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

FORM 20-F

(Mark One)

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**
- OR
- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
- For the fiscal year ended December 31, 2024
- OR
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
- OR
- SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report _____

For the transition period from _____ to _____

Commission file number 001-15128

United Microelectronics Corporation
(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Taiwan, Republic of China
(Jurisdiction of incorporation or organization)

**No. 3, Li-Hsin 2nd Road, Hsinchu Science Park,
Hsinchu 300094, Taiwan, R.O.C.**
(Address of principal executive offices)

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

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

Title of each class American Depository Shares, each representing five common shares	Trading Symbol(s) UMC	Name of each exchange on which registered New York Stock Exchange
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Securities registered or to be registered pursuant to Section 12(g) of the Act.

None
(Title of Class)

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

None
(Title of Class)

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

12,560,716,404 Common Shares of Registrant issued and outstanding as of December 31, 2024

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

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

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

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

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

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

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

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

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

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

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

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

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

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

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes No

UNITED MICROELECTRONICS CORPORATION
FORM 20-F ANNUAL REPORT
FISCAL YEAR ENDED DECEMBER 31, 2024

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SUPPLEMENTAL INFORMATION

The references to “United Microelectronics”, “we”, “us”, “our”, “our company” and “the Company” in this Annual Report refer to United Microelectronics Corporation and its consolidated subsidiaries, unless the context suggests otherwise. The references to “Taiwan” and “R.O.C.” refer to Taiwan, Republic of China. The references to “China” and “PRC” refer to People’s Republic of China. The references to “shares” and “common shares” refer to our common shares, par value NT\$10 per share, and “ADSs” refer to our American Depository Shares, each representing five common shares. The ADSs are issued under the Deposit Agreement, dated as of October 21, 2009, as amended, supplemented or modified from time to time, among United Microelectronics, JPMorgan Chase Bank, N.A. and the holders and beneficial owners from time to time of American Depository Receipts issued thereunder. The references to “TIFRSs” refer to the Taiwan International Financial Reporting Standards as issued by the Financial Supervisory Commission in the Republic of China. “IFRSs” refer to International Financial Reporting Standards as issued by the International Accounting Standards Board, or IASB. “U.S. GAAP” refer to the generally accepted accounting principles in the United States. Any discrepancies in any table between totals and sums of the amounts listed are due to rounding.

We publish our financial statements in New Taiwan dollars, the lawful currency of the R.O.C. In this Annual Report, “NT\$” and “NT dollars” mean New Taiwan dollars; “\$,” “US\$” and “U.S. dollars” mean United States dollars; “¥” means Japanese Yen; and “RMB¥” means Renminbi.

FORWARD-LOOKING STATEMENTS IN THIS ANNUAL REPORT MAY NOT BE REALIZED

Our disclosure and analysis in this Annual Report contain or incorporate by reference some forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events. You can identify forward looking statements by the fact that they do not relate strictly to historical or current facts. The words “may,” “will,” “is/are likely to,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan” and similar expressions are intended to identify a number of these forward-looking statements. Forward-looking statements in this Annual Report include, but are not limited to, statements regarding our business strategies and future plans, anticipated business condition and financial results, our capital expenditure plans, our capacity management plans, expectations as to the capabilities of our technologies and manufacturing process, technological upgrades, investment in research and development, future market demand, regulatory or other developments in our industry, business expansion plans or new investments as well as business acquisitions and financing plans. Please see “Item 3. Key Information—D. Risk Factors” for a further discussion of certain factors that may cause actual results to differ materially from those indicated by our forward-looking statements. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions about us, including, among other things:

- our dependence on frequent introduction of new product services and technologies based on the latest developments;
- the intensely competitive semiconductor, communications, consumer electronics and computer industries and markets;
- risks associated with our international business activities;
- our dependence on key personnel;
- general economic conditions, including those related to the semiconductor, communications, consumer electronics and computer industries;
- possible disruptions in commercial activities caused by natural and human-induced disasters, and outbreaks of contagious diseases;
- fluctuations in foreign currency exchange rates;
- geopolitical conflicts, including political relationships between U.S., China and Taiwan;
- additional disclosures we make in our previous and future Form 20-F annual reports and Form 6-K periodic reports to the U.S. Securities and Exchange Commission, or the SEC; and
- those other risks identified in the “Item 3. Key Information—D. Risk Factors” section of this Annual Report.

We do not and will not undertake the obligation to update or revise any forward-looking statements contained in this Annual Report whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this Annual Report might not occur and our actual results could differ materially from those anticipated in these forward-looking statements.

GLOSSARY

AMS	Analog/mixed-signal.
ASIC	Application Specific Integrated Circuit. A custom-designed integrated circuit that performs specific functions which would otherwise require a number of off-the-shelf integrated circuits to perform.
BCD	Bipolar-Complementary Metal Oxide Semiconductor (“CMOS”)-Double Diffused Metal Oxide Semiconductor (“DMOS”). An integrated circuit and one of the most important components for power management integration circuits.
BSI-CSI	Back-Side Illuminated CMOS Image Sensor, which is used for mobile product image sensor with better performance and thinner chip.
Cell	Semiconductor structure in an electrical state, which can store information, mainly used as the building block of memory array.
Die	A piece of a semiconductor wafer containing the circuitry of an unpackaged single chip.
DRAM	Dynamic Random Access Memory. A type of volatile memory product that is used in electronic systems to store data and program instructions. It is the most common type of RAM and must be refreshed with electricity hundreds of times per second or else it will fade away.
eFlash	Embedded Flash Nonvolatile Memory. Used for most SoC (“System-on-Chip”) applications and has faster speed and enhanced security.
eHV	Embedded High Voltage Device. Used for Liquid Crystal Display (“LCD”) driver circuit to drive LCD devices.
FinFET	Fin Field-Effect Transistor.
FPGA	Field Programmable Gate Array. A programmable integrated circuit.
Integrated Circuit	Entire electronic circuit built on a single piece of solid substrate and enclosed in a small package. The package is equipped with leads needed to electrically integrate the integrated circuit with a larger electronic system. Monolithic and hybrid integrated circuits are distinguished by the type of substrate used.
Interconnect	The conductive path made from copper or aluminum that is required to achieve connection from one circuit element to the other circuit elements within a circuit.

Mask or Photomask	A piece of glass on which an integrated circuit circuitry design is laid out.
MCU	Microcontroller unit, a small computer on a single integrated circuit, containing one or more central processing units along with memory and programmable input/output peripherals.
Memory	A group of integrated circuits that a computer uses to store data and programs, such as ROM, RAM, DRAM and SRAM.
Micron	A unit of spatial measurement that is one-millionth of a meter.
MRAM	Magnetic Random Access Memory.
Nanometer	A unit of spatial measurement that is one-billionth of a meter.
RAM	Random Access Memory. A type of volatile memory forming the main memory of a computer where applications and files are run.
RRAM	Resistive Random Access Memory.
RF-SOI	Radio Frequency Silicon on Insulator.
ROM	Read-Only Memory. Memory that is programmed by the manufacturer and cannot be changed. Typically, ROM is used to provide start-up data when a computer is first turned on.
Scanner	A photolithography tool used in the production of semiconductor devices. This camera-like step-and-scan tool projects the image of a circuit from a master image onto a photosensitized silicon wafer.
SoC	System-on-Chip. A chip that incorporates functions currently performed by several chips on a cost effective basis.

SOI	Silicon-On-Insulator. Silicon wafer consisting of a thin layer of oxide, on top of which semiconductor devices are built.
SRAM	Static Random Access Memory. A type of volatile memory product that is used in electronic systems to store data and program instructions. Unlike the more common DRAM, it does not need to be refreshed.
Transistor	Tri-terminal semiconductor device in which input signal (voltage or current depending on the type of transistor) controls output current. An individual circuit that can amplify or switch electric current. This is the building block of all integrated circuits.
Volatile memory	Memory products which lose their data content when the power supply is switched off.
12-inch wafer equivalents	Standard unit describing the equivalent amount of 12-inch wafers produced after conversion, used to quantify levels of wafer production for purposes of comparison. Figures of 12-inch wafer equivalents are derived by converting the number of wafers of all dimensions (e.g., 6-inch, 8-inch and 12-inch) into their equivalent figures for 12-inch wafers. 100 6-inch wafers are equivalent to 25 12-inch wafers. 100 8-inch wafers are equivalent to 44.44 12-inch wafers.

PART I.

ITEM 1 IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2 OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3 KEY INFORMATION

A. [RESERVED]

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Our business and operations are subject to various risks, many of which are beyond our control. If any of the risks described below actually occurs, our business, financial condition or results of operations could be seriously harmed.

Risks Related to Our Business and Financial Condition

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

In recent times, several major systemic economic and financial crises negatively affected global business, banking and financial sectors, including the semiconductor industry and markets. These types of crises cause turmoil in global markets that often result in declines in electronic product sales from which we generate our income through our goods and services. In addition, these crises may cause a number of indirect effects such as undermining the ability of our customers to remain competitive when faced with the financial and economic challenges created by adverse political and macro-economic conditions and companies struggling to survive in the wake of these crises. For example, since early 2023, semiconductor industry has experienced an economic downturn that has resulted and is likely to result in reduced demand for consumer electronics and other products incorporating semiconductors, which has in turn affected our business operations and financial conditions. In addition, even when these crises have abated, there could be in the future lingering effects from these types of crises on our business, including significant reduction in orders from our customers, insolvency of key suppliers resulting in product delays, inability of customers to obtain credit to finance purchases of our products, customer insolvencies and bankruptcies, and counterparty failures negatively impacting our treasury operations. Any future systemic political, economic or financial crises could cause revenues for the semiconductor industry as a whole to decline dramatically, and if the economic conditions or financial condition of our customers were to deteriorate, additional accounting related allowances may be required in the future and such additional allowances could increase our operating expenses and therefore reduce our operating income and net income. Any disruption in global trade conditions such as the increase in tariffs or the escalation of regional trade tension will indirectly impact global business environment which may adversely impact our business, results of operations and financial condition.

The seasonality and cyclical nature of the semiconductor industry and periodic overcapacity make us particularly vulnerable to significant and sometimes prolonged economic downturns.

The semiconductor industry has historically been highly cyclical and, at various times, has experienced significant downturns. Since most of our customers operate in semiconductor-related industries, variations in order levels from our customers can result in volatility in our revenues and earnings. Because our business is, and will continue to be, largely dependent on the requirements of semiconductor companies for our services, downturns in the semiconductor industry will lead to reduced demand for our services.

Our operating revenues are also typically affected by seasonal variations in market conditions that contribute to the fluctuations of the average selling price of semiconductor services and products. The seasonal sales trends for semiconductor services and products closely mirror those for consumer electronics, communication and computer sales. We generally experience seasonal lows in the demand for semiconductor services and products during the first half of the year, primarily as a result of inventory correction by our customers. Any change in the general seasonal variations, which we cannot anticipate, may result in materially adverse effects on our revenues, operations and businesses.

Our operating results fluctuate from quarter to quarter, which makes it difficult to predict our future performance.

Our revenues, expenses and results of operations have varied significantly in the past and may fluctuate significantly from quarter to quarter in the future due to a number of factors, many of which are beyond our control. Our business and operations have at times in the past been negatively affected by, and are expected to continue to be subject to the risk of the following factors:

- the seasonality and cyclical nature of both the semiconductor industry and the markets served by our customers;
- our customers' adjustments in their inventory;
- the loss of a key customer or the postponement of orders from a key customer;
- the rescheduling and cancellation of large orders;
- our ability to obtain equipment, raw materials, electricity, water and other required utilities on a timely and economic basis;
- pandemic and outbreaks of other contagious diseases;
- regulatory development and changes affecting our business operations globally;
- global and regional geopolitical conditions, including armed conflicts and wars;
- announcement of major collaboration or partnership agreements;
- environmental events, such as fires and earthquakes, or industrial accidents; and
- technological changes.

Due to the factors noted above and other risks discussed in this section, many of which are beyond our control, you should not rely on quarter-to-quarter comparisons to predict our future performance. Unfavorable changes in any of the above factors may seriously harm our business, financial condition and results of operations. In addition, our operating results may be below the expectations of public market analysts and investors in some future periods. In this event, the price of the common shares or ADSs may underperform or fall.

A decrease in demand for or selling prices of communication devices, consumer electronics and computer goods may decrease the demand for our services and reduce our margins.

Our customers generally use the semiconductors produced in our fabs in a wide variety of applications. We derive a significant percentage of our operating revenues from customers who use our manufacturing services to make semiconductors for communication devices, consumer electronics, PCs and other computers. The semiconductor industry experienced several downturns due to recent major financial crises and natural disasters. These downturns resulted in a reduced demand for our services and hence decreased our revenues and earnings. Any significant decrease in the demand for communication devices, consumer electronics, PCs or other computers may further decrease the demand for our services. In addition, if the average selling price of communication devices, consumer electronics, PCs or other computers decline significantly, we will be pressured to further reduce our selling prices, which may reduce our revenues and, therefore, reduce our margins significantly. As demonstrated by downturns in demand for high technology products in the past, market conditions can change rapidly, without apparent warning or advance notice. In such instances, our customers will experience inventory buildup and/or difficulties in selling their products and, in turn, will reduce or cancel orders for wafers from us. The timing, severity and recovery of these downturns cannot be predicted accurately or at all. When they occur, our business, profitability and price of the common shares and ADSs are likely to suffer. In addition, we may not be able to verify or guarantee the creditworthiness of some of our customers. If customers fail to make payments on a timely basis and accumulate substantial accounts receivable, we may not be able to collect payments or may incur substantial costs and expenses to pursue legal remedies to recover such losses, which may have an adverse effect on our financial conditions and results of operations.

Overcapacity in the semiconductor industry may reduce our revenues, earnings and margins.

The prices that we can charge our customers for our services are significantly related to the overall worldwide supply of integrated circuits and semiconductor products. The overall supply of semiconductor products is based in part on the capacity of other companies, which is outside of our control. For example, based on market conditions, some companies, including our largest competitors, have announced plans to increase capacity expenditures significantly. We believe such plans, if carried out as planned, will increase the industry-wide capacity and are likely to result in overcapacity in the future. In periods of overcapacity, if we are unable to offset the adverse effects of overcapacity through, among other things, our technology and product mix, we may have to lower the prices we charge our customers for our services and/or we may have to operate at significantly less than full capacity. Such actions could reduce our margin and profitability and weaken our financial condition and results of operations. We cannot give any assurance that an increase in the demand for foundry services in the future will not lead to overcapacity in the near future, which could materially adversely affect our revenues, earnings and margins.

Any problem in the semiconductor outsourcing infrastructure can adversely affect our operating revenues and profitability.

Many of our customers depend on third parties to provide mask tooling, assembly and test services, and we and our customers may not be able to control or direct such third parties to provide these services timely or at costs reasonable to our customers. If these customers cannot timely obtain these services on reasonable terms, they may not order any foundry services from us. This may significantly reduce our operating revenues and negatively affect our profitability.

We may be unable to implement new technologies as they become available, which may result in the decrease of our profitability and the loss of customers and market share.

The semiconductor industry is characterized by rapidly evolving and constantly changing technology. If we do not anticipate the technology evolution and rapidly adopt new and innovative technology, we may not be able to produce sufficiently advanced services at competitive prices. Our competitors may adopt new technology before we do and reduce our ability to compete effectively in the market. If we are unable to begin offering advanced services and processes on a competitive and timely basis, we may lose customers to our competitors providing similar technologies, which may cause our operating revenues to decline unless we can replace lost customers with new customers. In addition, the market prices for advanced technology and services tend to fall over time. As a result, if we are unable to offer new advanced services and processes on a competitive and timely basis, we may need to reduce prices that we set for our existing services and processes, which would have a negative effect on our profitability. We also depend upon the introduction of new technologies on a timely basis in order to benefit from the relatively higher prices such new technologies offer in the earlier stages of their life cycles. If we are unable to introduce new technologies on a timely and competitive basis, we may not be able to benefit from the relatively higher prices for new technologies, and our average selling price and profits would decrease accordingly.

We may be unable to provide leading technology to our customers if we lose the support of our technology partners.

Enhancing our manufacturing process technologies is critical to our ability to provide services for our customers. We intend to continue to advance our process technologies through internal research and development and alliances with other companies. In addition to our internal research and development team focused on developing new and improved semiconductor manufacturing process technologies, we are also dependent on some of our technology partners to advance certain process technology portfolios. In addition, we currently have patent cross-licensing agreements with several companies, including International Business Machines Corporation, or IBM. Some mask and equipment vendors also supply our technology development teams with masks and equipment needed to develop more advanced processing technologies. If we are unable to continue any of our joint development arrangements, patent cross-licensing agreements and other agreements, on mutually beneficial economic terms, if we re-evaluate the technological and economic benefits of such relationships, if we are unable to enter into new technology alliances and arrangements with other leading and specialty semiconductor companies, or if we fail to secure masks and equipment from our vendors in a timely manner sufficient to support our ongoing technology development, we may be unable to continue providing our customers with leading edge mass-producible process technologies and may, as a result, lose important customers, which would have a materially adverse effect on our businesses, results of operations and financial condition.

In addition, some of our customers rely upon third-party vendors, or intellectual property (IP) vendors, for the IP they embed into their designs. Although we work and collaborate with IP vendors with respect to such matters, there can be no guarantee that we will be successful or that the vendors will deliver according to our requirements or the needs of our customers. Failures to meet the targets or to deliver on a timely basis could cause customers to cancel orders and/or shift capacity to other suppliers.

The outbreak of infectious disease may materially and adversely affect our business and operations as well as our financial condition and results of operations.

Any outbreak of contagious diseases, including but not limited to Zika virus, Ebola virus, avian or swine influenza or severe acute respiratory syndrome, in any region of the world in which we operate our business may disrupt our ability to adequately staff our business and may generally disrupt our operations. An occurrence of a major pandemic, such as the COVID-19 pandemic, can materially and adversely affect our operations and the semiconductor markets in which we conduct our business. We have significant operations in China, Taiwan and the Asia Pacific region, including supply chain and manufacturing facilities and sales and marketing channels. If potential outbreak occurs in these areas, we may experience a decline of sales activities and customer orders, reduction of operation and workforce at our fabs, difficulties in international travels and communications, regulatory restrictions, reduction of research and development activities, and other risks resulting from the outbreak. We cannot predict the impact of infectious disease on the semiconductor industry in the future. As a result, any increase in our customers' demand may not be sustainable and we may experience a decline in our sales activities and customer orders. Any of these factors may adversely affect our business, financial conditions and results of operations.

Our business may suffer if we cannot compete successfully in our industry.

The worldwide semiconductor foundry industry is highly competitive. We compete with dedicated foundry service providers, as well as the foundry operation services of some integrated device manufacturers. Integrated device manufacturers principally manufacture and sell their own proprietary semiconductor products, but may also offer foundry services. New entrants and consolidations in the foundry business are likely to initiate a trend of competitive pricing and create potential overcapacity in legacy technology. Some of our competitors have greater access to capital and substantially greater production, research and development, marketing and other resources than we do. As a result, these companies may be able to compete more aggressively over a longer period of time than we can.

The principal elements of competition in the wafer foundry market include:

- technical competence;
- time-to-volume production and cycle time;
- time-to-market;
- research and development quality;
- available capacity;
- manufacturing yields;
- customer relationships, including service and design support;
- price;
- management expertise; and
- strategic alliances.

Our ability to compete successfully also depends on factors partially outside of our control, including product availability, IP, including cell libraries that our customers embed in their product designs, and industry and general economic trends.

We may not be able to implement our planned growth if we are unable to obtain the financing necessary to fund the substantial capital expenditures we expect to incur.

Our business and the nature of our industry require us to make substantial capital expenditures leading to a high level of fixed costs. The costs of facilities, tools and equipment to make semiconductors with advanced technology continue to rise, with each generation typically significantly more expensive than the larger-in-size more mature technologies which preceded. We expect to incur significant capital expenditures in connection with our growth plans. These capital expenditures will be made in advance of any additional sales to be generated by new or upgraded fabs as a result of these expenditures. Given the fixed-cost nature of our business, we have in the past incurred, and may in the future incur, operating losses if our revenues do not adequately offset our capital expenditures. Additionally, our actual expenditures may exceed our planned expenditures for a variety of reasons, including changes in:

- our growth plan;
- our process technology;
- our research and development efforts and patent license arrangements;
- market conditions;
- interest rates;
- exchange rate fluctuations; and
- prices of equipment.

We cannot assure you that additional financing will be available on satisfactory terms, if at all. If adequate funds are not available on satisfactory terms, we may be forced to curtail our expansion plans or delay the deployment of our services, which could result in a loss of customers and limit the growth of our business.

Our agreement with Intel subject us to additional risks, and we may not be able to succeed or generate sufficient revenue or profit as we anticipated under the Intel agreement.

On January 25, 2024, we entered into a collaboration with Intel Corporation for the purpose of developing a 12nm semiconductor process platform to address high-growth markets such as mobile, communication infrastructure and networking (the “Collaboration”). The Collaboration combines Intel’s established U.S. manufacturing capacity and UMC’s extensive foundry experience on mature nodes to enable an expanded process portfolio, and we currently expect production of 12nm products in 2027. However, the Collaboration subject us to additional risks in our business operations, including but are not limited to:

- Additional cost and investment to operate and support a manufacturing facility in the U.S.;
- Inability to control over the manufacturing process;
- Disagreement or conflict with Intel as to the terms of Collaboration;
- Lack of experience with operating or managing a foundry in the U.S.;
- Inability to recruit or retain qualified personnel to advance the collaboration;
- Delays in ramp-up productions;
- Failure of customers to accept new products; and
- Compliance with U.S. regulatory and legal requirements.

In addition, there is no guarantee that the Collaboration will result in financial and economic benefits as we anticipated. Any of the risk factors listed above and other risks may cause a delay in the production of 12nm products under the Collaboration or even prevent us from completing the joint development projects. Our failure to succeed or generate sufficient revenue under the Collaboration will adversely affect our business operations and results of operations, and may damage our reputation and adversely affect the trading price of our ADS.

We depend on a small number of customers for a significant portion of our operating revenues and any loss of these customers would result in significant declines in our operating revenues.

We have been largely dependent on a small number of customers for a substantial portion of our business. Our top ten customers accounted for 52.4%, 62.0% and 55.6% of our operating revenues in 2022, 2023 and 2024, respectively. Our largest customer from our wafer fabrication segment accounted for 8.6%, 13.1% and 10.4% of our operating revenues in 2022, 2023 and 2024, respectively. We expect that we will continue to depend upon a relatively limited number of customers for a significant portion of our operating revenues. We cannot assure you that our operating revenues generated from these customers, individually or in the aggregate, will reach or exceed historical levels in any future period. Loss or cancellation of business from significant changes in scheduled deliveries to, or decreases in the prices of services sold to any of these customers could significantly reduce our operating revenues.

Our customers generally do not have long-term agreements with us to purchase wafers, and many customers do not place purchase orders far in advance, which makes it difficult for us to predict our future revenues, adjust production costs and allocate capacity efficiently on a timely basis. In addition, due to the cyclical nature of the semiconductor industry, our customers’ purchase orders have varied significantly from period to period. As a result, we do not typically operate with any significant backlog, except in periods of extreme capacity shortage. The lack of significant backlog and the unpredictable length and timing of semiconductor cycles make it difficult for us to forecast our revenues in future periods. Moreover, our expense levels are based in part on our expectations of future revenues, and we may be unable to adjust costs in a timely manner to compensate for revenue shortfalls. We expect that in the future our operating revenues in any quarter will continue to be substantially dependent upon purchase orders received in that quarter.

Moreover, the increasing trend in mergers and acquisitions activities in the semiconductor industry could reduce total available customer base, which could potentially result in a loss of customers.

Our operations and business will suffer if we lose one or more of our key personnel without adequate replacements.

Our future success to a large extent depends on the continued services of our Chairman and key executive officers. We do not carry key person insurance on any of our personnel. If we lose the services of any of our Chairman or key executive officers, it could be difficult to find and integrate replacement personnel in a short period of time, or at all, which could harm our operations and the growth of our business.

We may have difficulty attracting and retaining skilled employees, who are critical to our future success.

The success of our business depends upon attracting and retaining experienced executives, engineers and other employees to implement our strategy. The competition for skilled employees is intense in our industry, which is exacerbated by the shortage of qualified personnel with appropriate experiences and expertise. We expect demand for personnel in Taiwan to increase in the future as new wafer fabrication facilities and other businesses are established in Taiwan. We also expect demand for experienced personnel in other locations to increase significantly as our competitors establish and expand their operations. Some of our competitors are willing to offer better compensation than what we do to our executives, engineers and other employees. We do not have long-term employment contracts with any of our employees. If we were unable to retain our existing personnel or attract, assimilate and recruit new experienced personnel in the future, it could seriously disrupt our operations and delay or restrict the growth of our business.

Our transactions with affiliates and shareholders may hurt our profitability and competitive position.

We have provided foundry services to several of our affiliates and shareholders. We currently do not provide any preferential treatment to any of these affiliates and shareholders. However, we may in the future reserve or allocate our production capacity to these companies if there is a shortage of foundry services in the market to enable these companies to maintain their operations and/or to protect our investments in them. This reservation or allocation may reduce our capacity available for our other customers, which may damage our relationships with other customers and discourage them from using our services. This may hurt our profitability and competitive position.

