting standards, the Listing Rules and legal requirements, and that adequate disclosures had been made.

APPROVAL OF THE FINANCIAL STATEMENTS

These financial statements had been approved by the tenth meeting of the ninth session of the Board on 28 August 2023 for publication.

By order of the Board
Shanghai Fudan Microelectronics Group Company Limited*
Chairman
Jiang Guoxing

Shanghai, the PRC, 28 August 2023

As at the date of this report, the Company's executive Directors are Mr. Jiang Guoxing, Mr. Shi Lei, Mr. Yu Jun and Ms. Cheng Junxia; non-executive Directors are Ms. Zhang Qianling, Mr. Wu Ping and Mr. Sun Zheng, and independent non-executive Directors are Mr. Cao Zhongyong, Mr. Cai Minyong, Mr. Wang Pin and Ms. Zou Fuwen.

* *For identification purposes only*