If we fail to maintain an effective system of internal control over financial reporting, we may be unable to accurately report our financial results or prevent fraud, and investor confidence in our company may be adversely affected.

We are required to comply with the R.O.C. and the U.S. securities laws and regulations in connection with internal controls. As a public company in the United States, our management is required to assess the effectiveness of our internal control over financial reporting using the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), or the COSO criteria, as required by Section 404 of the Sarbanes-Oxley Act of 2002. Moreover, even if our management concludes that our internal control over financial reporting is effective, our independent registered public accounting firm may decline to issue an opinion as to the effectiveness of our internal control over financial reporting, or may issue a report that is qualified or adverse. During the course of the evaluation of internal control over financial reporting, we or our independent registered public accounting firm may identify control deficiencies that we may not be able to remediate prior to the date of our first assessment of internal control over financial reporting. Our failure to achieve and maintain effective internal control over financial reporting could result in the loss of investor confidence in the reliability of our financial statements or prevent fraud, which in turn could harm our business and negatively impact the trading price of our securities.

Although effective internal controls can provide reasonable assurance with respect to the preparation and fair presentation of financial statements, they may not prevent or detect misstatements because of their inherent limitations, including the possibility of human error, the circumvention or overriding of controls, fraud or corruption. If we fail to maintain the adequacy of our internal controls, our business and operating results could be harmed, we could fail to meet our reporting obligations, and there could be a material adverse effect on the market price of our common shares and ADSs.

The trend of adopting protectionist measures in certain countries, including the United States, could have a material adverse impact on our results of operations and financial condition.

Governments in the United States, PRC and certain other countries have implemented fiscal and monetary programs to stimulate economic growth as a result of the recent economic downturn, and many of these programs include protectionist measures that encourage the use of domestic products and labor. Recent policy developments by the governments in US, China and elsewhere also suggest an increased unwillingness to allow international companies to invest in or acquire local businesses. Since many of our direct customers and other downstream customers in the supply chain are located in or have operations in the countries where protectionist measures were adopted, such protectionist measures may have a material adverse effect on demand for our manufacturing services.

We may decide to make strategic acquisitions of other companies, assets or businesses and such acquisitions may introduce significant risks and uncertainties, including risks related to integrating the acquired assets or businesses.

In order to position ourselves to take advantage of growth opportunities, we have made, and may continue to make, certain strategic acquisitions, mergers and alliances that involve significant risks and uncertainties. Even if we have identified a suitable target or partner for a strategic transaction, there is no guarantee that we will be able to negotiate a successful agreement at pricing favorable to us or to consummate the transaction in a timely manner, or at all. Furthermore, we may incur significant costs in pursuing such strategic transaction and invest in a substantial amount of time and effort without a guarantee that such transaction will be completed. Successful acquisitions and alliances in the semiconductor industry are difficult to accomplish because they require efficient integration and aligning of product offerings and manufacturing operations and coordination of sales and marketing and research and development efforts. The difficulties of integration and alignment may be increased by the necessity of coordinating geographically separated organizations, the complexity of the technologies being integrated and aligned and the necessity of integrating personnel with disparate business backgrounds and combining different corporate cultures. Furthermore, there is no guarantee that we will be able to identify a viable target for strategic acquisition, and we may incur significant costs and resources in such effort that may not result in a successful acquisition. In addition, we may also issue equity securities to pay for future acquisitions or alliances, which could be dilutive to existing shareholders. We may also incur debt or assume contingent liabilities in connection with acquisitions and alliances, which could impose restrictions on our business operations and harm our operating results.

Currency fluctuations could increase our costs relative to our revenues, which could adversely affect our profitability.

More than half of our operating revenues are denominated in currencies other than New Taiwan dollars, primarily in U.S. dollars. On the other hand, more than half of our costs of direct labor, raw materials and overhead are incurred in New Taiwan dollars. Although historically we hedged a portion of the resulting net foreign exchange position through the use of foreign exchange spot transactions, or currency forward contracts, we are still affected by fluctuations in foreign exchange rates among the U.S. dollar, the New Taiwan dollar and other currencies. Any significant fluctuation in exchange rates may impact our financial condition, including the U.S. dollar value of the ADSs and the U.S. dollar value of any cash dividends we distribute, which could have an adverse effect on the market price of the ADSs.

Risks Relating to Manufacturing

Our manufacturing processes are highly complex, costly and potentially vulnerable to impurities and other disruptions that can significantly increase our costs and delay product shipments to our customers.

Our manufacturing processes are highly complex, require advanced and costly equipment and are continuously being modified to improve manufacturing yields and product performance. Impurities or other difficulties in the manufacturing process or defects with respect to equipment or supporting facilities can lower manufacturing yields, interrupt production or result in losses of products in process. As system complexity has increased and process technology has become more advanced, manufacturing tolerances have been reduced and requirements for precision have become even more demanding. Although we have been enhancing our manufacturing capabilities and efficiency, from time to time we have experienced production difficulties that have caused delivery delays and quality control problems, as is common in the semiconductor industry. In the past we have encountered the following problems:

- capacity constraints due to changes in product mix or the delayed delivery of equipment critical to our production, including scanners, steppers and chemical stations;
- construction delays during expansions of our clean rooms and other facilities;
- difficulties in upgrading or expanding existing facilities;
- manufacturing execution system or automatic transportation system failure;
- unexpected breakdowns in our manufacturing equipment and/or related facilities;
- changing or upgrading our process technologies;
- raw materials shortages and impurities; and
- delays in delivery and shortages of spare parts and in maintenance for our equipment and tools.

Should these problems persist or repeat, we may suffer delays in delivery and/or loss of business and revenues. In addition, we cannot guarantee that we will be able to increase our manufacturing capacity and efficiency in the future to the same extent as in the past.

Our profit margin may substantially decline if we are unable to continuously improve our manufacturing yields, maintain high capacity utilization and optimize the technology mix of our silicon wafer production.

Our ability to maintain our profitability depends, in part, on our ability to:

- maintain high capacity utilization, which is defined as the ratio of the wafer-out quantity of 12-inch wafer equivalents divided by our estimated total 12-inch equivalent capacity in a specified period. The estimated capacity figures may vary depending upon equipment delivery schedules, pace of migration to more advanced processing technologies and other factors affecting production ramp-ups;
- maintain or improve our manufacturing yields, which is defined as the percentage of usable devices manufactured on a wafer; and
- optimize the technology mix of our production by increasing the number of wafers manufactured by utilizing different processing technologies.

Our manufacturing yields directly affect our ability to attract and retain customers, as well as the price of our services. Our capacity utilization affects our operating results because a large percentage of our operating costs are fixed. Our technology mix affects utilization of our equipment and process technologies, as well as the prices we can charge, either of which can affect our margins. If we are unable to continuously improve our manufacturing yields, maintain high capacity utilization or optimize the technology mix of our wafer production, our profit margin may substantially decline.

We may have difficulty in ramping up production in accordance with our schedule, which could cause delays in product deliveries and decreases in manufacturing yields.

As is common in the semiconductor industry, we have from time to time experienced difficulties in ramping up production at new or existing facilities or effecting transitions to new manufacturing processes. As a result, we have suffered delays in product deliveries or reduced manufacturing yields. We may encounter similar difficulties in connection with:

- the migration to more advanced process technologies, such as 45/40 and 28-nanometer and more advanced process technology;
- the joint development with vendors for more powerful tools (both in production and inspection) needed in the future to meet advanced process technology requirements; and
- the adoption of new materials in our manufacturing processes.

We may face construction delays, interruptions, infrastructure failure and delays in upgrading or expanding existing facilities, or changing our process technologies, any of which might adversely affect our production schedule. Our failure to achieve our production schedule could delay the time required to recover our investments and seriously affect our profitability.

Our production schedules could be delayed and we may lose customers if we are unable to obtain raw materials and equipment in a timely manner.

We are a manufacturing company that relies on suppliers to provide raw materials. In order to ensure stable manufacturing operations, we have signed long-term supply contracts with our suppliers to obtain sufficient quantities of acceptable quality raw materials. For example, we purchased a majority of our silicon wafers from Shin-Etsu Handotai Corporation, or Shin-Etsu, GlobalWafers, Sumco Group (including Sumco Corporation and Formosa Sumco Technology Corporation) and Soitec. Although we source raw materials from multiple suppliers, a small number of these suppliers hold an important position in our raw material supply due to the consistency of their product quality, and this concentration of supply may subject us to additional risks, particularly if we are not able to maintain relationships with these suppliers. In addition, our ability to source raw materials may depend on factors outside of our control, such as geopolitical tensions and regulatory development that could restrict our ability to do business with these suppliers.

In addition, from time to time we may reject materials that do not meet our specifications and quality standards, resulting in declines in output or manufacturing yields. We cannot assure you that we will be able to obtain sufficient quantities of raw materials and other supplies in a timely manner. Furthermore, the recent global supply chain disruption may adversely affect our ability to acquire and purchase raw materials in sufficient quantities or at all, or in a timely manner. If the supply of materials is substantially diminished or if there are significant increases in the costs of raw materials, we may be forced to incur additional costs to acquire sufficient quantities of raw materials to sustain our operations, which may increase our marginal costs and reduce profitability.

We also depend on a limited number of manufacturers and vendors that make and maintain the complex equipment we use in our manufacturing processes. In addition, we rely on these manufacturers and vendors to improve our technology to meet our customers' demands as technology improves. In periods of unpredictable and highly diversified market demand, the lead time from order to delivery of this equipment can be as long as twelve to eighteen months. If there are delays in the delivery of equipment or in the availability or performance of necessary maintenance, it could cause us to delay our introduction of new manufacturing capacity or technologies and delay product deliveries, which may result in the loss of customers and revenues.

With the fluctuations in the economy, the demand for semiconductors declined from 2023, and some material supply and demand situations will be alleviated. In order to reduce supply risks in the future, we are actively engaging new supply sources. However, there is no guarantee that we will be able to secure new supply sources, and even if we are able to identify such sources, we may have difficulties in negotiating terms favorable to us.

We may be subject to the risk of loss due to fire because the materials we use in our manufacturing processes are highly flammable.

We use highly flammable materials such as silane and hydrogen in our manufacturing processes and may therefore be subject to the risk of loss arising from fires. Despite taking many countermeasures, the risk of fire associated with these materials cannot be completely eliminated. We maintain insurance policies to reduce losses caused by fire, including property damage and business interruption insurance. However, our insurance coverage is subject to deductibles and self-insured retention and may not be sufficient to cover all of our potential losses. If any of our fabs were to be damaged or cease operations as a result of a fire, it would temporarily reduce manufacturing capacity, which will adversely affect our business operations and results of operations. In order to mitigate the impact, we have introduced the ISO 22301 BCM system in all production fab and practice emergency response every year to speed up the recovery time in the event of a fire. However, these additional measures may not be sufficient to prevent all future risks of loss.

We and suppliers are vulnerable to natural disasters and other events outside of our control, which may seriously disrupt our operations.

Most of our assets and suppliers are located in certain parts of Taiwan. Our operations and suppliers are vulnerable to earthquakes, floods, droughts, power losses and similar events that affect the locations of our operations. The occurrence of any of these events could interrupt our services and cause severe damages to wafers in process, or lead to business disruptions. For example, the prolonged period in the lack of rainfall, particularly acute in southern Taiwan, may impact our manufacturing capacity and therefore may have a potentially adverse and material impact on our operational and financial performance. Besides the potential risks that may be caused by water shortage, we have in the past experienced severe earthquakes which adversely affected our wafer manufacturing operations in Taiwan. For example, in April 2024, we experienced a 7.2 magnitude earthquake in Taiwan. Additionally, in January 2025, a 6.4 magnitude earthquake occurred in southern Taiwan, causing damage to some work-in-progress wafers at our Fab 12A factory in Tainan. Although we have adopted anti-seismic damper and anchorage in our fab, piping and equipment to ensure the safety of our employees and minimize impact resulting from the earthquake, and we can recover some of the losses from our insurance policy, there is no guarantee that all our countermeasures will always be effective when exceed its design limit. There is also no guarantee that any future damages or business loss from severe natural disasters will be covered by insurance, or that such coverage will be sufficient due to the unpredictability in insurance policies. Furthermore, the cost of insurance policies may increase in the future that will make it more expensive for us to obtain and maintain adequate insurance policies.

Our operations may be delayed or interrupted and our business could suffer if we violate environmental, safety and health, or ESH, regulations.

The semiconductor manufacturing process requires the use of various gases, chemicals, hazardous materials and other substances such as solvents and sulfuric acid which may have an impact on the environment. We are always subject to ESH regulations, and a failure to manage the use, storage, transportation, emission, discharge, recycling or disposal of raw materials or to comply with these ESH regulations could result in (i) regulatory penalties, fines and other legal liabilities, (ii) suspension of production or delays in operation and capacity expansion, (iii) a decrease in our sales, (iv) an increase in pollution cleaning fees and other operation costs, or (v) damage to our public image, any of which could harm our business. In addition, as ESH regulations are becoming more comprehensive and stringent, we may incur a greater amount of capital expenditures in technology innovation and materials substitution in order to comply with such regulations, which may adversely affect our results of operations.

Climate change may negatively affect our business.

There is increasing concern that climate change is occurring and may have dramatic effects on human activity without aggressive remediation steps. The change in temperature would result in increased severity and frequency of extreme weather events such as cyclones, floods, water stress, high temperature and increasing risk of extinction for the world's species. Public expectations for reductions in greenhouse gas emissions and climate-related risks could result in increased energy, water, transportation and raw material costs, which raised shareholder's concern and caused several international standards and questionnaires being revised to request enterprises disclosing their risks and financial impacts.

Furthermore, as climate change continues to be severe, the international community not only pays attention to the energy transition, but also successively establishes mechanisms for monetizing the impact of carbon emissions on society and the environment, such as carbon pricing mechanism, carbon border adjustment mechanism, etc. For example, we have an advanced 12-inch wafer fab in Singapore. The Singapore government introduced a carbon tax from 2019 onwards, making it the first country in Southeast Asia to promote this measure. In Taiwan, "Climate Change Response Act" was promulgated in February 2023 to accelerate the goal of achieving net-zero carbon emissions by 2050 with additional stringent requirements such as carbon tariffs on imports of carbon-intensive products and a carbon-fee charging to urge enterprises for GHG reduction. The Ministry of Environment announced the carbon fee rates in October 2024. The standard rate is set at NT\$300 per metric ton of carbon emissions, and these fees will be levied on enterprises for the carbon emissions from 2025. The impacts on UMC include an increase in operating and investment costs.

In addition, government's energy management measures may cause power shortage and affect our business operation. For example, China government requested enterprises to reduce electricity consumption in 2022. Although UMC's plants in China have not been directly affected, there is no guarantee that such reduction in consumption will not occur in the future.

Accordingly, we have developed climate change risk assessment tool and related departments participated in the identification work. Adaptation and mitigation measures are developed in response to the identified climate change risk. Furthermore, we also disclose risk and opportunity of climate change according to the framework of TCFD (Task Force on Climate-related Financial Disclosures) in UMC Sustainability Report and our official website. We will also continue to conduct third party TCFD performance assessment to ensure that our climate change risk assessment system and associated financial disclosure data are highly credible and transparent. However, there can be no guarantee that our initiatives and efforts can always be effective and in compliance with the regulatory requirements and international standards in this regard.

Disruptions in the international trading environment may seriously decrease our international sales.

We have operations worldwide and a significant percentage of our operating revenues is generated from sales to locations outside the R.O.C. and we expect this trend to continue in the foreseeable future. The success and profitability of our international activities depend on certain factors beyond our control, such as general economic conditions, labor conditions, political stability, tariff, tax laws, import duties, intellectual property rights, export control and foreign exchange controls of the countries in which we sell our products, and the political and economic relationships between these countries. As a result, our manufacturing services will continue to be vulnerable to disruptions in the international trading environment, including adverse changes in foreign government regulations, political unrest and international economic downturns.

These disruptions in the international trading environment affect the demand for our manufacturing services and change the terms upon which we provide our manufacturing services overseas, which could seriously decrease our international sales.

Political, Economic, Regulatory and Legal Risks

We face substantial political risks associated with doing business in Taiwan, particularly due to the tense relationship between the R.O.C. and the PRC which could negatively affect the value of your investment.

Our principal executive offices and most of our assets and operations are located in Taiwan. Accordingly, our business, financial condition and results of operations and the market price of our common shares and the ADSs may be affected by changes in R.O.C. governmental policies, taxation, inflation or interest rates and by social instability and diplomatic and social developments in or affecting Taiwan which are outside of our control. Taiwan has a unique international political status. Since 1949, Taiwan and the Chinese mainland have been separately governed. The PRC claims that it is the sole government in China and that Taiwan is part of China. Although significant economic and cultural relations have been established between the R.O.C. and the PRC, such as the adoption of the Economic Cooperation Framework Agreement and memorandum regarding cross-strait financial supervision, we cannot assure you that relations between the R.O.C. and PRC will not become strained again, in particular, considering the increasingly tense relationship between the United States and the PRC. For example, the PRC government has refused to renounce the use of military force to gain control over Taiwan and, in March 2005, passed an Anti-Secession Law that authorized non-peaceful means and other necessary measures should Taiwan move to gain independence from the PRC. Past developments in relations between the R.O.C. and the PRC have on occasions depressed the market prices of the securities of companies in the R.O.C. Such initiatives and actions are commonly viewed as having a detrimental effect to reunification efforts between the R.O.C. and the PRC. Relations between the R.O.C. and the PRC and other factors affecting military, political or economic conditions in Taiwan could materially and adversely affect our financial condition and results of operations, as well as the market price and the liquidity of our securities.

Our business depends on the support of the R.O.C. government and other government authorities in countries and regions where we operate, and a decrease in these supports may reduce our net income.

We, like many R.O.C. technology companies, have benefited from substantial tax incentives provided by the R.O.C. government and other government authorities in countries and regions where we operate under various different tax incentive programs, which are subject to the review and approval by the relevant tax authorities on the case by case basis. Although we will make our best efforts to meet the requirements under different incentive schemes and make the relevant applications, we cannot assure you that the tax authorities will grant the approval as we apply. Our application may be denied for reasons outside of our control, including changes in tax incentive regulations and criteria for qualifications. Additionally, the tax incentives granted, taken as a whole, may not be as favorable to us as those currently in effect. If any of the above occurs, our net income may decrease.

Our future tax obligations may adversely affect our net income.

We operate in various jurisdictions, which involve different tax regimes and application of tax regulations. Applicable taxes for which we make provisions could increase significantly as a result of changes in applicable tax laws in the countries where we operate.

Some of the above-mentioned tax incentives may be subject to the investment milestone and compliance with the terms and conditions set forth in the agreements with the government. Failure to fulfill the investment milestone or the terms and conditions would result in termination or revocation of the incentives. The local authority may have the rights to revoke these incentive rewards even if the company received tax benefits that it had enjoyed during the applicable period by the applicable tax laws or regulations.

In addition, the Organisation for Economic Co-operation and Development (“OECD”) created the Base Erosion and Profit Shifting (BEPS) Actions, which contemplate changes to numerous international tax principles, such as the Global Minimum Tax. These changes may increase our income tax rate in future, which may adversely affect our net income.

Compliance with U.S. Conflict Minerals Law may affect our ability or the ability of our suppliers to purchase raw materials at an effective cost.

We are subject to U.S. disclosure rules on conflict minerals adopted by the SEC, pursuant to which we are required to conduct due diligence of our supply chain and file an annual report to disclose whether conflict minerals utilized by us originated in the Democratic Republic of the Congo (DRC) or an adjoining country. We have filed the conflict mineral disclosure report every year since 2014 in order to comply with such rules, and we will continue to verify the relevant information with our vendors and suppliers and file the required report. However, we cannot assure you that we will be able to collect all the information required to comply with such regulations. If we are not able to confirm such information with vendors, or if we discover that some vendors are sourcing conflict minerals from prohibited countries, we may decide or be required to discontinue our relationship with such vendors, which may negatively impact our ability to obtain adequate supplies of materials needed for the manufacturing of our products and services. The failure to obtain necessary information or to maintain adequate supplies of materials from supply chains outside the DRC and adjoining countries may delay our production, increasing the risk of losing customers and business.

Similarly, many jurisdictions have promulgated regulations with the intention to deter human rights violations within supply chains. Possible violation by our suppliers may not be known to us and is beyond our control. While we believe our suppliers comply with applicable human rights requirements, there can be no guarantee that they will continue to do so, or that we will be able to obtain the necessary information on their activities to ensure compliance with any future requirements.

Cyberattacks and data security breaches may adversely affect our operations and damage our reputation.

Our business and operations depend upon reliable and uninterrupted information technology services, including the integrity of our web-based and electronic customer service systems. Although we have implemented what we believe are reasonable precautions to prevent accidental and/or malicious disruption of these services, there can be no assurance that our preventive measures will preclude failure of the information technology, web-based and electronic customer service systems upon which our business depends. Our systems might also be damaged by natural or man-made events or by computer viruses, physical or electronics break-ins, cyber-attacks and similar disruptions affecting the global Internet. In the past, we have experienced security breaches by third parties, including a distributed denial-of-service (DDoS) attack against our official website in October 2024. Although we were able to rectify such security breaches without any material impact on our operations, we cannot assure you that our information technology systems will be completely secure from future security breaches or cyberattacks. Disruption of these systems could adversely affect our ability to operate our business and to serve our customers, thereby negatively affecting our financial performance.

In addition, in the course of our operations, we receive confidential information from and about our customers, vendors, partners and employees. Although we take what we believe are reasonable precautions to protect such information from disclosure to or interruption, there are no guarantees our precautions will prevent accidental or malicious access to such information. In the event of such unauthorized access, our reputation could be adversely affected, and customers and others may not entrust us with their confidential information, which would negatively affect our operations, and we may incur costs to remedy the breach. Furthermore, the loss of confidential information of third parties may result in legal claims against us, in which case we will incur additional costs and expenses to defend such litigation.

Moreover, many jurisdictions have proposed stringent regulations concerning data privacy, and such regulations may impose additional legal requirements that make our operations more expensive and/or less efficient. In addition, should we experience a breakdown in our systems or failure in our precautions that results in a violation of such regulations, we may suffer adverse customer reaction and face governmental penalties.

Intellectual property disputes could result in lengthy and costly arbitration, litigation or licensing expenses or prevent us from providing services to customers.

As is typical in the semiconductor industry, we or our customers may receive claims of infringement from time to time or otherwise become aware of potentially relevant patents or other intellectual property rights held by other parties that may cover some of our technology, products and services or those of our end customers. The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights which has resulted in protracted and expensive arbitration and litigation for many companies.

Any litigation or arbitration regarding patents or other intellectual property could be costly and time consuming and could divert our management and key personnel from our business operations. We have in the past and may from time to time in the future become involved in litigation that requires our management to commit significant resources and time.

Because of the complexity of the technology involved and the uncertainty of litigation generally, any intellectual property arbitration or litigation involves significant risks. Any claim of intellectual property infringement against us may require us to:

- incur substantial legal and personnel expenses to defend the claims or to negotiate for a settlement of claims;
- pay substantial damages or settlement to the party claiming infringement;
- refrain from further development or sale of our products;
- enter into costly royalty or license agreements that might not be available on commercially reasonable terms or at all;
- cross-license our technology with a competitor to resolve an infringement claim, which could weaken our ability to compete with our competitors;
- indemnify our distributors, end customers, licensees and others from the costs of and damages of infringement claims; and
- curtail or modify our operations in response to regulatory inquiries relating to the alleged infringement, which may result in additional costs and expenses.

In addition, because we have a global operation, we may be subject to intellectual property disputes and litigation in foreign jurisdictions with divergent laws and practices, which will make it more costly and time consuming for us to initiate or defend such litigations. Furthermore, if we are engaged or involved in a high-profile intellectual property dispute or litigation in foreign countries with stringent national security regulations, such as the U.S. and China, we may be subject to heightened scrutiny by government agencies in such countries, which may lead to adverse actions taken by such government agencies, including prolonged investigation and litigation, which can negatively affect our operations and damage our reputation. Any intellectual property claim or litigation could harm our business, results of operations, financial condition and prospects.

Geopolitical conflicts, tensions and developments could affect our operations, business and profitability.

Rising political or economic conflicts and tensions between the United States and China have threatened and destabilized trading relationships and economic activities between the two countries. Because we have operations in both countries, such conflicts and tensions may negatively impact our business. At various times during recent years, the United States and China have had disagreements over political and economic issues, including but not limited to, the imposition of tariffs by the U.S. on goods imported from China. Since January 2025, President Trump has imposed rounds of tariffs on imports from China, including 10% tariff in February 2025 and another 10% in March 2025. On April 2, 2025, President Trump imposed an additional 34% tariff on imports from China, and a 32% tariff on imports from Taiwan. Subsequently, on April 9, 2025, President Trump further increased the additional tariff on imports from China to 125%, but adjusted the 32% tariff on Taiwan goods to 10%, with the remaining 22% subject to a temporary 90-day pause. The U.S. government may also impose tariffs targeting the imports of semiconductors from Taiwan, including those manufactured by us. In April 2025, the U.S. Department of Commerce announced the initiation of investigations into the imports of semiconductors and semiconductor manufacturing equipment, which may lead to the imposition of tariffs on imports of such products to the U.S.

Moreover, in recent years, the U.S. government has expanded controls on exports to China of certain goods and technologies, including advanced semiconductors and related tools and equipment. Most recently, in January 2025, the U.S. Department of Commerce's Bureau of Industry and Security, or BIS, issued additional rules expanding controls worldwide on advanced computing integrated circuits, and imposing new due diligence requirements on semiconductor foundries and outsourced semiconductor assembly and test ("OSAT") companies, including us. In particular, while we are listed under the new BIS rule as an approved OSAT company, the new due diligence requirements and controls on semiconductors could significantly increase our compliance costs, restrict the customers we may be able to serve, and we may be investigated, fined or penalized by the U.S. government for potential violations, which would in turn negatively affect our business and operations. On January 20, 2025, President Trump issued a memorandum titled "America First Trade Policy" directing the Department of Commerce to review existing measures to enhance export controls and eliminate loopholes. Under the Trump Administration, the U.S. government may enact new and more restrictive export control regulations that may reduce our ability to ship and sell products to certain customers in China and Asia and increase our cost to implement additional measures to comply with such new regulations. U.S.-China tension has also affected cross-strait relations, and the rise in escalations have increased the uncertainty of future business environment affecting the Company's operations and investments including revenue, delivery time, goodwill and investment plans. For example, a sharp increase in U.S. or European tariffs may favor local/domestic manufacturers while hurting exports which may drive up costs of the Company's products which is manufactured in Asia. This would reduce demand from our customers towards UMC and impact our business and operations. In addition, the United States export control laws regulate exports to certain countries if the content originating from the U.S. exceeds a certain ratio of the product or if the goods are direct products of certain U.S.-origin good, technology or software, which will affect our direct or indirect supply to specific customers. Restrictions on the export of high-tech materials or equipment may also affect our production and capacity expansion plans, which may disrupt shipments and damage our goodwill, while investment restrictions and regulatory changes may potentially affect our strategic planning, operational and financial performance. Furthermore, political tensions in the Taiwan Strait, including any threat of potential military confrontation between China and Taiwan, as well as U.S. involvement of any such military operations, could have a material adverse effect on our business by, among other things, making it more difficult for us to coordinate our operations between the United States and China and discouraging customers to place orders with us.

In addition, the ongoing war between Ukraine and Russia has resulted in the imposition of trade barriers, such as sanctions and import and export controls, which could increase our manufacturing costs, limit our access to certain supplies, make our pricing less competitive, increase the cost of energy and power, and limit our ability to offer our products and services in some markets or source key materials and key production equipment, which may have adverse direct or indirect effects on our sales.

We cannot predict the geopolitical development in the future and if the geopolitical landscape further deteriorates, potential supplies such as materials could be disrupted and ceased and demand for our products by customers in various countries could be affected, which will negatively affect our financial performance.

Risks Related to the Common Shares, ADSs and Our Trading Markets

Restrictions on the ability to deposit common shares into our ADS program may adversely affect the liquidity and price of the ADSs.

The ability to deposit common shares into our ADS program is restricted by R.O.C. law. Under current R.O.C. law, no person or entity, including you and us, may deposit common shares into our ADS program without specific approval of the R.O.C. FSC except for the deposit of the common shares into our ADS program and for the issuance of additional ADSs in connection with:

- (A) distribution of share dividends or free distribution of our common shares;
- (B) exercise of the preemptive rights of ADS holders applicable to the common shares evidenced by ADSs in the event of capital increases for cash; or
- (C) delivery of our common shares which are purchased in the domestic market in Taiwan directly by the investor or through the depositary or are already in the possession of the investor to the custodian for deposit into our ADS program, subject to the following conditions: (a) the re-issuance is permitted under the deposit agreement and custody agreement, (b) the depositary may accept deposit of those common shares and issue the corresponding number of ADSs with regard to such deposit only if the total number of ADSs outstanding after the issuance does not exceed the number of ADSs previously approved by the R.O.C. FSC, plus any ADSs issued pursuant to the events described in (A) and (B) above and (c) this deposit may only be made to the extent previously issued ADSs have been withdrawn.

As a result of the limited ability to deposit common shares into our ADS program, the prevailing market price of our ADSs on the NYSE may differ from the prevailing market price of the equivalent number of our common shares on the Taiwan Stock Exchange.

Holders of our ADSs will not have the same proposal or voting rights as the holders of our common shares, which may affect the value of your investment.

Except for treasury common shares and common shares held by our subsidiaries which meet certain criteria provided under the R.O.C. Company Act, each common share is generally entitled to one vote and no voting discount will be applied. However, except as described in this Annual Report and in the deposit agreement, holders of our ADSs will not be able to exercise voting rights attached to the common shares evidenced by our ADSs on an individual basis. Holders of our ADSs will appoint the depositary or its nominee as their representative to exercise the voting rights attached to the common shares represented by the ADSs. The voting rights attached to the common shares evidenced by our ADSs must be exercised as to all matters brought to a vote of shareholders collectively in the same manner.

Moreover, holders of the ADSs do not have individual rights to propose any matter for shareholders' votes at our shareholders' meetings. However, holders of at least 51% of the ADSs outstanding at the relevant record date may request the depositary to submit to us one proposal per year for consideration at our annual ordinary shareholders' meeting, provided that such proposal meets certain submission criteria and limitations, including the language and the length of the proposal, the time of submission, the required certification or undertakings, and the attendance at the annual ordinary shareholders' meeting. However, if the proposal submitted by the depositary does not qualify, we have no obligation to allow the depositary to modify such proposal.

Furthermore, if holders of at least 51% of the ADSs outstanding at the relevant record date instruct the depositary to vote in the same manner regarding a resolution, including election of directors, the depositary will appoint our Chairman, or his designee, to represent the ADS holders at the shareholders' meetings and to vote the common shares represented by the ADSs outstanding in the manner so instructed. If by the relevant record date, the depositary has not received instructions from holders of ADSs holding at least 51% of the ADSs to vote in the same manner for any resolution, then the holders will be deemed to have instructed the depositary to authorize and appoint our Chairman, or his designee, to vote all the common shares represented by ADSs at his sole discretion, which may not be in your interest. As a result of these rules and restrictions, holders of ADSs have limited ability to vote or be represented with respect to any actions to be taken by shareholders of the Company.

The rights of holders of our ADSs to participate in our rights offerings may be limited, which may cause dilution to their holdings.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. Under the deposit agreement, the depositary will not offer those rights to ADS holders unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the Securities Act of 1933, as amended (the “Securities Act”), or exempt from registration under the Securities Act. We are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to cause such a registration statement to be declared effective. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution in their holdings.

Changes in exchange controls that restrict your ability to convert proceeds received from your ownership of ADSs may have an adverse effect on the value of your investment.

Your ability to convert proceeds received from your ownership of ADSs depends on existing and future exchange control regulations of the Republic of China. Under the current laws of the Republic of China, an ADS holder or the depositary, without obtaining further approvals from the R.O.C. Central Bank of China, or the CBC, or any other governmental authority or agency of the Republic of China, may convert NT dollars into other currencies, including U.S. dollars, in respect of:

- the proceeds of the sale of common shares represented by ADSs or received as share dividends with respect to the common shares and deposited into the depositary receipt facility; and
- any cash dividends or distributions received from the common shares represented by ADSs.

In addition, the depositary may also convert into NT dollars incoming payments for purchases of common shares for deposit in the depositary receipt facility against the creation of additional ADSs. If you withdraw the common shares underlying your ADSs and become a holder of our common shares, you may convert into NT dollars subscription payments for rights offerings. The depositary may be required to obtain foreign exchange approval from the CBC on a payment-by-payment basis for conversion from NT dollars into foreign currencies of the proceeds from the sale of subscription rights of new common shares. Although it is expected that the CBC will grant approval as a routine matter, required approvals may not be obtained in a timely manner, or at all.

Under the Republic of China Foreign Exchange Control Law, the Executive Yuan of the Republic of China may, without prior notice but subject to subsequent legislative approval, impose foreign exchange controls or other restrictions in the event of, among other things, a material change in international economic conditions.

Our public shareholders may have more difficulties protecting their interests than they would as shareholders of a U.S. corporation.

Our corporate affairs are governed by our articles of incorporation and bylaws governing R.O.C. corporations. The rights of our shareholders to bring shareholders’ suits against us or our board of directors under R.O.C. law are much more limited than those of the shareholders of U.S. corporations. Therefore, our public shareholders may have more difficulties protecting their interests in connection with actions taken by our management, members of our board of directors or controlling shareholders than they would as shareholders of a U.S. corporation. Please refer to “Item 10. Additional Information—B. Memorandum and Articles of Association—Rights to Bring Shareholders’ Suits” included elsewhere in this Annual Report for a detailed discussion of the rights of our shareholders to bring legal actions against us or our directors under R.O.C. law.

Holders of our ADSs will be required to appoint several local agents in Taiwan if they withdraw common shares from our ADS program and become our shareholders, which may make ownership burdensome.

Non-R.O.C. persons wishing to withdraw common shares represented by their ADSs from our ADS program and hold our common shares represented by those ADSs are required to, among other things, appoint a local agent or representative with qualifications set forth by the applicable R.O.C. laws and regulations to open a securities trading account with a local brokerage firm, pay R.O.C. taxes, remit funds and exercise shareholders’ rights. In addition, the withdrawing holders are also required to appoint a custodian bank or a securities firm with qualifications set forth by the R.O.C. FSC to hold the securities in safekeeping, make confirmations, settle trades and report all relevant information, in which the securities firm is appointed as the custodian, the payments shall be held in safekeeping in a special account opened in a bank approved by the R.O.C. FSC. Without making this appointment and opening of the accounts, the withdrawing holders would not be able to subsequently sell our common shares withdrawn from a depositary receipt facility on the Taiwan Stock Exchange. Under R.O.C. law and regulations, except under limited circumstances, PRC persons are not permitted to withdraw the common shares underlying the ADSs or to register as shareholders of our company. Under the Regulations Governing Securities Investment and Futures Trading in Taiwan by Mainland Area Investors promulgated by the R.O.C. Executive Yuan on April 30, 2009, as amended, only qualified domestic institutional investors, or QDIIs and limited entities or individuals, are permitted to withdraw the common shares underlying the ADSs, subject to compliance with the withdrawal relevant requirements, and only QDIIs, and limited entities or individuals who meet the qualification requirements set forth therein are permitted to own common shares of an R.O.C. company listed for trading on the Taiwan Stock Exchange or the Taipei Exchange, provided that among other restrictions generally applicable to investments made by PRC persons, their shareholdings are subject to certain restrictions as set forth in the abovementioned regulations and that such mainland area investors shall apply for a separate approval if their investment, individually or in aggregate, amounts to or exceeds 10 percent of the common shares of any R.O.C. listed company.

You may not be able to enforce a judgment of a foreign court in the R.O.C.

We are a company limited by shares incorporated under the R.O.C. Company Act. Most of our assets and most of our directors and executive officers are located in Taiwan. As a result, it may be difficult for you to enforce judgments obtained outside Taiwan upon us or such persons in Taiwan. We have been advised by our R.O.C. counsel that any judgment obtained against us in any court outside the R.O.C. arising out of or relating to the ADSs will not be enforced by R.O.C. courts if any of the following situations shall apply to such final judgment:

- the court rendering the judgment does not have jurisdiction over the subject matter according to R.O.C. law;
- the judgment or the court procedure resulting in the judgment is contrary to the public order or good morals of the R.O.C.;
- the judgment was rendered by default, except where the summons or order necessary for the commencement of the action was legally served on us within the jurisdiction of the court rendering the judgment within a reasonable period of time or with judicial assistance of the R.O.C.; or
- judgments of the R.O.C. courts are not recognized in the jurisdiction of the court rendering the judgment on a reciprocal basis.

We may be considered a passive foreign investment company, which could result in adverse U.S. federal income tax consequences for U.S. investors.

We do not believe that we were a passive foreign investment company, or PFIC, for 2024 and we do not expect to become one in the foreseeable future, although there can be no assurance in this regard. Characterization as a PFIC could result in adverse U.S. federal income tax consequences to you if you are a U.S. investor.

For example, if we are a PFIC, our U.S. investors may become subject to increased tax liabilities under U.S. federal income tax laws and regulations and will become subject to burdensome reporting requirements. The determination of whether or not we are a PFIC is made on an annual basis and will depend on the composition of our income and assets from time to time. Specifically, for any taxable year we will be classified as a PFIC for U.S. federal income tax purposes if either (i) 75% or more of our gross income in that taxable year is passive income or (ii) the average percentage of our assets (which includes cash) by value in that taxable year which produce or are held for the production of passive income is at least 50%. The calculation of the value of our assets will be based, in part, on the quarterly market value of our common shares and ADSs, which is subject to change. See “Taxation—U.S. Federal Income Tax Considerations for U.S. Persons—Passive Foreign Investment Company.”

The trading price of the common shares and ADSs may be adversely affected by the general activities of the Taiwan Stock Exchange and U.S. stock exchanges, the trading price of our common shares, increases in interest rates and the economic performance of Taiwan.

Our common shares are listed on the Taiwan Stock Exchange and our ADSs are listed on New York Stock Exchange. The trading price of our ADSs may be affected by the trading price of our common shares on the Taiwan Stock Exchange and the economic performance of Taiwan. The Taiwan Stock Exchange is smaller and, as a market, more volatile than the securities markets in the United States and some European countries. The Taiwan Stock Exchange has experienced substantial fluctuations in the prices and volumes of sales of listed securities, and there are currently limits on the range of daily price movements on the Taiwan Stock Exchange. The Taiwan Stock Exchange is particularly volatile during times of political instability, such as when the relationship between Taiwan and the PRC becomes tense. Moreover, the Taiwan Stock Exchange has experienced disturbance caused by market manipulation, insider trading and payment defaults, and the government of Taiwan has from time to time intervened in the stock market by purchasing stocks listed on the Taiwan Stock Exchange. The recurrence of these or similar events could deteriorate the price and liquidity of our common shares and ADSs.

The market price of the ADSs may also be affected by general trading activities on the U.S. stock exchanges, which have experienced significant volatility with respect to trading prices of technology companies. Fluctuation in interest rates and other general economic conditions may also influence the market price of the ADSs.

ITEM 4 INFORMATION ON THE COMPANY

A. History and Development of the Company

Our legal and commercial name is United Microelectronics Corporation, commonly known as “UMC.” We were incorporated under the R.O.C. Company Law as a company limited by shares in May 1980 and our common shares are listed on the Taiwan Stock Exchange since 1985. Our principal executive office is located at No. 3 Li-Hsin 2nd Road, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C., and our telephone number is 886-3-578-2258. Our Internet website address is www.umc.com. The information on our website does not form part of this Annual Report. Our ADSs have been listed on the NYSE under the symbol “UMC” since September 19, 2000. In 2024, we were ranked among the top 5% of companies for the tenth consecutive year in the Corporate Governance Evaluation conducted by the Taiwan Stock Exchange and Taipei Exchange. The assessment was conducted across over 1,700 public companies in Taiwan.

We are one of the world’s largest independent semiconductor foundries and a leader in semiconductor manufacturing process technologies. Our primary business is the manufacture, or “fabrication”, of semiconductors, sometimes called “chips” or “integrated circuits”, for others. Using our own proprietary processes and techniques, we make chips to the design specifications of our many customers. Our company maintains a diversified customer base across industries, including communication devices, consumer electronics, computer and others, while continuing to focus on manufacturing for high growth, large volume applications, including networking, telecommunications, internet, multimedia, PCs and graphics. We sell and market mainly wafers which in turn are used in a number of different applications by our customers. The following table presented the percentages of our wafer sales by application for the years ended December 31, 2022, 2023 and 2024.

Application	Years Ended December 31,		
	2022 %	2023 %	2024 %
Communication	45.2	45.1	42.1
Consumer	26.2	24.0	28.4
Computer	14.6	11.0	13.5
Others	14.0	19.9	16.0
Total	100.0	100.0	100.0

We focus on the development of leading manufacturing process technologies designed for mass production. We were among the first in the foundry industry to enter into commercial operation with such advanced capabilities as producing integrated circuits with line widths of 0.25, 0.18, 0.15, 0.13 micron and 90, 65/55, 45/40, 28, 22 and 14 nanometer. The arrival of 5G technologies have increased the penetration rate in smartphones, wearables, and other devices associated with the Internet of Things which will spur a new wave of semiconductor related applications driving long term silicon content and wafer demand. More powerful semiconductors are required to drive multimedia functions (e.g., processing visual data) and to resolve network bandwidth issues. At the same time, the trend towards portable personal electronic devices have resulted in products that are becoming physically smaller and consuming less power. Process technology must also have the ability to shrink form factors of products aggressively to cater to this trend. Such technology must demonstrate the ability to integrate multiple functions, reduce the size of components needed for operation and lower IC power consumption. Dedicated semiconductor foundries need to achieve this process improvement and at the same time develop multiple process technologies to satisfy varying needs of communication, consumer and computer products. We believe our proprietary process technologies will enable us to continue to offer our customers significant performance benefits for their products, faster time-to-market production, cost savings and other competitive advantages.

We provide high quality service based on our performance. In today’s marketplace, we believe it is important to make available not only the most effective and flexible processes, but also the best solutions to enable customers to design integrated circuits capable of incorporating entire systems on a chip. Through these efforts, we intend to be the foundry solution for SoC customer needs. To achieve this goal, we believe it is necessary to timely develop and offer the IP and design support that customers need to ensure their specific design blocks function seamlessly with the other design blocks of the integrated circuit system in the manner intended. Accordingly, we have a dedicated IP and design support team that focuses on timely development of IP and processes specifically designed for our customers in order to ensure products that operate and perform as intended. Our design service team actively cooperates with our customers and vendors to identify, early in the product/market cycle, the offerings needed to ensure that our coordinated offerings are available in a streamlined and easy-to-use manner. This ensures the timely delivery of service offerings from the earliest time in the customer design cycle, resulting in a shorter time-to-volume production. We also provide our customers with real-time online access to production data and specifications, resulting in superior communication and efficiency. We further address our customers’ needs using our advanced technology and proven methodology to achieve fast cycle time, high yield, production flexibility and close customer communication. For example, we select and configure our clean rooms and equipment and develop our processes to maximize the flexibility in meeting and adapting to rapidly changing customer and industry needs. As a result, we believe that our cycle time, or the period from customer order to wafer delivery, and our responsiveness to customer request changes are among the fastest in the dedicated foundry industry. We believe our leading technology and high-volume capability is a major competitive advantage.

Our technology and service have attracted two principal types of foundry industry customers: fabless design companies and integrated device manufacturers. Fabless design companies design, develop and distribute proprietary semiconductor products but do not maintain internal manufacturing capacity. Instead, these companies depend on third party manufacturing sources. Integrated device manufacturers, in contrast, generally have integrated internally some or all functions—manufacturing as well as design, development, sales and distribution.

Our primary customers, in terms of our sales revenues, include premier integrated device manufacturers, such as Texas Instruments and Intel, plus leading fabless design companies, such as MediaTek, Realtek and Novatek. In 2024, our company's top ten customers accounted for 55.6% of our operating revenues. We believe our success in attracting these customers is a direct result of our commitment to high quality service and our intense focus on customer needs and performance.

In 2014, we established United Semiconductor (Xiamen) Co., Ltd., or USCXM, based in Xiamen, Fujian Province, China that focuses on 12-inch wafer foundry services. The initial groundbreaking event of USCXM took place in March 2015 and the grand opening ceremony took place in November 2016. USCXM successfully commenced commercial mass production by the end of 2016 and has carried out production on both 40nm and 28nm technology nodes in 2017. In February 2020, the board of directors of Hejian Technology (Suzhou) Co., Ltd., or Hejian, approved an investment of US\$500 million in USCXM which was completed in March 2023. In addition, we obtained approval from the R.O.C. government on October 26, 2022 for a US\$120 million investment by Hejian and a US\$664 million investment by UMC to purchase equity interest of USCXM from existing shareholders. After the completion of the transaction in July 2023, the Company and Hejian hold 100% of the shares of USCXM, and USCXM has increased its contribution to the overall financial performance of UMC. As one of UMC's four 12-inch fabs in geographically diverse locations, USCXM provides global customers with high-quality fabrication services and varied manufacturing options.

On February 24, 2022, we announced that our board has approved a plan to build a new advanced manufacturing facility next to its existing 300mm fab in Singapore. The design capacity of this greenfield fab is expected to be 30,000 wafers per month. The new fab will be one of the most advanced semiconductor foundries in Singapore utilizing our proprietary 22/28nm processes. We expect the new fab will play an important role in satisfying growing demand in these markets.

On April 26, 2022, DENSO Corporation, or DENSO, a leading mobility supplier, and USJC announced that the companies have agreed to collaborate on the production of power semiconductors at USJC's 300mm fab in order to serve the growing demand in the automotive market. An insulated gate bipolar transistor (IGBT) line will be installed at USJC's wafer fab, which will be the first such facility in Japan to produce IGBTs on 300mm wafers. DENSO will contribute its system-oriented IGBT device and process technologies while USJC will provide its 300mm wafer manufacturing capabilities to bring the 300mm IGBT process into mass production.

On January 25, 2024, we entered into a collaboration with Intel Corporation (the "Collaboration"), pursuant to which the parties agreed to jointly develop new 12nm related technology and commercialize such technology. In connection with such Collaboration, the parties granted each other IP licenses and rights necessary to carry out their respective obligations. The Collaboration is expected to create a 12nm semiconductor process platform to address high-growth markets such as mobile, communication infrastructure and networking. The Collaboration agreements set out terms to bring together Intel's at-scale U.S. manufacturing capacity and UMC's extensive foundry experience on mature nodes to enable an expanded process portfolio. The Collaboration also expects to offer global customers greater choice in their sourcing decisions with access to a more geographically diversified and resilient supply chain. We believe that the Collaboration will enable UMC's customers to smoothly migrate to a 12nm node, and allow UMC to establish a more significant footprint in the U.S. Production of the 12nm process, which is expected to begin in 2027. The Collaboration provides for a long-term agreement between UMC and Intel. The agreements may be terminated upon the occurrence of specified events, each as further set forth therein, including uncured material breach or violation of laws, inability to gain required regulatory approval, bankruptcy or similar circumstances, certain change of control transactions or failure to achieve certain business or operational milestones.

On February 27, 2024, our board approved capital injection of up to US\$22 million in UMC Capital Corp. to participate in its capital increase. On the same date, the Board of UMC Capital Corp. approved the investment in 7V AI Capital LLC of not more than US\$20 million.

On March 22, 2024, our board approved capital injection of up to NT\$800 million in Faraday Technology Corp. to participate in its capital increase.

On April 2, 2024, the board of directors of our PRC subsidiary, Hejian, approved the disposal of its ownership in UnitedDS Semiconductor (Shandong) Co., Ltd. to SiS Semiconductor (Shandong) Co., Ltd., an associate of UMC, as part of its strategic plan. The disposal was completed in August 2024 with a total transaction price of RMB¥77 million, which was approximately NT\$341 million.

On December 18, 2024, we entered into a corporate power purchase agreement (“CPPA”) with Fengmiao I Offshore Wind Farm (“Fengmiao I”), developed by Copenhagen Infrastructure Partners’ flagship fund, Copenhagen Infrastructure V. Pursuant to the CPPA, we agreed to purchase more than 30 billion kilowatt-hours of power from Fengmiao I over at least 30 years, marking the largest renewable energy transaction that we have ever made. This agreement will help us achieve our goal of 50% renewable energy use by 2030 as part of our roadmap to net zero emissions and 100% renewable energy by 2050.

Please refer to “Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources” for a discussion of our capital expenditures in the past three years and the plan for the current year.

Our Strategy

To maintain and enhance our position as a market leader, we have adopted a business strategy with a focus on a partnership business model designed to accommodate our customers’ business needs and objectives and to promote their interests as our partners. We believe that our success and profitability are inseparable from the success of our customers. The goal in this business model is to create a network of partnerships and alliances among integrated device manufacturers, IP and design houses, as well as foundry companies. We believe that we and our partners will benefit from the synergy generated through such long-term partnerships or alliances and the added value to be shared among the partners. The key elements of our strategy are:

Operate as a Customer-Driven Foundry. We plan to operate as a customer-driven foundry. The increasing complexity of 40 nanometer, 28 nanometer, and more advanced technologies has impacted the entire semiconductor industry, as ICs can now be designed with greater gate density and higher performance while incorporating the functions of an entire system on a single chip. These designs have created a new market of 5G communications, AIoT, automotive as well as the increase of silicon content per device. We collaborate closely with our customers as well as partners throughout the entire supply chain, including equipment, electronic design automation tool and IP vendors to work synergistically toward each customer’s SoC solution. We also possess experience and know-how in system design and architecture to integrate customer designs with advanced process technologies and IP. We believe the result is a higher rate of first-pass silicon success for our SoC solutions. Our customer-driven foundry solutions begin with a common logic-based platform, where designers can choose the process technologies and transistor options that best fit their specific application. From there, technologies such as radio frequency complementary metal-oxide-semiconductor, or RF CMOS, and embedded Flash memories can be used to further fine-tune the process for customers’ individual needs. Furthermore, as IP has become critical resources for SoCs, our portfolio includes basic design building blocks as well as more complex IP of optimized portability and cost, developed both internally and by third-party partners. With advanced technology, a broad IP portfolio, system knowledge and advanced 300-millimeter manufacturing, we offer comprehensive solutions that help customers deliver successful results in a timely fashion.

Build up Customer-focused Partnership Business Model. We have focused on building partnership relationships with our customers, and we strive to help our customers achieve their objectives through close cooperation. Unlike the traditional buy-and-sell relationship between a foundry and its customers, we believe our partnership business model will help us understand our customers’ requirements and, accordingly, better accommodate our customers’ needs in a number of ways, such as customized processes and services that optimize the entire value chain (not just the foundry portion) and IP-related support. We believe that this business model will enable us to deliver our products to our customers at the earliest time our customers require for their design cycle, resulting in shorter time-to-market and time-to-volume production. Furthermore, we believe we will provide more cost-effective services by focusing our research and development expenditures on the specific requirements of our customers. We believe our partnership business model will help us not only survive a market downturn, but also achieve a better competitive position.

Continue to Focus on High Growth Applications and Customers and Actively Explore New Market Opportunities. We believe one measure of a successful foundry company is the quality of its customers. We focus our sales and marketing on customers who are established or emerging leaders in industries with high growth potential. Our customers include industry leaders such as MediaTek, Realtek, Novatek and Texas Instruments. We seek to maintain and expand our relationships with these companies. We strive to demonstrate to these customers the superiority and flexibility of our manufacturing, technology and service capabilities and to provide them with production and design assistance. We are also making efforts to further diversify our customer portfolio in order to maintain a balanced exposure to different applications and different customers. We believe these efforts strengthen our relationships with our customers and enhance our reputation in the semiconductor industry as a leading foundry service provider.

In addition to customer diversification, we have also been actively exploring new market opportunities in consumer electronics such as Internet of Things.

Maintain Our Leading Position in Mass-Producible Semiconductor Technology and Selectively Pursue Strategic Investments in New Technologies.

We believe that maintaining and enhancing our leadership in semiconductor manufacturing technology for mass production is critical to attract and retain customers. Our reputation for technological excellence enabled us to acquire both established and emerging leaders in semiconductor industries who work closely with us on technology development. In addition, we believe our superior processing expertise has enabled us to provide flexible production schedules to meet our customers' particular needs. We plan to continue enhancing capital expenditures in research and development and building internal research and development expertise, to focus on logic and specialty process development to accelerate access to next-generation and specialized technologies. In April 2021, we announced an expansion of 300mm Fab 12A Phase 6 (P6) in Taiwan's Southern Taiwan Science Park through a collaboration model where the program is supported by customers' multi-year product alignment. As part of the agreement, these customers will provide us with a loading protection mechanism to ensure that P6 fab utilization rates will be maintained at healthy levels. Furthermore, on February 24, 2022, our board of directors approved a plan to build a new advanced manufacturing facility next to our existing 300mm fab (Fab12i) in Singapore. The first phase of this greenfield fab is expected to have a design capacity of 30,000 wafers per month, with production expected to commence in January 2026. The new fab (Fab12i P3) will utilize 28nm and 22nm process technologies.

On January 25, 2024, we entered into a collaboration with Intel Corporation to jointly develop a new 12nm semiconductor process platform to address high-growth markets such as mobile, communication infrastructure and networking. The collaboration combines Intel's at-scale U.S. manufacturing capacity and UMC's extensive foundry experience on mature nodes to enable an expanded process portfolio. We believe that this collaboration will offer global customers greater choice in their sourcing decisions with access to a more geographically diversified and resilient supply chain.

Our continuous technology development efforts and capital investment have allowed us to acquire new customers and opportunities, which enabled us to grow our business. We believe our progress in developing more advanced process technologies has benefited our customers in the fields of computers, communications, consumer electronics and others with special preferences in certain aspects of the products, such as the ultimate performance, density and power consumption.

Moreover, we expect to strengthen our leading position and increase our market share by collaborating with DENSO. In 2022, we agreed to jointly work on the production of power semiconductors at USJC's 300mm fab in order to serve the growing demand in the automotive market. This cooperation will leverage our robust portfolio of advanced specialty technologies and IATF 16949 certified fabs in diversified locations, where we are well placed to serve demand across auto applications, including advanced driver assistance systems, infotainment, connectivity and powertrain.

We also recognize that every company has limited resources and that the foundry industry is ever-evolving. Accordingly, we believe we should invest in new research and development technology intelligently and in a cost-effective manner to achieve the ultimate output of the resulting technology. In doing so, we balance the rate of return of our research and development with the importance of developing a technology at the right time to enhance our competitive edge without unduly diluting our profitability. We intend to avoid investments in technologies that do not present a commercial potential for volume production. We believe that to develop the earliest and most advanced semiconductor technology without regard to its potential for near term volume production may prove costly to our operations and would not strengthen our competitive position. We perceive a benefit to defer investment in the premature equipment needed to claim the earliest advanced technology and instead to purchase a more advanced and less expensive version of equipment from vendors who design such equipment based on pre-production lessons learned from the earliest technology.

Maintain Scale and Capacity Capabilities to Meet Customer Requirements, with a Focus on 12-inch Wafer Facilities for Future Expansion.

We believe that maintaining our foundry capacity with advanced technology and facilities is critical to the maintenance of our industry leadership. Our production capacity is currently among the largest of all semiconductor foundries in the world. We intend to increase our 12-inch wafer production capacity to meet the needs of our customers and to fully capitalize on the expected growth of our industry. We expect our future capacity expansion plans will focus on 12-inch wafer facilities in order to maintain our technology leadership. 12-inch wafers offer manufacturing advantages over 8-inch wafers due to, among other reasons, the greater number of chips on each wafer and the advantages only offered on newer 12-inch capable equipment. In addition, 12-inch wafer facilities present a more cost-effective solution in achieving an economic scale of production. We intend to carefully monitor current market conditions in order to optimize the timing of our capital spending.

B. Business Overview

Manufacturing Facilities

To maintain a leading position in the foundry business, we have placed great emphasis on achieving and maintaining a high standard of manufacturing quality. As a result, we seek to design and implement manufacturing processes that produce consistent, high manufacturing yields to enable our customers to estimate, with reasonable certainty, how many wafers they need to order from us. In addition, we continuously seek to enhance our production capacity and process technology, two important factors that characterize a foundry's manufacturing capability. Our large production capacity and advanced process technologies enable us to provide our customers with volume production and flexible and quick-to-market manufacturing services. All of our fabs operate 24 hours per day, seven days per week. Substantially all maintenance at each of the fabs is performed concurrently with production.

The following table sets forth operational data of each of our manufacturing facilities as of December 31, 2024.

	<u>Wavetek</u>	<u>Fab 8A</u>	<u>Fab 8C</u>	<u>Fab 8D</u>	<u>Fab 8E</u>	<u>Fab 8F</u>	<u>Fab 8S</u>	<u>Fab 8N</u>	<u>Fab 12A</u>	<u>Fab 12i</u>	<u>Fab 12X</u>	<u>Fab 12M</u>
Commencement of volume production	1989	1995	1998	2000	1998	2000	2000	2003	2002	2004	2016	2005
Estimated full capacity ⁽¹⁾⁽²⁾	27,632 wafers per month	69,142 wafers per month	39,800 wafers per month	39,450 wafers per month	43,700 wafers per month	48,200 wafers per month	38,000 wafers per month	84,500 wafers per month	136,279 wafers per month	57,207 wafers per month	26,500 wafers per month	38,400 wafers per month
Wafer size	6-inch (150mm)	8-inch (200mm)	12-inch (300mm)	12-inch (300mm)	12-inch (300mm)	12-inch (300mm)						

(1) Measured in stated wafer size.

(2) The capacity of a fab is determined based on the capacity ratings given by manufacturers of the equipment used in the fab, adjusted for, among other factors, actual output during uninterrupted trial runs, expected down time due to set up for production runs and maintenance and expected product mix.

Our fabs are located in the R.O.C., Singapore, PRC and Japan. The following table sets forth the size and primary use of our facilities and whether such facilities, including land and buildings, are owned or leased. The land in the Hsinchu and Southern Taiwan Science Parks is leased from the R.O.C. government. The land in the Pasir Ris is leased from statutory boards of the Singapore government. The land in the Suzhou Industrial Park and Xiang'an District is leased from the PRC government.

Location	Size (Land/Building) (in square meters)	Primary Use	Land (Owned or Leased)	Building (Owned or Leased)
Fab 8A, No. 3, 5, Li-Hsin 2nd Rd., Hsinchu Science Park, Hsinchu, Taiwan 300094, R.O.C.	43,130 / 83,699	8-inch wafer production	Leased (expires in December 2033)	Owned
Fab 8C & Fab 8D, No. 6, 8, Li-Hsin 3rd Rd., Hsinchu Science Park, Hsinchu, Taiwan 300094, R.O.C.	33,784 / 100,609	8-inch wafer production	Leased (expires in December 2033)	Owned
Fab 8E, No. 17, Li-Hsin Rd., Hsinchu Science Park, Hsinchu, Taiwan 300094, R.O.C.	35,779 / 76,315	8-inch wafer production	Leased (expires in February 2036)	Owned
Fab 8F, No. 3, Li-Hsin 6th Rd., Hsinchu Science Park, Hsinchu, Taiwan 300096, R.O.C.	23,774 / 65,736	8-inch wafer production	Leased (expires in February 2038)	Owned
Fab 8S, No. 16, Creation 1st Rd., Hsinchu Science Park, Hsinchu, Taiwan 300093, R.O.C.	20,365 / 65,614	8-inch wafer production	Leased (expires in December 2043)	Owned
Fab 8N, No. 333, Xinghua St., Suzhou Industrial Park, Suzhou, Jiangsu Province 215025, P.R.C.	215,621 / 112,247	8-inch wafer production	Leased (expires in December 2052)	Owned
Fab 12A, No. 18, 20, Nan-Ke 2nd Rd., & No. 57, Nan-ke 3rd Rd., Southern Taiwan Science Park, Sinshih, Tainan, Taiwan 744092 & 744094, R.O.C.	247,798 / 635,551	12-inch wafer production	Leased (expires in June 2042)	Owned
Fab 12i, No. 3, Pasir Ris Drive 12, Singapore 519528 & 61A Pasir Ris Industrial Drive 1, Singapore 519536	197,953 / 379,514	12-inch wafer production	Leased (expires in July 2052)	Owned
Fab 12X, No. 899, Wan Jia Chun Road, Xiang'an District, Xiamen, Fujian Province 361101, P.R.C.	250,725 / 348,537	12-inch wafer production	Leased (expires in January 2065)	Owned
Fab 12M, 2000, Mizono, Tado-cho, Kuwana, Mie, 511-0118, Japan	307,293 / 157,672	12-inch wafer production	Owned	Owned
United Tower, No. 3, Li-Hsin 2nd Rd., Hsinchu Science Park, Hsinchu, Taiwan 300094, R.O.C.	8,985 / 85,224	Administration office	Leased (expires in December 2033)	Owned
Neihu Rd. Office, 8F, No. 68, Sec. 1, Neihu Rd., Taipei, Taiwan 114066, R.O.C.	626 / 4,817	Administration office	Owned	Owned
Testing Building, No. 1, Chin-Shan, 7th St., Hsinchu, Taiwan 300063, R.O.C.	10,762 / 41,318	Leased to several companies	Owned	Owned
R&D Building, No. 18, Nan-Ke 2nd Rd., Southern Taiwan Science Park, Sinshih, Tainan, Taiwan 744092, R.O.C.	42,000 / 47,396	Research and development	Leased (expires in December 2043)	Owned
Wavetek, No. 10, Chuangxin 1st Rd., Hsinchu Science Park, Baoshan Township, Hsinchu, Taiwan 300092, R.O.C.	27,898 / 34,609	6-inch wafer production	Leased (expires in December 2034)	Owned

Process Technology

Process technology is a set of specifications and parameters that we implement for manufacturing the critical dimensions of the patterned features of the circuitry of semiconductors. Our process technologies are currently among the most advanced in the foundry industry. These advanced technologies have enabled us to provide flexible production schedules to meet our customers' particular needs.

We have been constantly strengthening our independent R&D capabilities and fabrication in semiconductor process technologies, especially dedicated to the R&D of logic and specialty processes in the recent years. We will adhere to our R&D strategy to establish independent R&D capabilities and will work with important partners, such as IDM and fabless, to develop key process technologies through technology licensing. We will also work with suppliers of photomask, packaging, equipment, material, and EDA to accelerate market launch schedule in order to fulfill our promise to provide customers with innovative and reliable process technologies.

We pioneered the production of numerous semiconductor products. Our continued enhancement of our process technologies has enabled us to manufacture semiconductor devices with smaller geometries. In 2013, we successfully developed and released into production 28nm Poly-SiON and High-k/metal gate technologies. In 2015, we provided a High-k/metal gate with high performance compact, or HPC, solution and improved to a high-performance compact plus, or HPC+, solution by the end of 2017 for speed-intensive and optimized power consumption products. We and Cadence Design Systems collaborate on certification of analog/mixed-signal flow for 28HPC+ process. Certification enables customers to leverage the integrated, comprehensive AMS solution to facilitate accelerated designs on our most advanced 28nm node. In 2018, we developed 22nm ULP (ultra-Low Power) and ULL (ultra-Low Leakage) technology to provide cost effective solutions and to obtain better chip performance for IoT applications. We also joined the IBM chip alliance, for advanced process development. With IBM's know-how and support, we aim to continue to improve our internally developed 14nm FinFET technology, so as to offer a 14nm competitive low-power enhanced technology for mobile computing and communication products. In March 2017, we commenced the shipment of 14nm wafers to customers and have achieved production quality yields for the advanced process that is being utilized for consumer electronic applications. UMC's 14nm FinFET technology features 55% higher speed and twice the gate density over 28nm process technology. The 14nm process also consumes approximately 50% less power than for 28nm. Moreover, UMC is actively developing a 12nm FinFET Compact (12FFC), with a significant performance boost, smaller chip size, and lower power consumption, compared to the 14FFC process. The 12FFC is more competitive and gives full play to the advantages of FinFET process technology to drive the application of next-generation silicon chips in various fields, such as networking, artificial intelligence, and further high-end consumer electronic products. UMC is also collaborating with Intel on the 12nm FinFET process manufactured in the United States, which is an important part of UMC's strategy to pursue cost-effective capacity expansion and technology node upgrades, and continues our consistent commitment to customers. Currently, the 12nm collaboration is progressing smoothly. UMC's customers and partners are very optimistic about the potential of the 12nm business opportunities. According to early evaluation feedback from major customers, UMC's 12nm performance is expected to be very competitive in the industry. This collaboration will help customers smoothly upgrade to this critical technology node while benefiting from the supply chain resilience brought about by expanded production capacity in the North American market. This 12nm collaboration leverages the complementary strengths of UMC and Intel to expand the potential market while significantly accelerating the technology development schedule. It is expected to complete the process verification in 2026 and enter production in 2027.

Our 22nm technology readiness follows silicon validation on world's smallest USB 2.0 test vehicle. The latest specialty process offering provides competitive performance and a seamless migration path from 28nm to 22nm. We are offering a 22uLP version that has compatible design rules and the same mask count at the foundry's 28nm technology, and also a 22uLL version. UMC 22uLP and 22uLL form a super set to support a voltage domain from 1.0V to 0.6V, allowing customers to enjoy the benefits of both technologies on system-on-chip (SoC) designs. The 22nm platform is supported by our foundation IP and is ideal for a wide variety of semiconductor applications including consumer ICs for set top box, digital TV, surveillance, power or leakage sensitive IoT chips (with Bluetooth or WiFi) and wearable products that require longer battery life.

Furthermore, we have also successfully developed specialty technologies such as 55/40/28nm embedded memory used for MCU and automotive products, 55/40/28/22nm embedded high voltage device used for display drivers, 55/28/22nm BSI-CSI for image sensors and 110/55nm BCD for power management circuits. We also developed 40/22nm RRAM for advanced node embedded solutions, and RF-SOI technologies of 110/90/55/40nm nodes covering both custom and platform for RF device applications. We also developed 40/22nm RRAM for advanced node embedded solutions. We are also actively developing a 14nm FinFET (14eHV) embedded high-voltage process technology platform. Compared with 28eHV, the chip performance is greatly improved, the size is smaller, and the energy consumption can be reduced by more than 40%. It can be applied to display driver chips to provide higher resolution and higher refresh rate.

We have successfully added deep trench capacitors (DTC) to our 2.5D Si interposer solution to provide excellent power integrity, providing our customers with various applications in high-performance computing (HPC), cloud computing, and large language models (LLMs) for artificial intelligence (AI). We have launched wafer-level 3D W2W hybrid bonding solution offers advantages in both bandwidth and form factor reduction, meeting the growing trend of edge computing and miniaturization needs in mobile devices. We have collaborated with customers to enter the mass production stage in 2025 in the application of RF components in mobile devices. In terms of edge AI applications, we have established a one-stop vertical integration project with our supply chain partners, providing customized low-power logic chips and memory module heterogeneous integration to meet the needs of customers in IoT, secure smart infrastructure, and other terminal devices.

We are fully committed to the research and development of 12-inch silicon photonics technology in 2025, including the development of key devices such as optical waveguides, optical modulators and optical diodes. We have many years of experience in various semiconductor manufacturing, especially in the production of SOI wafers, 12-inch dry/immersion development and germanium/silicon germanium epitaxy technology. Our technological expertise is built upon years of mass production experience in 90nm to 55nm RF-SOI technologies and 40nm to 22nm logic processes. This extensive background positions us to excel in advancing 12-inch silicon photonics technology, which demands rapid responsiveness to customer needs and agile adaptation to the ever-changing market landscape. Our Fab 12i in Singapore has always focused on customized products, which enables us to quickly adapt to market demands and maintain an advantage over the competition. Fab 12i plans to install the machines and equipment required for silicon photonics in the first half of 2025 and enter the risk production stage in the second half of 2025.

The table below sets forth our actual process technology range, categorized by line widths, or the minimum physical dimensions of the transistor gate of integrated circuits in production by each fab in 2024, and the estimated annual full capacity of each fab, actual total annual output and capacity utilization rates in 2022, 2023 and 2024:

	Years of Commencement of Operation	Year Ended December 31, 2024 Range of Process Technologies (in microns)	Years Ended December 31, (in thousands of 12-inch wafer equivalents, except percentages)		
			2022	2023	2024
Wavetek	1989	5 to 0.15	84	82	83
Fab 8A	1995	3 to 0.11	340	360	368
Fab 8C	1998	0.35 to 0.11	204	210	212
Fab 8D	2000	0.18 to 0.09	182	195	210
Fab 8E	1998	0.6 to 0.14	208	218	233
Fab 8F	2000	0.18 to 0.11	245	253	257
Fab 8S	2000	0.18 to 0.11	197	199	202
Fab 8N	2003	0.5 to 0.11	423	442	450
Fab 12A	2002	0.13 to 0.014	1,170	1,305	1,556
Fab 12i	2004	0.13 to 0.040	655	655	678
Fab 12X	2016	0.080 to 0.022	314	317	318
Fab 12M	2005	0.13 to 0.040	436	438	455
Total estimated capacity	—	—	4,458	4,674	5,022
Total output (actual)	—	—	4,486	3,201	3,451
Average capacity utilization	—	—	100.6%	68.5%	68.7%

Capacity and Utilization

The fabs in Taiwan that we own directly are named Wavetek, Fab 8A, Fab 8C, Fab 8D, Fab 8E, Fab 8F, Fab 8S and Fab 12A. All of them are located in the Hsinchu Science Park except for Fab 12A which is located in the Southern Taiwan Science Park. The fab in Singapore is named Fab 12i. The fabs in China are named Fab 8N and Fab 12X, located in Suzhou and Xiamen, respectively. The fab in Japan is named Fab 12M located in Mie.

Our average capacity utilization rate was 100.6% in 2022, 68.5% in 2023 and 68.7% in 2024.

Equipment

Because the performance and productivity of our manufacturing capability depends substantially on the technology node of our capital equipment, we always purchase equipment that not only meet the criteria of our existing process requirement, but also have the capability to be upgraded to match our future demand. The principal equipment we use to manufacture semiconductor devices are scanners/steppers, cleaners and track equipment, inspection equipment, etchers, furnaces, wet stations, strippers, implanters, sputters, CVD equipment, probers, testers and so on. We own all of the production equipment except for a few demonstration tools.

Our policy is to purchase performance proven equipment from vendors with dominant market share to ensure our continued competitiveness in the semiconductor field.

Although some equipment is only available from limited qualified vendors and/or is manufactured in limited quantities, we believe that our relationships with equipment suppliers are strong enough to allow us to leverage our position as a major customer to purchase equipment with competitive terms.

Although we face the challenge of procuring the right equipment in sufficient quantity necessary for ramp-up or expansion of our fabrication facilities under constraint of short lead times, we have not in the past experienced any material problems in procuring the latest generation equipment on a timely basis even in periods of unpredictably high market demand. We manage the risks through procurement process via timely internal cross-division communications, efficient market information collection, early slot booking and constant communications with our suppliers.

Raw Materials

Our manufacturing processes use many raw materials, primarily silicon wafers, chemicals, gases and various types of precious sputtering targets. These raw materials are generally available from several suppliers. Our policy with respect to raw material purchases, similar to that for equipment purchases, is to select only a small number of qualified vendors who have demonstrated quality and reliability on delivery time of the raw materials. We may have long-term supply contracts with our vendors if necessary.

Our general inventory policy is to maintain sufficient stock of each principal raw material for production and rolling forecasts of near-term requirements received from customers. In addition, we have agreements with several key material suppliers under which they hold similar levels of inventory in their warehouses for our use. However, we are not under any obligation to purchase raw material inventory that is held by our vendors for our benefit until we actually order it. We typically work with our vendors to plan our raw material requirements on a monthly basis, with indicative pricing generally set on a quarterly basis. The actual purchase price is generally determined based on the prevailing market conditions. In the past, prices of our principal raw materials have not been volatile to a significant degree. Although we have not experienced any shortage of raw materials that had a material effect on our operations, and supplies of raw materials we use currently are adequate, shortages could occur in various critical materials due to interruption of supply or an increase in industry demand.

The most important raw material used in our production processes is silicon wafer, which is the basic raw material from which integrated circuits are made. The principal makers for our wafers are Shin-Etsu, GlobalWafers, Sumco Group and Soitec. We have in the past obtained and believe that we will continue to be able to obtain a sufficient supply of silicon wafers. We believe that we have close working relationships with our wafer suppliers. Based on such long-term relationships, we believe that these major suppliers will use their best efforts to accommodate our demand.

We use a large amount of water in our manufacturing process. We obtain water supplies from government-owned entities. We also use substantial amounts of dual loop electricity supplied by Taiwan Power Company in the manufacturing process. We maintain back-up generators that are capable of providing adequate amounts of electricity to maintain the required air pressure in our clean rooms in case of power interruptions. We believe our back-up devices are reasonably adequate in preventing business interruptions caused by power outages and emergency situations.

Quality Management

We believe that our advanced process technologies and reputation for high quality and reliable services and products have been important factors in attracting and retaining leading international and domestic semiconductor companies as customers.

We structure our quality management system in accordance with the latest international quality standards and our customers' strict quality and reliability requirements. Our quality management system incorporates comprehensive quality control programs into the entire business flow of foundry operation including, among others, new process development management, production release control, incoming raw material inspection, statistical process control and methodology development, process change management, technical documentation control, product final inspection, metrology tool calibration and measurement system analysis, quality audit program, nonconformity management, customer complaint disposition, eight-discipline problem solving and customer satisfaction monitoring.

We set high quality standards to ensure consistent high yielding and reliable product performance. Our quality program is continually enhanced through top-down annual Business Policy Management and bottom-up Total Quality Management activities. In addition, our efforts to observe best practices among fabs in the foundry industry have also contributed to the improvement of our overall quality management system.

Many of our customers perform physical production site qualification process in the early development phase and routine quality conformance audits in the volume production phase. These audits include both quality system review and physical fabrication area inspection for verification of conformity with the international quality standard and customers' quality requirement. Our quality management system and quality control programs have been qualified and routinely audited by numerous customers who are recognized as world-class semiconductor companies with best-in-class quality standards.

Our Quality Assurance Division and Reliability Technology and Assurance Division collaborate to provide quality and reliability performance to customers. With our wafer processing quality and reliability conformance monitoring program, we monitor the product quality and reliability at various stages of the entire manufacturing process before shipment to customers.

All our fabs are certified in compliance with IATF 16949 and QC080000 IECQ HSPM standards. IATF 16949 sets the criteria for developing a fundamental quality management system emphasizing on customer satisfaction in quality management, continual improvement, defect prevention and variation and waste reduction. QC080000 IECQ HSPM sets the criteria for developing a process management system for hazardous substances and focuses on developing environmentally friendly manufacturing processes. We are committed to continuously improving our quality management system and to delivering high quality product to our customers.

Services and Products

We primarily engage in wafer fabrication for foundry customers. To optimize fabrication services for our customers, we work closely with them as they finalize circuit design and contract for the preparation of masks to be used in the manufacturing process. We also offer our customers turnkey solutions by providing subcontracted assembly and test services. We believe that this ability to deliver a variety of foundry services in addition to wafer fabrication enables us to accommodate the needs of a full array of integrated device manufacturers, system companies and fabless design customers with different in-house capabilities.

Wafer manufacturing requires many distinct and intricate steps. Each step in the manufacturing process must be completed with precision in order for finished semiconductor devices to work as intended. The processes require taking raw wafers and turning them into finished semiconductor devices generally through five steps: circuit design, mask tooling, wafer fabrication, assembly and test. The services we offer to our customers in each of these five steps are described below.

Circuit Design. At this initial design stage, our engineers generally work with our customers to ensure that their designs can be successfully and cost-effectively manufactured in our facilities. We have assisted an increasing number of our customers in the design process by providing them with access to our partners' electronic design analysis tools, IP and design services, as well as by providing them with custom embedded memory macro-cells. In our Silicon Shuttle program, we offer customers and IP providers early access to actual silicon samples with their desired IP and content in order to enable early and rapid use of our advanced technologies. The Silicon Shuttle program is a multi-chip test wafer program that allows silicon verification of IP and design elements. In the Silicon Shuttle program, several different vendors can test their IP using a single mask set, greatly reducing the cost of silicon verification for us and the participating vendors. In our alliances with them, we coordinate with leading suppliers of IP, design and ASIC services to ensure their offerings are available to our customers in an integrated, easy to use manner which matches customers' need to our technologies. With a view to lowering customer design barriers, we expanded our design support functions from conventional design support to adding IP development to complement third-party intellectual properties and to provide customers with the widest range of silicon-verified choices. Our offerings range from design libraries to basic analog mixed-mode intellectual properties which, together, have helped shorten our customer's design cycle time.

Mask Tooling. Our engineers generally assist our customers to design and/or obtain masks that are optimized for our advanced process technologies and equipment. Actual mask production is usually provided by independent third parties specializing in mask tooling.

Wafer Fabrication. As described above, our manufacturing service provides all aspects of the wafer fabrication process by utilizing a full range of advanced process technologies. During the wafer fabrication process, we perform procedures in which a photosensitive material is deposited on the wafer and exposed to light through the mask to form transistors and other circuit elements comprising of a semiconductor. The unwanted material is then etched away, leaving only the desired circuit pattern on the wafer. As part of our wafer fabrication services, we also offer wafer probing services, which test, or probe, individual die on the processed wafers and identify dice that fail to meet required standards. We prefer to conduct wafer probing internally to obtain speedier and more accurate data on manufacturing yield rates.

Assembly and Testing. We offer our customers turnkey solutions by providing the option to purchase finished semiconductor products that have been assembled and tested. We outsource assembly and test services to leading assembly and test service providers, including Siliconware Precision Industries Co., Ltd., or Siliconware, and Advanced Semiconductor Engineering Inc. in Taiwan. After final testing, the semiconductors are shipped to our customers' designated locations.

Customers and Markets

Our primary customers, in terms of our sales revenues, include premier integrated device manufacturers, such as Texas Instruments and Intel, plus leading fabless design companies, such as MediaTek, Realtek and Novatek. Although we are not dependent on any single customer, a significant portion of our operating revenues has been generated from sales to a few customers. Our top ten customers accounted for approximately 55.6% of our operating revenues in 2024.

Set forth below is a geographic breakdown of our operating revenues in 2022, 2023 and 2024 by the location where our customers are headquartered.

Region	Years Ended December 31,		
	2022 %	2023 %	2024 %
Taiwan	37.8	30.7	36.1
China (including Hong Kong)	14.2	12.4	16.0
Japan	6.1	5.2	3.9
Korea	9.2	13.9	11.3
USA	24.2	26.6	25.0
Europe	8.5	11.2	7.7
Others	0.0	0.0	0.0
Total	100.0	100.0	100.0

We believe our success in attracting these end customers is a direct result of our commitment to high quality service and our intense focus on customer needs and performance. As an independent semiconductor foundry, most of our operating revenue is generated by our sales of wafers. The following table presented the percentages of our wafer sales by types of customers for the years ended December 31, 2022, 2023 and 2024.

Customer Type	Years Ended December 31,		
	2022 %	2023 %	2024 %
Fabless design companies	84.1	78.3	84.3
Integrated device manufacturers	15.9	21.7	15.7
Total	100.0	100.0	100.0

We focus on providing a high level of customer service in order to attract customers and maintain their ongoing loyalty. Our culture emphasizes responsiveness to customer needs with a focus on flexibility, speed and accuracy throughout our manufacturing and delivery processes. Our customer-oriented approach is especially evident in two types of services: customer design development services and manufacturing services. We believe that our large production capacity and advanced process technology enable us to provide better customer service than many other foundries through shorter turn-around time, greater manufacturing flexibility and higher manufacturing yields.

We work closely with our customers throughout the design development and prototyping processes. Our design support team closely interacts with customers and IP vendors to facilitate the design process and to identify their specific requirements for IP offerings. We are responsive to our customers' requirements in terms of overall turn-around time and production time-to-market by, for example, helping our customers streamline their IP offering processes and delivering prototypes in a timely and easy-to-use fashion. We also maintain flexibility and efficiency in our technical capability and respond quickly to our customers' design changes.

For IP offerings, we work with several leading IP vendors from digital, memory and analog fields in the semiconductor industry to deliver quality IP blocks that have been silicon validated using our advanced processes. Our alliances with major electronic design automation vendors provide our customers with digital/analog reference design procedures and easy-to-use design solutions. By continuously enhancing our IP offerings, reference design procedures and design services through collaboration with major vendors, we aim to provide complete, accurate and user-friendly design solutions to our customers.

As a design moves into manufacturing production, we continue to provide ongoing customer support through all phases of the manufacturing process. The local account manager works with our customer service representative to ensure the quality of our services, drawing upon our marketing and customer engineering support teams as required.

We offer an online service, "MyUMC," which gives our customers easy access to our foundry services by providing a total online supply chain solution. MyUMC offers 24-hour access to detailed account information such as manufacturing, engineering and design support documents through each customer's own customized start page. The features that are available to customers through MyUMC include (i) viewing the status of orders from the start of production to the final shipping stages; (ii) designing layouts to shorten customers' tape out time; (iii) collecting customer engineering requests; (iv) gathering and downloading documents for design purposes; and (v) accessing online in real-time the same manufacturing data used by our fab engineers.

We also have system-to-system connecting services to provide direct data exchange between our system and our customers' systems. These services, which include our "Design Support Online Services," facilitate our design collaborations with our customers to help reduce the cost of chip designs and reduce the time to market. In order to continue to improve our information security management, our Information Technology Division received the certification of ISO/IEC 27001:2005 in 2008 and renewed ISO/IEC 27001:2013 in 2015.

In addition, we have established a data-driven advanced semiconductor smart manufacturing system to provide world-class quality production, ensure information security and service quality, as well as improve customer satisfaction, operational and R&D efficiency. We achieved this by integrating a spectrum of innovative digital technologies, including Internet of Things, big data, cloud, artificial intelligence and information technology, and our enterprise information and semiconductor expertise.

We price our products on a per die or per wafer basis, taking into account the complexity of the technology, the prevailing market conditions, the order size, the cycle time, the strength and history of our relationship with the customer and our capacity utilization. Our main sales office is located in Taiwan, which is in charge of our sales activities in Asia. United Microelectronics (Europe) BV, our wholly-owned subsidiary based in Amsterdam, assists our sales to customers in Europe. Our sales in North America are made through UMC Group (USA), our subsidiary located in Silicon Valley. We also have sales offices in China, Japan and Korea to support our customers in those regions.

We advertise in trade journals, organize technology seminars, hold a variety of regional and international sales conferences and attend a number of industry trade fairs to promote our products and services. We also publish a corporate newsletter for our customers.

Information Security Risk Management

We have made information security risk analysis and have taken the mitigating measures as described below:

(1) Risk Management Organization

We have established an Enterprise Risk Management Committee to coordinate with key internal departments for risk management and control, jointly reviewing and managing internal and external risks of the Company. In addition, we established the “Corporate Security Division” in 2018, which is responsible for our information security and physical security planning and related audit matters, and work together with our Information Technology Division to further strengthen information security.

(2) Information Security Policy (Internal Control and Protocol)

Our information security policy is based on the guiding principle: “To establish Information Security Management rules in accordance to customer’s requirement, to reach a consensus that information security is everyone’s responsibility through full awareness, to protect information confidentiality, integrity, availability for the Company and customer, and to provide safe production environment to ensure sustainable operation of the Company’s business.” Our major information security objectives are aimed at antivirus, anti-intrusion and anti-leakage through the building of multiple internal controls such as firewall, intrusion detection and antivirus systems to enhance our ability to defend against external attacks. Also, through regular educational and training programs, security operation/awareness is embedded and seamlessly integrated into every employee’s daily work.

(3) Establish Enterprise Risk Management System

According to the Enterprise Risk Management Committee management procedure, we assess the risk level of information security, take the appropriate actions and regularly review the effectiveness of these actions. The committee regularly reviews the possibility of risk occurrence and the potential change of severity over time to understand and assess the effectiveness of risk management programs and related control operations. We comply with multiple ISO certification standards in the areas of quality, environment, water resources, carbon footprint and green energy. Related information security certification includes ISO15408, ISO22301 and ISO27001.

(4) Assessment of Information Security and Cyber Risks

We place particular emphasis on preventing information security and cyber risks, and have built a comprehensive multi-layer defense mechanism including firewall, intrusion detection, antivirus system, vulnerability scanning, patch management procedure and penetration testing. Our company followed the National Institute of Standards and Technology to establish a corporate information security framework and created corresponding metrics to strengthen information security management including (i) aiming to further improve the detection of irregularities and elevate preventive capabilities including protocols such as Security Orchestration, Automation, and Response (SOAR) and Endpoint Detection and Response (EDR), (ii) optimizing network security area of overall information systems and (iii) increasing the multi-factor authentication protection for hosting privileged account login.

(5) Information Security Management System (ISMS) Verification

Our ADRs have been listed on NYSE since 2000 and we have complied with the Sarbanes-Oxley Act (SOX 404) for internal control over financial reporting processes. We also strengthened our information security process by introducing ISO27001 information security management system certification to reduce security risk and production anomaly that may be caused by human error. We carry out the relevant continuous improvement and recertification on an annual basis.

In 2014, a cross-division security committee was established. Based on the need to produce secure products like smart card ICs, we introduced ISO15408 (CC, Common Criteria) certification specifically designed for secure production procedures not only in data receiving, processing and destruction but also higher physical access control request for the purpose of securing entire production line. We carry out the relevant continuous improvement and recertification on a biennial basis.

(6) Insurance against Information Security Risks

Data leakage, virus infection, ransomware attacks and hacking event in Taiwan and throughout the world have caused many international and well-known companies to encounter significant operating loss. There is no guarantee that enterprises will not become the target of attacks despite reasonable security protection in place. In view of this, we obtained cyber security insurance to mitigate and reduce this risk. Such insurance policy has been in effect since January 2019 with retroactive option which can trace back to undiscovered pre-existing threats. The annual insurance coverage is US\$10 million for the Company and its subsidiaries.

(7) The Impact of Occurred Major Asset Security Incidents and Response Measures

UMC had no major information security incidents in recent years, except for a distributed denial-of-service (DDoS) attack on our official website in October 2024. This led to slow access to the Company's official website, making it unable to provide normal services. This incident did not cause system infection, damage, intrusion, or data leakage, and had no significant impact on the Company's operations. The Company immediately blocked the attacking IP addresses through the security protection system, and activated traffic cleaning services, and the official website was restored back to normal access. The Company has established corresponding DDoS monitoring indicators to detect and respond to potential attacks early.

In short, new invasive techniques are constantly evolving but past defense achievements do not necessarily mean or guarantee that anomaly breach will not occur in the future. Enterprises must keep pace with the ever-changing and growing information security threat and requires continuous improvement. We will uphold to "Integrity, Pragmatism, Agility, Ingenuity" as corporate culture and will fulfill due care/due diligence' management responsibility to provide customers with a secure production environment to reduce operational risk and reward shareholders with highest investment value as possible.

Competition

The worldwide semiconductor foundry industry is highly competitive, particularly during periods of overcapacity and inventory correction. We compete internationally and domestically with dedicated foundry service providers, as well as with integrated device manufacturers and final product manufacturers which have in-house manufacturing capacity or foundry operations. Some of our competitors have substantially greater production, financial, research and development and marketing resources than we have. As a result, these companies may be able to compete more aggressively over a longer period of time than we can. In addition, several new dedicated foundries have commenced operations and compete directly with us. New entrants in the foundry business are likely to initiate a trend of competitive pricing and create potential overcapacity in legacy technology. Any significant increase in competition may erode our profit margins and weaken our earnings.

The principal elements of competition in the semiconductor foundry industry include technical competence, production speed and cycle time, time-to-market, research and development quality, available capacity, manufacturing yields, customer service and price. We believe that we compete favorably with our competitors on each of these elements, particularly our technical competence and research and development capabilities.

Intellectual Property

Our success depends on our ability to obtain patents, licenses and other intellectual property (IP) rights covering our production processes and activities. To that end, we have developed and acquired certain patents and patent licenses and intend to continue to seek patents on our production processes. As of December 31, 2024, we held 7,210 U.S. issued patents and 8,350 patents issued outside of the United States. As trade secret protection become increasingly critical, we have stepped up internal compliance training and established a robust IP management system. In 2023, UMC achieved Taiwan Intellectual Property Management System (TIPS) certification for the second year, with our certification level improving from AA to AAA (such certificate is valid until December 31, 2026), underscoring our unwavering commitment to IP and corporate governance best practices.

Our ability to compete also depends on our ability to operate without infringing on the proprietary rights of others. The semiconductor industry is generally characterized by frequent claims and litigation regarding patent and other IP rights. As is the case with many companies in the semiconductor industry, we have from time to time received communications from third parties asserting patents that allegedly cover certain of our technologies and alleging infringement of certain IP rights of others. We expect that we will continue to receive similar communications in the future. Irrespective of the validity or the successful assertion of such claims, we could incur significant costs and devote significant management resources to the defense of these claims, which could seriously harm our company. See "Item 3. Key Information—D. Risk Factors—Our inability to obtain, preserve and defend IP rights could harm our competitive position."

In order to minimize our risks from claims based on our manufacture of semiconductor devices or end-use products whose designs infringe on others' IP rights, we in general accept orders only from companies that we believe have established satisfactory reputation and for products that are not identified as risky for potential infringement claims. Furthermore, we obtain indemnification rights from customers. We also generally obtain indemnification rights from equipment vendors to hold us harmless from any losses resulting from any suit or proceedings brought against our company involving allegation of infringement of IP rights on account of our use of the equipment supplied by them.

We have entered into various patent cross-licenses with major technology companies, including a number of leading international semiconductor companies, such as IBM and AVAGO. Our cross licenses may have different terms and expiry dates. Depending upon our competitive position and strategy, we may or may not renew our cross licenses and further, we may enter into different and/or additional technology and/or IP licenses in the future.

Research and Development

We place significant importance on the dynamics of the semiconductor industry and continue to invest and develop semiconductor manufacturing process technology and know-how. In order to continue the development of logic and specialty technologies, optimize transistor performance, reduce power consumption, and continuously enhance our technical advantages, in 2022, 2023 and 2024, we spent NT\$12,953 million, NT\$13,284 million and NT\$15,616 million (US\$476 million), respectively, on research and development, which represented 4.6%, 6.0% and 6.7%, respectively, of our operating revenues of such years. Our research and development efforts mainly focus on delivering comprehensive foundry solutions that consist of the key process technologies encompassing logic as well as specialty manufacturing technologies that address customers' needs. These resources provide our foundry customers with improved opportunities to develop diverse product lines that supply the global semiconductor market. Our commitment to research and development can be illustrated by our research and development expenditures, which was approximately 6.7% of operating revenues, and a total of 364 domestic and foreign patents granted in 2024.

As of December 31, 2024, we employed 1,466 professionals in our research and development activities. In addition, other management and operational personnel are also involved in research and development activities but are not separately identified as research and development professionals. We will continue to invest in technology innovation, optimize capacity to enhance product mix and penetrate emerging applications. We believe that these efforts will create higher customer adoption of our logic and specialty technologies and expand our market share to fuel growth.

Our Investments

Our investment holdings consist of equity interest in certain company and reflect current market valuations as these assets may change in accordance with market conditions.

The following table sets forth the sales of our investments in 2022:

Investees	Number of shares sold (in millions)	Proceeds from disposal (in NT\$ millions)
Excellence Optoelectronics Inc.	9	201
Lanhor Fund	—	195
Lintes Technology Co., Ltd.	1	125
Mercuries Life Insurance Co., Ltd.	20	117
Winking Entertainment Ltd.	2	112

The following table sets forth the sales of our investments in 2023:

Investees	Number of shares sold (in millions)	Proceeds from disposal (in NT\$ millions)
King Yuan Electronics Co., Ltd.	23	1,331
Unimicron Technology Corp.	2	293
Evergreen Aviation Technologies Corp.	3	285
AMPAK Technology Inc.	3	256
Win Win Precision Technology Co., Ltd.	4	217

The following table sets forth the sales of our investments in 2024:

Investees	Number of shares sold (in millions)	Proceeds from disposal (in NT\$ millions)	(in US\$ millions)
FORTEMEDIA, INC.	13	223	7
PHISON ELECTRONICS CORP.	2	214	7

Environmental, Safety and Health Matters

We have implemented extensive ESH management systems since 1996. These systems enable our operations to identify applicable ESH regulations, assist in evaluating compliance status and timely establish loss preventive and control measures. The systems we implemented in all our fabs have been certified as meeting the ISO 14001 and ISO 45001 standards. ISO 14001 consists of a set of standards that provide guidance to the management of organizations to achieve an effective environmental management system. Procedures are established at manufacturing locations to ensure that all accidental spills and discharges are properly addressed. ISO 45001 is an international occupational health and safety management system standard, which may be applied to assess and certify our management systems. Our goal in implementing ISO 14001 and ISO 45001 systems is to continually improve our ESH management, comply with ESH regulations and to be a sustainable green foundry. Our major ESH policies include:

Environmental Protection Aspects:

- Fully comply with or go beyond requirements of environmental laws and regulations, and international conventions, striving for zero pollution and sustainable development.
- Integrate environmental management into the Company's operational and management systems, and build an environmentally conscious company culture.
- Actively set aggressive environmental management goals, regularly track and continuously improve environmental performance, and reduce environmental impact.
- Introduce and develop environmentally friendly technologies that can be applied to R&D, procurement, production operations, business facilities, distribution and logistics, products, and/or services to minimize environmental impact at each life cycle stage in order to achieve green design, green production, and green operations goals.
- Stay informed of environmental trends around the world, assess the associated opportunities and risks, engage in proper waste management, effectively utilize energy/resources, and promote circular economy.
- Conduct regular training on risk assessment and risk management to ensure employees understand the environmental impact of their work activities, enhance environmental protection awareness, and encourage responsible action.
- Enhance awareness of the Company's environmental policy and environmental impact among both internal and external stakeholders (including the Company and its subsidiaries, value chain partners, civil society) through due diligence, active communication and engagement, and transparent information disclosure.
- Fulfill corporate social responsibility and cooperate with the government, the public and global business partners in ecological improvement and rehabilitation.

Safety and Health Aspects:

- Meet or exceed the requirements on occupational safety and health of the place of operation and comply with ISO 45001 and relevant international standards, aiming for zero incident. We are committed to steady development while making safety a priority.

- Set up prioritization and action plans, continue to promote safety and health management system and risk improvement processes to achieve and maintain world-class safety/health and risk management performance.
- Use advanced safety and health technologies as well as risk and disaster rescue techniques to actively enhance all safety aspects in a pioneering manner.
- Implement due diligence to ensure the safety of the work environment and operations, contractors, customers as well as partners in the operation of the enterprise.
- Through communication, consultation and participation in decision-making with staff or their representatives, make it a responsibility for personnel of all levels to exercise influence, eliminate hazard factors, prevent occurrence of accidents and work-related illnesses, and promote effective safety and health interactions through cooperation and sharing.
- Continue conducting safety and health education and advocacy, encouraging active participation in safety and health activities, and allowing for health and safety to be a habit and a way of life for all workers.

As a member of the global community and a semiconductor industry leader, we have implemented measures to deal with environmental problems and mitigate climate change. We have introduced green concepts in our operations, including green commitment, management, procurement, production, products, recycling, office, education and marketing.

With respect to safety and health management, we realized that lowering the risks in equipment and processes can reduce accidents, but cannot guarantee the safety of all employees. In order to achieve the goal of “zero-accident,” we intend to promote the concept of “safety is my responsibility.” We have educated employees with the concepts of “be aware of your own safety as well as the safety of others” and “safety is everyone’s responsibility, and my personal accountability.”

Furthermore, we have implemented the Failure Mode and Effects Analysis (FMEA) method to foster employees’ capabilities in risk analysis. Therefore, we established a channel for communication to encourage and ensure the employees to fully express their opinions for professional response and assistance. By doing so, we hope to establish a culture of “Safety and health first” to further improve the quality of our working environment, and eventually to become a good example of global safety and health management.

The following list sets forth some of the important awards that we received in environmental protection, safety and health:

- Selected as a member of Dow Jones Sustainability Indices (DJSI) World Index for the seventeenth straight year since 2008 and also named a constituent of Emerging Markets Index in 2024;
- Selected as component of MSCI ACWI ESG Leaders Index and MSCI Emerging Markets ESG Leaders Index;
- Selected as component of FTSE4Good All-World Index and FTSE4Good Emerging Index for tenth consecutive year, and FTSE4Good TIP Taiwan ESG Index since the launch of the index in 2017;
- Recognized double A List by CDP for climate change and water security for three consecutive years;
- Awarded “Top 10 Taiwanese Companies Sustainability Model Award” 5th place (2024) and “Corporate Sustainability Report Award” (2008-2024) for seventeenth consecutive year by Taiwan Institute for Sustainable Energy;
- Awarded “National Enterprise Environmental Protection Award” by Ministry of Environment, Executive Yuan, R.O.C. (2003-2024) for twenty-second consecutive year;
- Awarded “The Best Participation of Green Procurement for Enterprises” by Ministry of Environment, Executive Yuan, R.O.C. (2011-2024);
- Awarded “Excellent Occupational Safety and Health Executive Organization” by the Hsinchu Science Park, National Science and Technology Council (1998-2024);
- Awarded “Excellence in Resource Circulation Gold Award” by Ministry of Environment, Executive Yuan, R.O.C. (2024);
- Awarded “Singapore Water Efficiency Award” by Singapore Public Utilities Board (2024).

Climate Change

Our climate change policies include: (i) achieving carbon neutral status via carbon management, (ii) becoming a comprehensive low-carbon emissions solution provider, and (iii) leveraging corporate resources to cultivate a low-carbon emissions economy. In order to implement these policies, we set greenhouse gas reduction goals as to various phases. In the program of UMC Sustainability Strategy and Blueprint, we launched resource and energy productivity improvement plans which target to reduce the usage of water, electricity and waste per unit of product by 30%, 30% and 50% in 2030, respectively, compared to 2015. We also set the goal of reducing the F-GHG emissions per unit of product by 65% in 2025 compared to 2010.

In June 2021, we announced our pledge to reach net zero carbon emissions by 2050 and to take concrete steps to Net Zero Action as the first semiconductor foundry globally. We are vigorously responding to the Paris Climate Agreement goal and pursuing efforts to limit the global warming not exceeding 1.5°C. In addition, we were admitted into RE100, becoming the second semiconductor wafer foundry in this initiative, and committed to using 100% renewable energy by 2050. To reach net zero carbon emissions by 2050, we have three resolutions to cover direct emissions from fab operations, indirect emissions from energy consumption, and indirect emissions from value chain. The three resolutions are:

- Persistent and proactive carbon emission reduction: Through continually developing advanced foundry process technologies, enhancing productivity and improving energy efficiency, we are able to minimize carbon emissions in both manufacturing stage of wafers and using stage of IC end products.
- 100% renewable energy: A 3-stage objective of 25% by 2025, 50% by 2030, and 100% by 2050 is set to substantially increase the proportion of consuming renewable energy, and we will also invite our value chain to support the low-carbon energy transition.
- Investment in net-zero technologies: we commit to investing in net zero emissions technologies and participating in Carbon Offset Projects to remove and offset carbon emissions that are inevitable or still subject to technical restrictions.

In 2022, UMC's GHG emissions reduction target has been approved by the Science Based Targets initiative (SBTi). With 2020 as the base year, we target 25% reduction in direct greenhouse gas emissions (Scope 1) and indirect emissions from electricity consumption (Scope 2) by 2030. We also aim to lower emissions from our value chain (Scope 3) by 12.3% in the same period. SBTi's approval is a confirmation of our intended pathway to achieve net zero while also ensuring our reduction targets are in line with what the latest climate science says is needed to prevent the worst impacts of climate change. In 2023, UMC further committed to the SBTi net zero target. In accordance with the SBTi net-zero standards, UMC adjusted its 2030 GHG reduction targets to reduce Scope 1 and Scope 2 carbon emissions by 42% with 2020 as the base year by 2030. Additionally, a 25% reduction in carbon emissions within the Scope 3 is targeted, and by 2050, a 90% reduction in emissions with the neutralization of remaining unavoidable carbon emissions will be achieved to meet the net-zero target. We also support timely disclosure of carbon information and ensuring data quality and engage third-party verifiers to ensure the quality of the data. We completed the verification on greenhouse gas emission and reduction records for all of our fabs on an annual basis. Since 2006, we have participated in the Carbon Disclosure Project formed by global institutional investors and disclosed our annual greenhouse gas emission volume, reduction goals and results. In 2024, UMC has been recognized in CDP's "A List" for transparency and action on both climate change and water security. We stand out as the sole semiconductor company globally to secure this double "A" recognition for three consecutive years, affirming our commendable performance in greenhouse gas emission reduction and water resource management.

Climate change will not only bring about negative impacts but also drive opportunities for semiconductor simultaneously. Consequently, we have been proactively searching for our own climate related opportunities by considering of market demand for energy-saving and our technique advantages. Our climate change opportunities were identified as green technologies of RF & Power and Logic Related which could reduce the power consumption and carbon emission, which we expect to increase our revenue in 2024.

Risk Management

Risk and safety matters are administered by Group Risk Management and Environmental Safety Health Division. We are pursuing the goal of a highly protected risk status in the semiconductor industry through the implementation of strict engineering safety procedures, regular enforcement of safety codes and standards, and compliance of detailed industry safety guidelines.

Our risk control strategy has been implemented in many ways, including constructing inherently safe fabs, strengthening physical protection standards, redundancy/contingency design, providing with real-time abnormality detection, implementing disciplined maintenance and inspection, deploying natural hazard early warning systems, enhancing emergency response abilities, and developing business continuity plan, which includes crisis management and recovery procedures, to achieve our continuous operation promise. The achievements in the recent years are as follows:

- Start in 1999, maintains third party audit by AIG (American International Group), a global leader in risk management and insurance, to evaluate 20 elements of physical and human management performance of each fab.

- Inherent safety design and rescue skill develop for emerging risk, including but not limit to: solar power generation system on the roof-top, and lithium battery inside collaborative robot, and electrical car, etc.
- Enhanced power distribution system's reliability and early abnormality detection, such as gradually replace existing lead-acid UPS batteries with lithium-iron, install real-time leak current measurement of cable shielding conductors' grounding system of HV distribution system, enlarge diesel generators installation rate to increase emergency power percentage and maintain diesel oil in a safety level, etc. For the countermeasure against momentary voltage drops, continually increase the uninterruptible power supply coverage rate for production tools.
- Fixed-term contract for private water source and water trucks and in combination with self water-saving, U Water, and reclaimed water usage, which can supply more than 50% of water consumption to overcome water shortage risk in the drought season.
- Conducted BCP (Business Continuity Plan) drill for external LPG (Liquefied Petroleum Gas) and bulk GN2 (Gaseous Nitrogen) supply disruption risk.
- Enhance cleanroom's seismic bracing for suspended ceiling and raised floor in older 8-inch fabs in Hsinchu. The earthquake improvement plan will continue to expand to other areas, such as laboratories.

Taiwan situates in Circum-Pacific Seismic Belt, and the threat of earthquakes cannot be underestimated. We have implemented tons of proactive efforts in earthquake loss prevention. We imported the latest anti-seismic technologies, a seismic isolation platform for newly installed reticle stocker and furnace and built up an earthquake warning system in Tainan production base that will provide us with enhanced response time in the event of an earthquake.

Nowadays, extreme weather has become a risk to various business operations. Taiwan suffered its worst drought in 56 years in 2021. In the face of climate change and a more severe water shortage conditions in the future, we have implemented actions based on different water restriction stages, including formulating various water-saving measures and production scheduling adjustments. We also continue to hire water trucks and increase the capacity of contracted private water sources as a contingency plan. In the future, various options such as the use of reclaimed water, recycled water and desalinated seawater will be continuously introduced to reduce water risks.

In addition, we are fully aware of the impact presented by business interruption. We are also devoted in the pursuit of corporate resilience and continuity by committing non-interrupted services to satisfy our valued customers and important shareholders. In 2013, Fab 12A in Tainan was the first foundry in the world to receive ISO 22301 Business Continuity Management certification. By 2024, all our production sites had been certified. It demonstrates our commitment to carrying out disaster response abilities and ensuring continuous production objective.

Insurance

We maintain industrial all risk insurance for our buildings, facilities, equipment and inventories as well as third-party properties. The insurance for fabs and their equipment covers losses from physical damage and business interruption up to their respective policy limits except for policy exclusions, including damages and interruptions caused by natural disasters such as earthquake or typhoons. In addition, we purchase directors and officers liability insurance for our board directors and executive officers, covering the liabilities incurred in relation to his/her/its operation of business and legally responsible for. We also maintain public liability insurance for losses to third parties arising from our business operations. We believe that our insurance arrangement is adequate to cover all major types of losses relevant to the semiconductor industry practice. However, significant damage to any of our production facilities, whether as a result of fire or other causes, could seriously harm our business and we may not be able to recover all of our losses through insurance policy coverage.

C. Organizational Structure

The following list shows our corporate structure as of December 31, 2024:

Company	Jurisdiction of Incorporation	Percentage of Ownership as of December 31, 2024
UMC Group (USA)	U.S.A.	100.00%
United Microelectronics (Europe) B.V.	The Netherlands	100.00%
UMC Capital Corp.	Cayman Islands	100.00%
TLC Capital Co., Ltd.	Taiwan, R.O.C.	100.00%
Green Earth Limited	Samoa	100.00%
Fortune Venture Capital Corp.	Taiwan, R.O.C.	100.00%
UMC Investment (Samoa) Limited	Samoa	100.00%
ECP Vita Pte. Ltd.	Singapore	100.00%
Soaring Capital Corp.	Samoa	100.00%
Unitruth Advisor (Shanghai) Co., Ltd.	China	100.00%
Tera Energy Development Co., Ltd.	Taiwan, R.O.C.	94.93%
United Microchip Corporation	Cayman Islands	100.00%
Wavetek Microelectronics Corporation	Taiwan, R.O.C.	79.54%
Everrich Energy Investment (HK) Limited	China	94.93%
Everrich (Jining) New Energy Technology Co., Ltd. (formerly Everrich (Shandong) Energy Co., Ltd.)	China	94.93%
Wavetek Microelectronics Corporation (USA)	U.S.A.	79.54%
Best Elite International Limited	British Virgin Islands	100.00%
Infoshine Technology Limited	British Virgin Islands	100.00%
Oakwood Associates Limited	British Virgin Islands	100.00%
Hejian Technology (Suzhou) Co., Ltd.	China	99.9985%
United Semiconductor (Xiamen) Co., Ltd.	China	99.9994%
UMC Korea Co., Ltd.	Korea	100.00%
Omni Global Limited	Samoa	100.00%
United Microtechnology Corporation (California)	U.S.A.	100.00%
Sino Paragon Limited	Samoa	100.00%
United Semiconductor Japan Co., Ltd.	Japan	100.00%

D. Property, Plants and Equipment

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

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5 OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Unless stated otherwise, the discussion and analysis of our financial condition and results of operations in this section apply to our financial information as prepared in accordance with IFRSs. You should read the following discussion of our financial condition and results of operations together with the consolidated financial statements and the notes to such statements included in this Annual Report. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under “Item 3. Key Information—D. Risk Factors” or in other parts of this Annual Report on Form 20-F.

For the convenience of readers, NT dollar amounts used in this section for, and as of, the year ended December 31, 2024 have been converted into U.S. dollar amounts using US\$1.00 = NT\$32.79, the foreign currency exchange rate on December 31, 2024 as released by the Board of Governors of the Federal Reserve System. The U.S. dollar conversion appears in parentheses next to the relevant NT dollar amount.

Overview

We are one of the world's leading independent semiconductor foundries, providing comprehensive wafer fabrication services and technologies to our customers based on their designs.

Cyclicalities of the Semiconductor Industry

As the semiconductor industry is highly cyclical, revenues varied significantly over this period. In recent years, the semiconductor industry has undergone a shift in demand in response to several prevalent trends, including the widespread implementation of 5G communications, proliferation of Internet of Things, advancement and adoption of electrical vehicles and related technologies. After experienced substantial growth for three consecutive years, there were inevitably cases of repeated orders to foundries, resulting in serious higher-than-normal inventory level. In addition, influenced by various adverse factors such as the war in Ukraine and Covid-19 lockdown and reopening in China, the foundry industry faced sluggish demand and serious inventory adjustments in 2023, with these challenges continuing to affect the industry throughout 2024, resulting in lower capacity utilization for the year and weak operation performance. Our average capacity utilization rate was 100.6%, 68.5% and 68.7% for the years ended December 31, 2022, 2023 and 2024, respectively. We believe that our operating results continue to reflect the ongoing uncertainty in the global economy.

Pricing

We price our products on either a per die or a per wafer basis, taking into account a variety of factors, including the complexity of the technology, the prevailing market conditions, the order size, the cycle time, the strength and history of our relationship with the customer and our capacity utilization. Because semiconductor wafer prices tend to fluctuate frequently, we regularly review our pricing on a quarterly basis. As a majority of our costs and expenses are fixed or semi-fixed in nature, fluctuations in our products' average selling price historically have had a substantial impact on our margins and profitability. Our average selling price increased by 6.3% from 2022 to 2023 and decreased by 5.0% from 2023 to 2024, which reflects the optimization in overall product mix in 2023, and the nominal price erosion in 2024.

We believe that our current level of pricing is comparable to that of other leading foundries in each respective geometry. We believe that our ability to provide a wide range of advanced foundry services and process technologies as well as large manufacturing capacity will enable us to provide competitive pricing with other leading foundries at a comparable price level.

Capacity Utilization Rates

Our operating results are characterized by relatively high fixed costs. In 2022, 2023 and 2024, approximately 67.7%, 63.9% and 69.6%, respectively, of our manufacturing costs consisted of depreciation, a portion of indirect material costs, amortization of license fees, indirect labor and utilities costs.

If our utilization rates increase, our costs would be allocated over a larger number of units, which generally leads to lower unit costs. As a result, our capacity utilization rates can significantly affect our margins. Our utilization rates have varied from period to period to reflect our production capacity and market demand. Our average capacity utilization rate was 100.6%, 68.5% and 68.7% for the years ended December 31, 2022, 2023 and 2024, respectively. Utilization rates were primarily affected by global macroeconomic factors. Other factors affecting utilization rates are efficiency in production facilities, product flow management, the complexity and mix of the wafers produced, overall industry conditions, the level of customer orders, mechanical failure, disruption of operations due to expansion of operations, relocation of equipment or disruption of power supply, acquisition and disposition of foundry assets, and fire or natural disaster.

Our production capacity is determined based on the capacity ratings of the equipment in the fab, provided by engineers, adjusted for, among other factors, actual output during uninterrupted trial runs, expected down time due to set up for production runs and maintenance, expected product mix and research and development. Because these factors include subjective elements, our measurement of capacity utilization rates may not be comparable to those of our competitors.

Change in Product Mix and Technology Migration

Because the price of wafers processed with different technologies varies significantly, the mix of wafers that we produce is among the primary factors that affect our revenues and profitability. The value of a wafer is determined principally by the complexity and performance of the processing technology used to produce the wafer, as well as by the yield and defect density. Production of devices with higher levels of functionality and performance, with better yields and lower defect density as well as with greater system-level integration requires better manufacturing expertise and generally commands higher wafer prices. The increase in price generally has more than offset associated increases in production cost once an appropriate economy of scale is reached.

Prices for wafers of a given level of technology generally decline over the processing technology life cycle. As a result, we have continuously been migrating to increasingly sophisticated technologies to maintain the same level of profitability. We introduced our 28-nanometer technology to customers in 2011 and commenced large-scale commercial production in 2014. The development of 22nm started in 2018 and entered into volume production in 2021. The logic and specialty process technology offerings from 22nm as well as 28nm specialty technologies satisfy new market demand as customers adopt UMC's latest 12-inch process solutions. Our 28nm and below technologies contributed approximately 23.8%, 30.7% and 33.7% of our foundry revenue in 2022, 2023 and 2024 respectively.

The table below sets forth a breakdown of percentage of our wafer sales by process technologies in 2022, 2023 and 2024.

Process Technologies	Years Ended December 31,		
	2022	2023	2024
	%	%	%
14 nanometers and under	0.1	0.0	0.0
28 nanometers	23.8	30.7	33.7
40 nanometers	17.7	13.7	13.8
65 nanometers	18.2	19.2	16.0
90 nanometers	7.8	9.6	10.7
0.11/0.13 micron	11.8	10.6	10.2
0.15/0.18 micron	11.1	9.4	10.1
0.25/0.35 micron	7.1	4.8	4.4
0.50 micron or higher	2.4	2.0	1.1
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Manufacturing Yields

Manufacturing yield per wafer is measured by the number of functional dice on that wafer over the maximum number of dice that can be produced on that wafer. A small portion of our products is priced on a per die basis, and our high manufacturing yields have allowed us to achieve higher margins. In addition, with respect to products that are priced on a per wafer basis, we believe that our ability to deliver high manufacturing yields generally has allowed us to either charge higher prices per wafer or attract higher order volumes, resulting in higher margins.

We continually upgrade our process technologies. At the beginning of each technological upgrade, the manufacturing yield utilizing the new technology is generally lower, sometimes substantially lower, than the yield under the current technology. The yield is generally improved through the expertise and cooperation of our research and development personnel and process engineers, as well as equipment and at times raw material suppliers. Our policy is to offer customers new process technologies as soon as the new technologies have passed our internal reliability tests.

Investments

Most of our investments were made to improve our market position and for strategy considerations, a significant portion of which are in foundry-related companies including fabless design customers, raw material suppliers and IP vendors.

We have, from time to time, disposed of investments for financial, strategic or other purposes in recent years. See “Item 4. Information on the Company—B. Business Overview—Our Investments” for a description of our investments.

Treasury Share and Repurchase Programs

We have from time to time announced plans, none of which were binding on us, to repurchase up to a fixed amount of our common shares on the Taiwan Stock Exchange at the price range set forth in the plans. On April 24, 2019, our board of directors resolved to purchase up to 200 million common shares on the Taiwan Stock Exchange at a price between NT\$8.40 and NT\$18.10 per share during the period from April 25, 2019 to June 24, 2019 for cancellation. Our board of directors further resolved to repurchase up to 200 million common shares on the Taiwan Stock Exchange during a two-month period from June 8, 2020 to transfer to employees. We repurchased the total of 105 million common shares from June 8, 2020 through August 7, 2020 at a price between NT\$11.55 and NT\$23.25, with an average price of NT\$15.98 per share.

During 2022, 2023, and 2024, we did not purchase any of our common shares, and transfer such common shares that we repurchased under these plans to our employees as employee compensation.

A. Operating Results

Operating Revenues

We generate our operating revenues primarily from the manufacture and sales of wafers that are fabricated at our foundries. We also derive a small portion of our operating revenues from wafer probe services that we perform internally as well as mask tooling services and assembly and test services that we subcontract to other companies.

Operating Costs

Our operating costs consist principally of:

- overhead, including depreciation and maintenance of production equipment, indirect labor costs, indirect material costs, supplies, utilities and royalties;
- wafer costs;
- direct labor costs; and
- service charges paid to subcontractors for mask tooling, assembly and test services.

Our total depreciation expenses were NT\$41,328 million, NT\$37,758 million and NT\$45,472 million (US\$1,387 million) in 2022, 2023 and 2024, respectively.

Operating Expenses

Our operating expenses consist of the following:

- Sales and marketing expenses, which consist primarily of salaries and related personnel expenses, mask expenses, intellectual property development expenses and wafer sample expenses. Wafer samples are actual silicon samples of our customers' early design ideas made with our most advanced processes and provided to those customers;
- General and administrative expenses, which consist primarily of salaries for our administrative, finance and human resource personnel, fees for professional services, and expenses of computer systems;
- Research and development expenses, which consist primarily of salaries and related personnel expenses, research testing related expenses, depreciation on the equipment and expenses of computer systems; and
- Expected credit impairment gains (losses). For notes, accounts receivable and contract assets, we apply a simplified approach in calculating expected credit losses (ECLs) and recognize a loss allowance based on lifetime ECLs at each reporting date. ECLs are measured based on our historical credit loss experience and customers' current financial condition, adjusted for forward-looking factors, such as customers' economic environment.

Net Other Operating Income and Expenses

Net other operating income and expenses consist primarily of:

- amortization of deferred government grants related to machinery and equipment;
- gains or losses arising from disposal of property, plant and equipment; and
- net rental income or loss from property.

Non-operating Income and Expenses

Our non-operating income and expenses primarily consist of the following:

1. Interest income, which is primarily derived from time deposits.
2. Other income, which principally consists of dividend income, which is primarily derived from financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income.
3. Other gains and losses, which principally consist of:
 - gains or losses on valuation of financial assets and liabilities, which are primarily derived from disposal of and changes in the values of financial assets and liabilities classified as fair value through profit or loss; and
 - gains or losses on disposal of investments, which are primarily derived from our disposal of investments accounted for under the equity method and disposal of a subsidiary.
4. Finance costs, which principally consist of:
 - interest expenses, which are primarily derived from bonds payable and bank loans; and
 - financial expenses, which are primarily derived from shareholder services proxy fee.
5. Share of profit or loss of associates and joint ventures, which is primarily derived from the recognition of investee companies' net profit based on the ownership percentage we hold.
6. Bargain purchase gain, which is derived from the acquisition of significant influence over SILICON INTEGRATED SYSTEMS CORP. (SIS). SIS was previously measured at fair value through other comprehensive income and reclassified as investments accounted for under the equity method. Our share of the net fair value of SIS's identifiable assets and liabilities was in excess of the fair value of the previously held investment in SIS at the acquisition date, and the difference was recognized as bargain purchase gain. For more information, please refer to Note 6(7) to our audited consolidated financial statements included in this Annual Report.

Taxation

In the R.O.C., the corporate income tax rate and unappropriated earnings tax rate are 20% and 5%, respectively. Our branch in Singapore enjoys tax exemption for income derived from tax-exempted activities under Singapore's Income Tax Act and Economic Expansion Incentive (Relief from Income Tax) Act. These tax exemptions resulted in tax savings of approximately NT\$4,355 million, NT\$1,387 million and NT\$422 million (US\$13 million) in 2022, 2023 and 2024, respectively. Under the amendment to the R.O.C. Statute of Industrial Innovation in 2019, the amounts of unappropriated earnings from 2018 and thereafter used for constructing or purchasing buildings, qualified equipment and technology can qualify for deduction when computing the income tax on unappropriated earnings. We also benefit from other tax incentives generally available to technology companies in Taiwan, such as tax credits applicable against corporate income tax that range from 10% to 25% of qualified research and development expenditures and 3% to 5% of the amount of investment in certain qualified equipment and technology. These tax incentives resulted in tax savings of approximately NT\$3,307 million, NT\$3,074 million and NT\$1,652 million (US\$50 million) in 2022, 2023 and 2024, respectively.

The R.O.C. government enacted the R.O.C. Income Basic Tax Act, also known as the "Alternative Minimum Tax Act," or the AMT Act, to impose an alternative minimum tax. AMT is a supplemental tax which is payable if the income tax payable pursuant to the R.O.C. Income Tax Act is below the minimum amount prescribed under the AMT Act. Most tax-exempt income under the R.O.C. Income Tax Act is considered to be taxable under the AMT Act, such as eligible income generated during tax holidays and capital gain from selling domestic securities, and tax credits are not allowed to deduct AMT. The tax rate for business entities is 12%.

According to the R.O.C. Controlled Foreign Company (CFC) rules enacted in 2016 and implemented since January 1, 2023, certain undistributed profits generated by companies operating in low-tax jurisdictions will be subject to deemed distribution and advance taxation by their Taiwanese parent company.

After taking into account the tax exemptions and tax incentives discussed above, we recorded NT\$19,327 million, NT\$8,311 million and NT\$8,370 million (US\$255 million) of income tax expenses in 2022, 2023 and 2024, respectively. Our effective income tax rate in 2024 was 14.67%.

Comparisons of Results of Operations

The following table sets forth some of our results of operations data as a percentage of our operating revenues for the periods indicated.

	Years Ended December 31,		
	2022 %	2023 %	2024 %
Operating revenues	100.0	100.0	100.0
Operating costs	(54.9)	(65.1)	(67.4)
Gross profit	45.1	34.9	32.6
Operating expenses			
Sales and marketing	(1.5)	(1.4)	(1.1)
General and administrative	(3.5)	(3.4)	(3.1)
Research and development	(4.6)	(6.0)	(6.7)
Expected credit impairment gains (losses)	(0.0)	0.1	0.0
Subtotal	(9.6)	(10.7)	(10.9)
Net other operating income and expenses	1.9	1.8	0.5
Operating income	37.4	26.0	22.2
Non-operating income and expenses	1.9	4.8	2.4
Income from continuing operations before income tax	39.3	30.8	24.6
Income tax expense	(6.9)	(3.8)	(3.6)
Net income	32.4	27.0	21.0
Total other comprehensive income (loss)	1.5	2.3	4.0
Total comprehensive income (loss)	33.9	29.3	25.0
Net income (loss) attributable to:			
Shareholders of the parent	32.1	26.8	21.0
Non-controlling interests	0.3	0.2	(0.0)
Comprehensive income (loss) attributable to:			
Shareholders of the parent	33.6	29.1	25.0
Non-controlling interests	0.3	0.2	(0.0)

Year Ended December 31, 2024 Compared to Year Ended December 31, 2023

Operating revenues. Operating revenues increased by 4.4% from NT\$222,533 million in 2023 to NT\$232,303 million (US\$7,085 million) in 2024, primarily due to an increased customer demand from 3,195 thousand 12-inch equivalent wafers in 2023 to 3,446 thousand 12-inch equivalent wafers in 2024, and a 3.1% depreciation of the NTD in 2024 from 2023, partially offset by a decline of 5.0% in average selling price from 2023 to 2024.

Operating costs. Operating costs increased by 8.2% from NT\$144,789 million in 2023 to NT\$156,649 million (US\$4,777 million) in 2024, primarily due to the increase in shipments, the increasing depreciation cost and higher utilities costs.

Gross profit and gross margin. Gross profit decreased from NT\$77,744 million in 2023 to NT\$75,654 million (US\$2,307 million) in 2024. Our gross margin decreased from 34.9% in 2023 to 32.6% in 2024, primarily due to an annual decline of 5.0% in average selling price.

Operating income and operating margin. Operating income decreased from NT\$57,891 million in 2023 to NT\$51,613 million (US\$1,574 million) in 2024. Our operating margin decreased from 26.0% in 2023 to 22.2% in 2024. The decrease in operating margin was largely due to the decrease in gross profit as described above. Operating expenses increased by 6.3% from NT\$23,856 million in 2023 to NT\$25,365 million (US\$774 million) in 2024.

Sales and marketing expenses. Our sales and marketing expenses decreased by 16.2% from NT\$3,225 million in 2023 to NT\$2,702 million (US\$82 million) in 2024, mainly due to the decrease of NT\$458 million (US\$14 million) in IP and IP royalty expenses and NT\$180 million (US\$5 million) in personnel expenses, partially offset by the increase of NT\$101 million (US\$3 million) in mask expenses. Our sales and marketing expenses as a percentage of our operating revenues decreased from 1.4% in 2023 to 1.1% in 2024.

General and administrative expenses. Our general and administrative expenses decreased by 4.8% from NT\$7,477 million in 2023 to NT\$7,117 million (US\$217 million) in 2024, mainly due to the decrease of NT\$464 million (US\$14 million) in personnel expenses, partially offset by the increase of NT\$49 million (US\$1 million) in computer usage expenses. Our general and administrative expenses as a percentage of our operating revenues decreased from 3.4% in 2023 to 3.1% in 2024.

Research and development expenses. Our research and development expenses increased by 17.6% from NT\$13,284 million in 2023 to NT\$15,616 million (US\$476 million) in 2024. The increase in research and development expenses was mainly due to the increase of NT\$1,469 million (US\$45 million) in research expenses, NT\$355 million (US\$11 million) in IP expenses, NT\$265 million (US\$8 million) in computer usage expenses, NT\$127 million (US\$4 million) in personnel expenses, and NT\$77 million (US\$2 million) in mask expenses, partially offset by the decrease of NT\$167 million (US\$5 million) in research and development expenses of wafers. Our research and development expenses as a percentage of our operating revenues increased from 6.0% in 2023 to 6.7% in 2024.

Expected credit impairment gains (losses). Our expected credit impairment gains decreased from NT\$130 million in 2023 to NT\$70 million (US\$2 million) in 2024. The decrease in expected credit impairment gains was mainly due to the decrease in reversal of loss allowance on accounts receivable. Our expected credit impairment gains as a percentage of our operating revenues decreased from 0.1% in 2023 to 0.0% in 2024.

Net other operating income and expenses. Net other operating income decreased by 66.9% from NT\$4,002 million in 2023 to NT\$1,324 million (US\$40 million) in 2024, mainly due to a decrease of NT\$2,525 million (US\$77 million) in government grants. Net other operating income and expenses as a percentage of our operating revenues decreased from 1.8% in 2023 to 0.5% in 2024.

Non-operating income and expenses. Non-operating income decreased by 48.6% from NT\$10,560 million in 2023 to NT\$5,432 million (US\$166 million) in 2024, mainly due to a decrease of NT\$3,069 million in share of profit of associates and joint ventures, a decrease of NT\$1,183 million in interest income caused by the decline in cash and time deposits levels, and a shift in other gains and losses from a gain of NT\$223 million in 2023 to a loss of NT\$303 million (US\$9 million) in 2024, partially offset by an increase of NT\$850 million in exchange gain, net. The increase in other losses was resulted from a decline on valuation of financial assets and liabilities at fair value through profit or loss, shifting from a loss of NT\$41 million in 2023 to a loss of NT\$321 million (US\$10 million) in 2024.

Other comprehensive income (loss). Our other comprehensive income increased from an income of NT\$5,058 million in 2023 to an income of NT\$9,322 million (US\$284 million) in 2024. We attributed this change primarily to the change in exchange differences on translation of foreign operations from a loss of NT\$2,000 million in 2023 to a gain of NT\$9,056 million (US\$276 million) in 2024, the change in share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss from a loss of NT\$71 million in 2023 to a gain of NT\$299 million (US\$9 million) in 2024. These gains were partially offset by the change of unrealized gain (loss) from equity instruments investments measured at fair value through other comprehensive income from a gain of NT\$5,287 million in 2023 to a loss of NT\$514 million (US\$16 million) in 2024, and a decrease in share of other comprehensive income of associates and joint ventures which will not be reclassified subsequently to profit or loss from a gain of NT\$1,519 million in 2023 to a gain of NT\$330 million (US\$10 million) in 2024.

Net income (loss) attributable to the shareholders of the parent. Due to the factors described above, our net income decreased by 18.3% from NT\$59,689 million in 2023 to NT\$48,779 million (US\$1,488 million) in 2024.

Comprehensive income (loss) attributable to the shareholders of the parent. Due to the factors described above, our comprehensive income decreased by 10.3% from NT\$64,747 million in 2023 to NT\$58,101 million (US\$1,772 million) in 2024.

Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

For the comparison of our operating results for the year ended December 31, 2023 to the year ended December 31, 2022, please refer to “Item 5. Operating and Financial Review and Prospects—Operating Results—Comparisons of Results of Operations—Year Ended December 31, 2023 Compared to Year Ended December 31, 2022” of our annual report on Form 20-F filed with the SEC on April 25, 2024.

B. Liquidity and Capital Resources

The foundry business is highly capital intensive. Our development over the past three years has required significant investments. Additional expansion for the future generally will continue to require significant cash for acquisition of plant and equipment to support increased capacities, particularly for the production of 12-inch wafers, although our expansion program will be adjusted from time to time in response to market conditions and customer demand. In addition, the semiconductor industry has historically experienced rapid changes in technology. To maintain competitiveness at the same capacity, we are required to make adequate investments in plant and equipment. In addition to our need for liquidity to support the substantial fixed costs of capacity expansion and the upgrading of our existing plants and equipment for new technologies, as we ramp up production of new plant capacity, we require significant working capital to support purchases of raw materials for our production and to cover variable operating costs such as labor costs until production yields provide sufficiently positive margins for a fabrication facility to produce operating cash flows.

Resource for Liquidity

We have financed our capital expenditure requirements in recent years from operating cash inflows, bank borrowings, as well as the issuance of corporate bonds. Operating cash inflows significantly exceed operating income, reflecting the significant non-cash depreciation expense.

As of December 31, 2024, we had NT\$105,000 million (US\$3,202 million) of cash and cash equivalents and NT\$606 million (US\$18 million) of current financial assets at fair value through profit or loss. Cash equivalents included time deposits with original maturities of three months or less and repurchase agreements collateralized by government bonds and corporate notes. These agreements bore interest rates ranging from 0.43% to 0.62%, 0.71% to 0.85% and 0.85% to 0.98%, in 2022, 2023 and 2024, respectively. The terms of these agreements were typically less than one month. As of December 31, 2022, 2023 and 2024, we held repurchase agreements in the amount of NT\$5,923 million, NT\$1,948 million and NT\$6,098 million (US\$186 million), respectively.

In mid-June 2014, we issued an aggregate principal amount of NT\$5,000 million of seven-year and ten-year domestic unsecured corporate bonds, with a denomination of NT\$1 million per bond. The seven-year domestic unsecured corporate bond was issued with an aggregate principal amount of NT\$2,000 million with an annual coupon bearing an interest rate of 1.7%. The ten-year domestic unsecured corporate bond was issued with an aggregate principal amount of NT\$3,000 million with an annual coupon bearing an interest rate of 1.95%. All the principal has been fully repaid. The proceeds of this bond offering were used for repayment of debts.

In late March 2017, we issued another five-year and seven-year domestic unsecured corporate bonds totaling NT\$8,300 million, with a face value of NT\$1 million per unit. The five-year domestic unsecured corporate bond was issued in the amount of NT\$6,200 million. Interest is due and payable annually at 1.15%, and the principal was repaid in March 2022. The seven-year domestic unsecured corporate bond was issued in the amount of NT\$2,100 million. Interest is due and payable annually at 1.43%, and the principal was repaid in March 2024. The proceeds of this bond offering were used for repayment of debts.

In early October 2017, we issued another five-year and seven-year domestic unsecured corporate bonds totaling NT\$5,400 million, with a face value of NT\$1 million per unit. The five-year domestic unsecured corporate bond was issued in the amount of NT\$2,000 million. Interest is due and payable annually at 0.94%, and the principal was repaid in October 2022. The seven-year domestic unsecured corporate bond was issued in the amount of NT\$3,400 million. Interest is due and payable annually at 1.13%, and the principal was repaid in October 2024. The proceeds of this bond offering were used for repayment of debts.

In late April 2021, we issued another five-year, seven-year and ten-year domestic unsecured corporate bonds totaling NT\$9,600 million, with a face value of NT\$1 million per unit. The five-year domestic unsecured corporate bond was issued in the amount of NT\$5,500 million. Interest is due and payable annually at 0.57%, and the principal will be repayable in April 2026 upon maturity. The seven-year domestic unsecured corporate bond was issued in the amount of NT\$2,000 million. Interest is due and payable annually at 0.63%, and the principal will be repayable in April 2028 upon maturity. The ten-year domestic unsecured corporate bond was issued in the amount of NT\$2,100 million. Interest is due and payable annually at 0.68%, and the principal will be repayable in April 2031 upon maturity. The proceeds of this bond offering were used for purchasing machinery and equipment and environmental protection related expenditures. As of December 31, 2024, NT\$9,600 million aggregate principal amount of these bonds were outstanding.

In early July 2021, we issued zero coupon exchangeable bonds due 2026. The exchangeable bond offerings consist of US\$400 million bonds exchangeable into common shares of Novatek Microelectronics Corp., Ltd., or Novatek. As of December 31, 2024, no bonds had been exchanged into common shares of Novatek and we had repurchased and cancelled the outstanding principal amount of exchangeable bonds totaling US\$187 million in 2022.

In mid-December 2021, we issued another five-year domestic unsecured corporate bonds totaling NT\$5,000 million, with a face value of NT\$1 million per unit. Interest is due and payable annually at 0.63%, and the principal will be repayable in December 2026 upon maturity. The proceeds of this bond offering were used for purchasing machinery and equipment. As of December 31, 2024, NT\$5,000 million aggregate principal amount of these bonds were outstanding.

In mid-September 2023, we issued another five-year domestic unsecured corporate bonds totaling NT\$10,000 million, with a face value of NT\$1 million per unit. Interest is due and payable annually at 1.62%, and the principal will be repayable in September 2028 upon maturity. The proceeds of this bond offering were used for green building. As of December 31, 2024, NT\$10,000 million aggregate principal amount of these bonds were outstanding.

Operating Activities

In 2024, net cash provided by operating activities was NT\$93,872 million (US\$2,863 million), primarily due to net income before income tax of NT\$57,045 million (US\$1,740 million) and the add-back of non-cash items, such as depreciation and amortization in the amount of NT\$48,168 million (US\$1,469 million).

In 2023, net cash provided by operating activities was NT\$86,000 million, primarily due to net income before income tax of NT\$68,450 million and the add-back of non-cash items, such as depreciation and amortization in the amount of NT\$40,484 million.

In 2022, net cash provided by operating activities was NT\$145,861 million, primarily due to net income before income tax of NT\$109,626 million and the add-back of non-cash items, such as depreciation and amortization in the amount of NT\$44,170 million.

Investing Activities

In 2024, net cash used in investing activities was NT\$85,941 million (US\$2,621 million), primarily due to cash used for acquisition of property, plant and equipment amounting to NT\$88,544 million (US\$2,700 million).

In 2023, net cash used in investing activities was NT\$97,787 million, primarily due to cash used for acquisition of property, plant and equipment amounting to NT\$91,474 million and net increase of financial assets measured at amortized cost amounting to NT\$5,617 million.

In 2022, net cash used in investing activities was NT\$54,427 million, primarily due to cash used for acquisition of property, plant and equipment amounting to NT\$80,128 million and partially offset by net decrease of financial assets measured at amortized cost amounting to NT\$28,497 million.

Financing Activities

In 2024, net cash used in financing activities was NT\$39,200 million (US\$1,195 million), primarily due to NT\$37,586 million (US\$1,146 million) for cash dividend payment.

In 2023, net cash used in financing activities was NT\$29,086 million, primarily due to NT\$45,015 million for cash dividend payment and NT\$21,209 million for payment of other financial liabilities, partially offset by NT\$17,388 million due to net increase in bank loans, NT\$10,423 million due to net increase in guarantee deposits and NT\$9,989 million due to bonds issued.

In 2022, net cash used in financing activities was NT\$57,255 million, primarily due to NT\$37,445 million for cash distributed from additional paid-in capital and net decrease of bank loans of NT\$20,782 million.

We had bonds payable of NT\$30,052 million (US\$916 million) in the aggregate as of December 31, 2024.

The following table sets forth our outstanding long-term bank loans as of December 31, 2024:

	Unsecured long-term bank loans <small>(in NT\$ millions)</small>	Secured long-term bank loans <small>(in US\$ millions)</small>	Secured long-term bank loans <small>(in NT\$ millions)</small>	Secured long-term bank loans <small>(in US\$ millions)</small>
Due in 2025	2,462	75	3,066	94
Due in 2026	2,891	88	2,577	79
Due in 2027	2,642	80	2,098	64
Due in 2028	5,312	162	1,916	58
Due in 2029	12,597	384	824	25
Due in 2030 & thereafter	53	2	39	1

The interest rates of our long-term bank loans range from 1.53% to 5.49%.

As of December 31, 2024, the current or exchangeable portion of bonds due within one year was NT\$5,467 million (US\$167 million), and the current portion of long-term bank loans due within one year was NT\$5,528 million (US\$169 million).

Capital Expenditures

We will continue to employ a ROI-driven approach in our capital expenditure planning as our expansion projects will be supported by customers who have signed multi-year supply agreements with us. As of December 31, 2024, our construction contracts amounted to NT\$70,946 million (US\$2,164 million) and the portion of the contracts not yet recognized was approximately NT\$15,220 million (US\$464 million). In 2022, 2023 and 2024, we incurred capital expenditures of approximately NT\$82,420 million, NT\$94,087 million and NT\$91,052 million (US\$2,777 million), respectively, primarily to purchase equipment for research and development and production at our fabs.

During April 2021, we announced an expansion of 300mm Fab 12A Phase 6 (P6) in Taiwan's Southern Taiwan Science Park through a collaboration model where the program is supported by customers' multi-year product alignment. As part of the agreement, these customers will provide us with a loading protection mechanism to ensure that P6 fab utilization rates will be maintained at healthy levels. In addition, on February 24, 2022, our board of directors approved a plan to build a new advanced manufacturing facility next to its existing 300mm fab (Fab12i) in Singapore. The first phase of this greenfield fab will enter production ramp in January 2026. The new fab (Fab12i P3) will provide 28nm and 22nm process technologies.

Contractual Obligations

Our material cash requirement for known contractual obligation came from bonds, loans, lease obligation, commitment for purchase obligations, the guarantee deposits and financial liability for the repurchase of other investors' investments. As of December 31, 2024, the total contractual cash obligations, including the amounts which has yet been recorded on our balance sheet as of December 31, 2024, are NT\$207,814 million, among which NT\$78,050 million will be due within one year and NT\$129,764 million will be due after one year.

In addition, as part of the normal course of business, we have entered into multi-year contract to purchase renewable energy. We will purchase more than 30 billion kilowatt-hours of Offshore Wind Power over least 30 years. The amounts to be paid under this contract will be based on the actual volumes of electricity to be generated by the power generation equipment specified in the contract. Our payment obligations under this contract are not readily determinable.

Transactions with Related Parties

See "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions" and Note 7 to our audited consolidated financial statements included in this Annual Report.

C. Research, Development, Patents and Licenses

The semiconductor industry is characterized by rapid changes in technology, frequently resulting in obsolescence of process technologies and products. As a result, effective research and development is essential to our success. We invested approximately NT\$12,953 million, NT\$13,284 million and NT\$15,616 million (US\$476 million) in 2022, 2023 and 2024, respectively, in research and development, which represented 4.6%, 6.0% and 6.7%, respectively, of operating revenues for such years. Following our operation and development planning, our IP division has formulated strategies and plans for the protection and development of intellectual property to promote the steady growth of the number of patent rights. Status on the implementations is reported to the board of directors at least once a year. We were granted a total of 364 domestic and foreign patents in 2024, 251 of which are US patents, 29 ROC (Taiwan) patents, 61 China patents, and 23 patents from the rest of the world. The total accumulated number of our patents is 15,560, which can provide a thorough and strong IP foundation for our technologies.

Our current research and development activities seek to optimize the use of available capacity by developing specialty technology platforms into existing technology nodes. Although we emphasize firm-wide participation in the research and development process, we maintain central research and development teams primarily responsible for developing cost-effective technologies that can serve the manufacturing needs of our customers. We believe we have a strong foundation in research and development and intend to continue our efforts on technology developments. Our management believes in the value of continued support of research and development efforts and intends to continue our foundry position by providing customers with comprehensive technology solutions in the industry.

D. Trend Information

Please refer to "Item 5. Operating and Financial Review and Prospects—Overview" for a discussion of the most significant recent trends in our production, sales, costs and selling prices. In addition, please refer to discussions included in this Item 5 for a discussion of known trends, uncertainties, demands, commitments and events that we believe are reasonably likely to have a material effect on our operating revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information not necessarily to be indicative of future operating results or financial condition.

E. Critical Accounting Estimates

Please refer to Note 5 to our audited consolidated financial statements included elsewhere in this Annual Report.

ITEM 6 DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth the name, age, position, tenure and biography of each of our directors and executive officers as of March 31, 2025. There is no family relationship among any of these persons.

The business address of our directors and executive officers is the same as our registered address.

Name	Age	Position	Year(s) with Us
Stan Hung	64	Chairman, Director and Chief Strategic Officer	33
SC Chien	67	Co-president and Director (Representative of Hsun Chieh Investment Co., Ltd.)	36
Jason Wang	62	Co-president and Director (Representative of Silicon Integrated Systems Corp.)	17
Lih J. Chen ⁽¹⁾	78	Independent Director	7
Jyuo-Min Shyu ⁽¹⁾	71	Independent Director	7
Kuang Si Shiu ⁽¹⁾	73	Independent Director	4
Wen-Shin Hsu ⁽¹⁾	48	Independent Director	4
Ling-Ling Wu ⁽¹⁾	60	Independent Director	1
Su Lin Wang ⁽¹⁾	63	Independent Director	1
Chitung Liu	59	Chief Financial Officer, Senior Vice President and Head of Corporate Governance	24

(1) Member of the audit committee and remuneration committee.

Stan Hung is a director, Chief Strategic Officer and the Chairman of our company. Mr. Hung was our chief financial officer and senior vice president from 2000 to 2007. He was also the Chairman of ITE TECH. INC. from 2007 to 2008 and a director of EPISTAR Corporation from 2007 to 2016. Prior to re-joining United Microelectronics Corporation in 1991, Mr. Hung was a financial manager at Optoelectronics Corporation. He is also the chairman and strategic officer of Faraday Technology Corporation and Silicon Integrated Systems Corp., the chairman of Fortune Venture Capital Corp., TLC Capital Co. Ltd., UMC Capital Corp., the director & legal representative of SiS Semiconductor (Shandong) Co., Ltd. and UnitedDS Semiconductor (Shandong) Co., Ltd., a director of Triknight Capital Corporation and United Microelectronics (Europe) B.V. Mr. Hung received a bachelor's degree in accounting from Tam Kang University in 1982.

SC Chien is a director and the President of our company. Mr. Chien joined UMC in 1989 and has been responsible for overseeing departments involved in advanced technology development, specialty technology development and customer engineering. Mr. Chien is a representative institutional director for Hsun Chieh Investment Co., Ltd. and he is also a director of Fortune Venture Capital Corp., TLC Capital Co., Ltd., Unimicron Technology Corp., UMC Capital Corp and Wavetek Microelectronics Corporation. Mr. Chien received a bachelor's degree in chemical engineering from National Taiwan University.

Jason Wang is a director and the President of our company. Mr. Wang is a representative institutional director for Silicon Integrated Systems Corp. and has also served on the board of directors of UMC GROUP (USA) since 2004. Mr. Wang joined UMC as Vice President of Corporate Marketing in 2008, and from 2009 to 2014, served as President of UMC GROUP (USA) responsible for business operation efficiency enhancement and UMC North America strategic business development. Mr. Wang is also a director of Fortune Venture Capital Corp., TLC Capital Co., Ltd., United Microelectronics (Europe) B.V., UMC Capital Corp., United Microtechnology Corporation (California) and eJoule International Limited. Mr. Wang did his undergraduate study in Business Administration at San Jose State University.

Lih J. Chen is an independent director of our company. Professor Chen is the Distinguished Chair Professor of National Tsing Hua University and an Academician at Academia Sinica. He was also the President of National Tsing Hua University and the Deputy Ministers of National Science Council. Professor Chen received a Ph.D. degree in physics from University of California, Berkeley in 1974.

Jyuo-Min Shyu is an independent director of our company. Dr. Shyu is an Emeritus Professor at National Tsing Hua University. He was also the Minister of Ministry of Science and Technology and the President of Industrial Technology Research Institute. Dr. Shyu is also an independent director of Qisda Corporation and Far EasTone Telecommunications Co., Ltd., as well as a director of Iridium Medical Technology Co., Ltd, GeoThings, Inc. and Alpha Ring Asia Inc. Professor Shyu received a Ph.D. degree in Electrical Engineering and Computer Science from University of California, Berkeley in 1988.

Kuang Si Shiu is an independent director of our company. Mr. Shiu is also an independent director of Yuanta Financial Holdings Co., Ltd. and Yuanta Commercial Bank Co., Ltd, a director of Cannan Cilai Co., Ltd., as well as a supervisor of The Promised Land Foundation, Yu Cheng Investment Co., Ltd. and Ti Mo Tai Investment Co., Ltd. Mr. Shiu served in financial institutions for over 30 years, and he was also formerly the chairman and president of Mega Financial Holding Co., Ltd. and Mega International Commercial Bank Co., Ltd., chairman of Hua Nan Financial Holdings Co., Ltd., Hua Nan Commercial Bank Ltd. and Land Bank of Taiwan Co., Ltd. Mr. Shiu received a MBA degree in Indiana University in 1978.

Wen-Shin Hsu is an independent director of our company. Professor Hsu is a professor at the Department of Accounting at National Taiwan University. Professor Hsu is the Director of Global MBA in National Taiwan University from 2019, and Associate Dean of International affairs of College of Management School in National Taiwan University from 2020. Professor Hsu concurrently serves as an independent director of Unitech Printed Circuit Board Corp., and ANT Precision Industry Co., Ltd., also the Senior Executive Vice President and Chief Financial Officer of Chunghwa Telecom Co., Ltd. Professor Hsu received a Ph.D. degree in Accounting & Finance from Lancaster University in 2006.

Ling-Ling Wu is an independent director of our company. Professor Wu is a professor at the Department of Information Management at National Taiwan University. Professor Wu was an independent director of Faraday Technology Corp., Unimicron Technology Corp., ITE Technology Inc., Crystalwise Technology Inc and Hycon Technology Corp. Professor Wu received a Ph.D. degree in Psychology from University of Chicago in 1995.

Su Lin Wang is an independent director of our company. Mrs. Wang is an Adjunct Specialist Professor at Institute of International Business at National Cheng Kung University and concurrently serves as an independent director of Jess-Link products Co., Ltd. and AVerMedia Technologies, Inc., also the President of MAYO Human Capital Inc. Mrs. Wang was Senior Vice President & Corp. CFO of Delta Electronics., Inc. During her service period, Mrs. Wang assisted to spin off the group's business unit into an independent subsidiary and to list the company in Hong Kong Stock Exchange. She also established a matrix management organization to enable regional units and business units to collaborate and improve operational performance. Mrs. Wang received a Master in Finance of National Taiwan University in 2004.

Chitung Liu is the Chief Financial Officer and the Senior Vice President of our company. On March 6, 2019, Mr. Chitung Liu was appointed as our Head of Corporate Governance. Prior to joining our company in 2001, Mr. Liu was a managing director of UBS. Mr. Liu is the chairman of Hejian Technology (Suzhou) Co., Ltd., United Semiconductor (Xiamen) Co., Ltd. and a director of Fortune Venture Capital Corp., TLC Capital Co., Ltd., Unimicron Technology Corp., Yann Yuan Investment Co., Ltd., UMC Group (USA), Green Earth Limited, ECP Vita Pte. Ltd., UMC Capital Corp. and United Microchip Corporation. Mr. Liu received an executive MBA degree from National Taiwan University in 2009.

B. Compensation

The aggregate compensation paid and benefits in kind granted to our directors in 2024 were approximately NT\$49 million (US\$1.5 million). The remuneration was out of our 2024 earnings distribution plan, and the distribution percentage for directors is 0.1%. See "Item 10. Additional Information—B. Memorandum and Articles of Association—Dividends and Distributions." Some of the remuneration was paid to the legal entities that certain directors represent. The aggregate compensation paid and benefits in kind granted to our executive officers in 2024 were approximately NT\$1,230.4 million (US\$37.5 million), which include NT\$482 million (US\$14.7 million) as bonus. The aggregate compensation paid and benefits in kind granted to our directors and senior management in 2024 were approximately NT\$1,279.4 million (US\$39 million), which include NT\$482 million (US\$14.7 million) as bonus.

C. Board Practices

All of our directors were elected in May 2024 for a term of three years at our annual general meeting of shareholders. Neither we nor any of our subsidiaries has entered into a contract with any of our directors by which our directors are expected to receive benefits upon termination of their services.

Audit Committee

Our board of directors established an audit committee in March 2005. In the annual general meeting held on June 13, 2008, we amended our articles of incorporation to introduce the mechanism of an audit committee. See "Item 10. Additional Information—B. Memorandum and Articles of Association—Directors". After the re-election of directors in the annual general meeting on May 30, 2024, our board of directors appointed Lih J. Chen, Jyuo-Min Shyu, Kuang Si Shiu, Wen-Shin Hsu, Ling-Ling Wu and Su Lin Wang to be members of the audit committee. Each audit committee member is an independent director who is financially literate with accounting or related financial management expertise. The audit committee meets as often as it deems necessary to carry out its responsibilities. Pursuant to an audit committee charter, the audit committee has responsibility for, among other things, overseeing the qualifications, independence and performance of our internal audit function and independent auditors, and overseeing the accounting policies and financial reporting and disclosure practices of our company. The audit committee also has the authority to engage special legal, accounting or other consultants it deems necessary in the performance of its duties.

Remuneration Committee

The R.O.C. Securities and Exchange Act, as amended on November 24, 2010, further introduced the mechanism of a "Remuneration Committee," which requires publicly listed companies in the R.O.C., including our company, to adopt a remuneration committee. Pursuant to the Regulations Governing the Establishment and Exercise of Powers by Remuneration Committees of Public Companies, the remuneration committee shall be composed of no less than three members commissioned by the board of directors. In addition, for a company with independent directors, such as us, at least one of the remuneration committee members shall be an independent director. We established a remuneration committee in accordance with Article 14-6 of the R.O.C. Securities and Exchange Act on April 27, 2011. We amended our articles of incorporation to implement the mechanism of our remuneration committee during the annual general meeting held on June 15, 2011. After the re-election of directors in the annual general meeting on May 30, 2024, our board of directors appointed Lih J. Chen, Jyuo-Min Shyu, Kuang Si Shiu, Wen-Shin Hsu, Ling-Ling Wu and Su Lin Wang to serve as members of the remuneration committee.

Pursuant to applicable SEC rules and NYSE listing standards, we as a foreign private issuer are required to disclose any significant ways in which our corporate governance practices differ from those followed by NYSE-listed U.S. domestic companies under the NYSE's listing standards. A copy of the significant differences between our corporate governance practices and NYSE corporate governance rules applicable to U.S. companies is available on our website http://www.umc.com/upload/media/08_Investors/Corporate_Governance/Corporate_Governance/The_differences_between_the_UCMs_corporate_governance_practices_and_those_required_of_domestic_companies_under_NYSE_listing_standards_20190306.pdf.

Nominating Committee

Our board of directors established a nominating committee in December 2017. Our nominating committee consists of Lih J. Chen, Jyuo-Min Shyu, Kuang Si Shiu, Wen-Shin Hsu, Ling-Ling Wu and Su Lin Wang, each of whom is an independent director. The nominating committee is to assist the board to enhance the management mechanism and improve corporate governance for our sustainable development. The objectives of our nominating committee include: (i) to constitute the nomination policy and succession plans of the directors and the executives, and to review and propose the candidate list of the directors and the executives accordingly, (ii) to construct and to develop the operation of our board and the board committees, as well as to plan and assess the performance of the board, the board committees and the executives, and (iii) to enhance the corporate governance system and practices in order to protect the interests of our shareholders.

D. Employees

As of December 31, 2024, we had 19,016 employees, which included 12,128 engineers, 6,057 technicians and 831 administrative staff performing administrative functions on a consolidated basis, where a majority of the employees work from our Taiwan R.O.C. offices and facilities. We have in the past implemented, and may in the future evaluate the need to implement, labor redundancy plans based on the work performance of our employees.

	Years Ended December 31,		
	2022	2023	2024
Employees			
Engineers	12,390	12,336	12,128
Technicians	7,461	6,662	6,057
Administrative Staff	829	835	831
Total	20,680	19,833	19,016

Employee salaries are reviewed annually. Salaries are adjusted based on industry standards, inflation and individual performance. As an incentive, additional bonuses in cash may be paid at the discretion of management based on the performance of individuals. In addition, except under certain circumstances, R.O.C. law requires us to reserve from 10% to 15% of any offerings of our new common shares for employees' subscription.

Our employees participate in our profit distribution pursuant to our articles of incorporation. Employees are entitled to receive additional bonuses based on a certain percentage of our allocable surplus income. On February 26, 2025, our board of directors proposed an employee bonus in cash in the aggregate amount of NT\$4,509.6 million (US\$137.5 million) in relation to retained earnings in 2024.

Our employees are not covered by any collective bargaining agreements. We believe we have a good relationship with our employees.

E. Share Ownership

As of March 31, 2025, each of our directors and executive officers held common shares and/or ADSs of UMC, either directly for their own account or indirectly as the representative of another legal entity on our board of directors, except for our independent directors Lih J. Chen, Jyuo-Min Shyu, Kuang Si Shiu, Wen-Shin Hsu, Ling-Ling Wu and Su Lin Wang. As of March 30, 2025, our most recent record date, Hsun Chieh Investment Co., Ltd. held approximately 441 million of our common shares, representing approximately 3.51% of our issued and outstanding share capital; Silicon Integrated Systems Corp. held approximately 267 million of our common shares, representing approximately 2.12% of our issued and outstanding share capital; and Chairman Mr. Hung held approximately 59 million of our common shares, representing approximately 0.47% of our issued and outstanding share capital.

F. Disclosure of a registrant's action to recover erroneously awarded compensation.

On October 25, 2023, the remuneration committee of our board of directors approved an Incentive Based Compensation Clawback Policy providing for the Company's recoupment of recoverable incentive compensation that is received by covered Officers of the Company under certain circumstances, in compliance with Section 10D of the Exchange Act, Rule 10D-1 promulgated thereunder and NYSE Section 303A.14. See Exhibit 97.1 to this Annual Report. The Company has not recouped compensation, or attempted to recoup compensation, from any employee to date.

ITEM 7 MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth information known to us with respect to the beneficial ownership of our common shares as of (i) March 30, 2025, our most recent record date, and (ii) as of certain record dates in each of the preceding two years, for (1) the shareholders known by us to beneficially own more than 2% of our common shares and (2) all directors and executive officers as a group. Beneficial ownership is determined in accordance with SEC rules.

Name of Beneficial Owner	As of April 2, 2023	As of April 1, 2024	As of March 30, 2025	
	Number of common shares beneficially owned			
Capital Tip Customized Taiwan Select High Dividend ETF	0.01%	2.48%	774,212,000	6.16%
Hsun Chieh Investment Co., Ltd. ⁽¹⁾	3.53%	3.52%	441,371,000	3.51%
Silicon Integrated Systems Corp.	2.13%	2.13%	266,580,424	2.12%
Directors and executive officers as a group	6.83%	6.86%	860,094,456	6.85%

(1) 36.49% owned by United Microelectronics Corporation as of March 31, 2025.

None of our major shareholders have different voting rights from those of our other shareholders. To the best of our knowledge, we are not directly or indirectly controlled by another corporation, by any foreign government or by any other natural or legal person severally or jointly.

For information regarding our common shares held or beneficially owned by persons in the United States, see "Item 9. The Offer and Listing—A. Offer and Listing Details—Market Price Information for Our American Depository Shares" in this Annual Report.

B. Related Party Transactions

From time to time we have engaged in certain transactions with our affiliates. The sales and purchase prices with related parties are determined through mutual agreement in reference to market conditions.

The following table shows our aggregate equity ownership interest, on a consolidated basis, in major related fabless design companies that we enter into transactions from time to time as of March 30, 2025.

Name	Ownership %
Silicon Integrated Systems Corp.	17.99
Faraday Technology Corp.	13.80

We provide foundry services to these fabless design companies and the sales price was determined through arms-length negotiation and mutual agreement in reference to market conditions. We generated total of NT\$5,784 million, NT\$3,022 million and NT\$3,611 million (US\$110 million) of our operating revenues in 2022, 2023 and 2024, respectively, from the provision of our foundry services to these two companies. For more information of related party transactions, please refer to Note 7 to our audited consolidated financial statements included in this Annual Report.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8 FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

Please refer to Item 18 for a list of all financial statements filed as part of this Annual Report on Form 20-F.

Legal and Administrative Proceedings

We may, from time to time, become a party to various legal or administrative proceedings arising in the ordinary course of our business.

On August 31, 2017, the Taichung District Prosecutors Office indicted us based on the Trade Secret Act of R.O.C., alleging that our employees misappropriated the trade secrets of Micron Technology, Inc., or Micron, and of Micron Memory Taiwan Co., Ltd. On June 12, 2020, an adverse ruling issued by the District Court of Taichung in a suit alleged that we, two of our current employees and a former employee engaged in the misappropriation of trade secrets. We appealed against the sentence. On November 26, 2021, we and Micron announced a settlement agreement between the two companies for all legal proceedings worldwide (the “Settlement Agreement”). Accordingly, Micron submitted a motion to withdraw the case. On January 27, 2022, the Intellectual Property and Commercial Court announced its ruling of this case and we were sentenced to a fine of NT\$20 million, subject to a two-year term of probation. On January 27, 2024, we completed the probation period successfully and the sentence has been terminated.

On December 5, 2017, Micron filed a civil action with similar cause against us with the United States District Court, Northern District of California. Micron claimed entitlement to the actual damages, treble damages and relevant fees and requested the court to issue an order that enjoins us from using its trade secrets in question. In accordance with the Settlement Agreement, the court issued a dismissal of the case with prejudice in January 2022.

On January 12, 2018, we filed three patent infringement actions with the Fuzhou Intermediate People’s Court against, among others, Micron (Xi'an) Co., Ltd. and Micron (Shanghai) Trading Co., Ltd., requesting the court to order the defendants to stop manufacturing, processing, importing, selling, and committing to sell the products deploying the infringing patents in question, and to destroy all inventories and related molds and tools. On July 3, 2018, the Fuzhou Intermediate People’s Court granted preliminary injunction against the aforementioned two defendants, holding that the two defendants must immediately cease to manufacture, sell, and import products that infringe our patent rights. The court approved withdrawal of one of the patent infringement actions on our motion while the other two actions are still on trial. In accordance with the Settlement Agreement, we submitted a motion to withdraw the case and the application for injunctive procedure. On March 28, 2024, the court approved our withdrawal of actions and the application for injunctive procedure.

The amounts of aforementioned fine from ruling of the Intellectual Property and Commercial Court and the worldwide settlement between us and Micron were recorded in non-operating other losses and have no material financial and operational effect on our business for the years presented.

Other than the abovementioned legal proceedings, we are not currently involved in any litigation or other proceedings that may have, or have had in the recent past, significant effects on our financial position or profitability.

Dividend Policy

As for our policy on dividend distributions, see “Item 10. Additional Information—B. Memorandum and Articles of Association—Dividends and Distributions.” On June 12, 2018, our shareholders approved a cash dividend of NT\$0.7 per common share for an aggregate of NT\$8,557,023,101. On June 12, 2018, our board of directors resolved to adjust the cash dividend ratio to NT\$0.71164307 per common share because the number of outstanding common shares had changed as a result of our repurchase of treasury common shares. On June 12, 2019, our shareholders approved a cash dividend of NT\$0.58 per common share for an aggregate of NT\$6,916,104,855. On June 19, 2019, our board of directors resolved to adjust the cash dividend ratio to NT\$0.58989396 per common share because the number of outstanding common shares had changed as a result of our repurchase of treasury common shares. On June 10, 2020, our shareholders approved a cash dividend of NT\$0.75 per common share for an aggregate of NT\$9,765,154,720. On June 29, 2020, our board of directors resolved to adjust the cash dividend ratio to NT\$0.80395653 per common share because the number of outstanding common shares had changed as a result of our repurchase of treasury common share and the conversion of convertible bonds. On July 7, 2021, our shareholders approved a cash dividend of NT\$1.60 per common share for an aggregate of NT\$19,875,842,389. On July 7, 2021, our board of directors resolved to adjust the cash dividend ratio to NT\$1.59988820 per common share because the number of outstanding common shares had changed as a result of cancellation and issuance of Restricted Stock Awards. On May 27, 2022, our shareholders approved to distribute cash from additional paid-in capital of NT\$3.0 per common share for an aggregate of NT\$37,446,370,452. On May 31, 2023, our shareholders approved a cash dividend of NT\$3.60 per common share for an aggregate of NT\$45,017,096,342. On June 7, 2023, our board of directors resolved to adjust the cash dividend ratio to NT\$3.60046348 per common share because the number of outstanding common shares had changed as a result of cancellation of Restricted Stock Awards. On May 30, 2024, our shareholders approved a cash dividend of NT\$3.0 per common share for an aggregate of NT\$37,587,101,925. On June 12, 2024, our board of directors resolved to adjust the cash dividend ratio to NT\$3.00011747 per common share because the number of outstanding common shares had changed as a result of cancellation of Restricted Stock Awards. On February 26, 2025, our board of directors proposed dividends of NT\$35,787,597,878 (approximately NT\$2.85 per common share), which are expected to be approved at our annual general meeting on May 28, 2025.

The following table sets forth the cash dividends per share and stock dividends per share as a percentage of common shares outstanding paid during each of the years indicated in respect of common shares outstanding at the end of each such year, except as otherwise noted.

	<u>Cash Dividend per Share</u> NT\$	<u>Stock Dividend per Share</u> NT\$	<u>Total Number of Common Shares Issued as Stock Dividend</u>	<u>Number of Outstanding Common Shares at Year End</u>
2016	0.56501906	—	—	12,624,318,715
2017	0.50	—	—	12,624,318,715
2018	0.71164307	—	—	12,424,318,715
2019	0.58989396	—	—	11,724,318,715
2020	0.80395653	—	—	12,422,401,493
2021	1.59988820	—	—	12,483,247,566
2023	3.60046348	—	—	12,529,822,160
2024	3.00011747	—	—	12,560,716,404

- (1) We declare stock dividends in an NT dollar amount per share, but we pay the stock dividends to our shareholders in the form of common shares. The amount of common shares distributed to each shareholders is calculated by multiplying the dividend declared by the number of common shares held by the given shareholders, divided by the par value of NT\$10 per share. Fractional common shares are not issued but are paid in cash.

B. Significant Changes

For the significant subsequent events following the close of the last financial year up to the date of this Annual Report on Form 20-F, please refer to Note 10 to our audited consolidated financial statements included elsewhere in this Annual Report.

ITEM 9 THE OFFER AND LISTING

A. Offer and Listing Details

Market Information for Our Common Shares

Our common shares have been listed on the Taiwan Stock Exchange under the symbol “2303” since July 1985. There is no public market outside Taiwan for our common shares.

Market Information for Our American Depository Shares

Our ADSs have been listed on the NYSE under the symbol “UMC” since September 19, 2000. The outstanding ADSs are identified by the CUSIP number 910873405. Each of our ADSs represents the right to receive five common shares.

As of March 31, 2025, there were a total of 86,635,010 ADSs listed on the NYSE. With certain limited exceptions, holders of common shares who are not R.O.C. persons are required to hold these common shares through a brokerage or custodial account in the R.O.C. As of March 31, 2025, 433,175,050 common shares were registered in the name of a nominee of JPMorgan Chase & Co., the depositary under the deposit agreement. JPMorgan Chase & Co. has advised us that, as of March 31, 2025, 86,619,609 ADSs representing these 433,098,045 common shares were held of record by Cede & Co., and 15,401 ADSs were held by U.S. registered shareholders. We have no further information as to common shares held or beneficially owned by U.S. persons.

B. Plan of Distribution

Not applicable.

C. Markets

The principal trading markets for our common shares are the Taiwan Stock Exchange and the New York Stock Exchange, on which our common shares trade in the form of ADSs.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10 ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

The following statements summarize the material elements of our capital structure and the more important rights and privileges of shareholders conferred by the R.O.C. law and our articles of incorporation.

Objects and Purpose

The scope of business of UMC as set forth in Article 2 of our articles of incorporation, includes, among others, (i) integrated circuits; (ii) semiconductor parts and components; (iii) parts and components of microcomputers, microprocessors, peripheral support and system products; (iv) parts and components of semiconductor memory systems products; (v) semiconductor parts and components for digital transceiver product and system products; (vi) semiconductor parts and components for telecom system and system products; (vii) testing and packaging of integrated circuits; (viii) mask production; (ix) metals, derived fuels and chemical products generated simultaneously from our manufacturing process; (x) management consulting service in regard to sustainable development, energy/resources conservation technologies and semiconductor fab related affairs; (xi) clearance, recycle and disposal of waste and manufacturing outputs; research and development, design, production, sales, promotion and after-sale services related to our business; and (xii) export/import trade related to our business.

Directors

The R.O.C. Company Act and our articles of incorporation provide that our board of directors is elected by shareholders and is responsible for the management of our business. As of March 31, 2025, our board of directors consisted of nine directors, out of which six are independent directors. In the annual general meeting held on June 11, 2007, we amended our articles of incorporation to abolish the managing director mechanism. In the annual general meeting held on June 13, 2008, we amended our articles of incorporation to introduce the mechanism of an audit committee. The Chairman presides at all meetings of our board of directors, and also has the authority to represent our company. The term of office for our directors is three years, and our directors are elected by our shareholders by means of cumulative voting. The amendment to our articles of incorporation on June 11, 2007 also adopts a nomination system which provides that holders of one percent or more of the issued and outstanding shares of our company would be entitled to submit a roster of candidates to be considered for nomination to our company's board of directors at an annual general meeting involving the election of directors. Pursuant to the R.O.C. Company Act, entity that owns our common shares may be elected as a director, in which case a natural person must be designated to act as the legal entity's representative. A legal entity that is our shareholder may designate its representative to be elected as our director on its behalf. In the event several representatives are designated by the same legal entity, any or all of them may be elected. A director who serves as the representative of a legal entity may be removed or replaced at any time at the discretion of such legal entity, and the replacement director may serve the remainder of the term of office of the replaced director. As of March 31, 2025, two of our nine directors are representatives of other legal entities, as shown in "Item 6. Directors, Senior Management and Employees—A. Directors and Senior Management."

According to the R.O.C. Company Act and the rules promulgated under the R.O.C. Securities and Exchange Act, a director who has a personal interest in a matter to be discussed at the meeting of the board of directors, shall explain the essential contents of such personal interest in the meeting of the board of directors. Moreover, where the spouse, a blood relative within the second degree of kinship of a director, or any company which has a controlling or subordinate relation with a director has interests in a matter to be discussed at the meeting of the board of directors, such director shall be deemed to have a personal interest in the matter. In case that such personal interest may impair the interests of us, such director shall abstain from joining the discussion and voting on such matter. In case that such director is the representative designated by a legal entity shareholder to be elected as our director and such legal entity shareholder has personal interest in the matter to be discussed at the meeting of the board of directors, the rules above mentioned shall also apply. Our articles of incorporation provide that our board of directors is authorized, by taking into account of the extent of his/her/its involvement of our operation activities and the value of his/her/its contribution, to determine the compensation for each director at a comparable rate adopted by other companies of the same industry regardless of the profit received by our company. In addition, according to our articles of incorporation, we may distribute a maximum of 0.2% of the annual profits before tax as remuneration to directors. Please refer to “—Dividends and Distributions” in this item below for more details. Our articles of incorporation do not impose a mandatory retirement age limit for our directors. Furthermore, our articles of incorporation do not impose a shareholding qualification for each director, while the laws and regulations require the aggregate shareholding of all directors, excluding independent directors, to meet certain thresholds considering the paid-in capital and the numbers of the independent directors. According to our current internal Loan Procedures, we shall not extend any loan to our directors.

In order to strengthen corporate governance of companies in Taiwan, effective from January 1, 2007, the amended R.O.C. Securities and Exchange Act authorizes the R.O.C. FSC, after considering certain factors, including the scale, shareholding structure and business nature of a public company, to require that a public company, such as our company, meet certain criteria, including having at least two independent directors but not less than one fifth of the total number of directors.

In addition, pursuant to the R.O.C. Securities and Exchange Act, a public company is required to either establish an audit committee, or retain supervisors, provided that the R.O.C. FSC may, after considering the scale and business nature of a public company and other necessary situation, require the company to establish an audit committee in place of its supervisors. We have amended our articles of incorporation in the annual general meeting held on June 13, 2008, introducing the mechanism of an audit committee. On February 20, 2013, the R.O.C. FSC has ruled that a public company with certain scale or of certain business nature, including us, shall establish an audit committee instead of the supervisors. According to our articles of incorporation and audit committee charter, our audit committee is composed of all independent directors and performs the power and duties provided by applicable laws and regulations, including without limitation the powers and the duties of supervisors provided under the R.O.C. Company Act. A company is not allowed to maintain both supervisors and an audit committee, so we chose to eliminate our supervisors when we established our audit committee in 2009.

According to our current articles of incorporation, we may purchase directors and officers liability insurance for our directors, covering the liabilities incurred in relation to his/her/its operation of business and legally responsible for.

Common Shares

As of December 31, 2024, our authorized share capital was NT\$260 billion, divided into 26 billion common shares, of which 12,560,716,404 common shares were issued and outstanding. All common shares presently issued are fully paid and in registered form, and existing shareholders are not subject to any capital calls. We do not have any outstanding warrants or option to purchase our common shares.

Restricted Share Awards & Employee Compensation Program

To retain our employees, we issue equity-based compensation to the selected employees and management. The restricted shares will be awarded to if the financial performance meets (i) return on equity (ROE%) and (ii) operating margin (OM%) criteria set forth in the Restricted Stock Awards Program.

The return on equity (ROE%) and operating margin (OM%) are used as performance indicators for the operational goals of the Company. The performance target for the two indicators are listed below, which shall be simultaneously fulfilled. Determination of fulfillment of the indicators will be based on the consolidated financial statements, audited by a certified public accountant, for the last fiscal year prior to the end of each vesting period.

Effective Date of Equity Based Compensation: July 9, 2020

Effective Date of Share Distribution: September 1, 2020

Equity Based Compensation Shares: 200.030 million shares

Effective Date of Share Distribution: June 9, 2021

Equity Based Compensation Shares: 1.268 million shares

Indicator	Return on equity (ROE%)	Operating margin (OM%)
2 years after	6% or above	6% or above granting
3 years after	8% or above	8% or above granting
4 years after	10% or above	10% or above granting

For the restricted share awards approved by the board of directors in 2022, the following performance indicators will be used as operational goals for the Company: return on equity (ROE%), earnings per share (EPS) and Morgan Stanley Capital International (MSCI) annual ESG ratings. The performance targets and weighting for the indicators are listed below. Target are set for each indicator. Indicators that have achieved the target value, the number of vested shares in the year is calculated according to the corresponding weighting. Otherwise, the corresponding weighting is 0%. The performance period refers to the fiscal year of the most recent annual financial statement audited by a certified public accountant before the vesting date. Performance indicators are based on the consolidated financial statements audited by a certified public accountant corresponding to the period required by the indicators.

Effective Date of Equity Based Compensation: October 6, 2022

Effective Date of Share Distribution: December 5, 2022

Equity Based Compensation Shares: 23.0595 million shares

Effective Date of Share Distribution: December 5, 2023

Equity Based Compensation Shares: 26.7275 million shares

Indicator	Weighting	Target
Return on Equity (ROE%)	30%	Higher than the Company's average of the previous three years (Note 1)
Earnings Per Share (EPS)	30%	Higher than the Company's average of the previous three years (Note 1)
Morgan Stanley Capital International (MSCI) Annual ESG rating	40%	Rating is A or greater (Note 2)

Note 1. Comparing the performance period with the average of the preceding three years.

Note 2. The year of MSCI annual ESG rating is consistent with the performance period defined in the return on equity and earnings per share.

For the restricted share awards approved by the board of directors in 2024, the following performance indicators will be used as operational goals for the Company: earnings per share (EPS), total shareholder return (TSR) and ESG. The performance targets and weighting for the indicators are listed below. Target are set for each indicator. Indicators that have achieved the target value, the number of vested shares in the year is calculated according to the corresponding weighting. Otherwise, the corresponding weighting is 0%. The performance period refers to the fiscal year of the most recent annual financial statements audited by a certified public accountant before the relevant vesting date. Performance indicators are based on the consolidated financial statements audited by a certified public accountant corresponding to the period required by the indicators.

Effective Date of Equity Based Compensation: October 8, 2024

Effective Date of Share Distribution: December 5, 2024

Equity Based Compensation Shares: 32.9560 million shares

Indicator	Weighting	Target
Earnings Per Share (EPS)	30%	Higher than the Company's average of the previous three years (Note 1)
Total Shareholder Return (TSR) (Note 2)	30%	The Company's TSR compared to the TWSESCI Index TSR: <ul style="list-style-type: none"> • Greater than or equal to the TWSESCI Index TSR: 100% • Less than the TWSESCI Index TSR: 0%
ESG	40%	100% if both of the following goals are met; otherwise, 0%. The conditions are as follows: <ul style="list-style-type: none"> • Greenhouse gas (GHG) emissions (Note 3) <ul style="list-style-type: none"> On the job for 2 years after granted: Reduce 14% or more in year 2025; On the job for 3 years after granted: Reduce 16% or more in year 2026; On the job for 4 years after granted: Reduce 18% or more in year 2027. • Female directors reach one-third or more of the Board. (Note 4)

Note 1. Comparing the performance period with the average of the preceding three years. The average of the preceding three years is calculated by taking the EPS of each year to infinite decimal places and then rounding the resulting average to four decimal places.

Note 2. The TSR is calculated based on the share prices of the Company (Ticker: 2303 TT) and the Taiwan Semiconductor Index (Ticker: TWSESCI Index) during the performance period, with the initial share price defined as the average stock price of the previous 30 trading days up to and including the first day of the performance period, and the ending share price defined as the average stock price of the previous 30 trading days up to and including the last day of the performance period, plus the dividends (if any). Stock price and dividend information are based on the Taiwan Stock Exchange and Bloomberg Financial Database.

Note 3. GHG emissions take year 2020 as the base year, with the calculation scopes defined under GHG Protocol, including direct emissions (Scope 1) and indirect emissions from purchased or acquired energy (Scope 2) defined by GHG Protocol, and the reduction performance is calculated under a full-capacity production scenario.

Note 4. Based on the list of board members on each vesting date.

New Shares and Preemptive Rights

New shares may only be issued with the prior approval of our board of directors. If our issuance of any new shares will result in any change in our authorized share capital, we are required under R.O.C. Company Act to amend our articles of incorporation and obtain approval of our shareholders in a shareholders' meeting. We must also obtain the approval of, or submit a registration with, the R.O.C. FSC and the Science Park Administration.

According to the R.O.C. Company Act, when a company issues capital stock for cash, 10% to 15% of the issue must be offered to its employees. In addition, if a listed company intends to offer new shares for cash, at least 10% of the issue must also be offered to the public. This percentage can be increased by a resolution passed at a shareholders' meeting, which will reduce the number of new shares in which existing shareholders may have preemptive rights. Unless the percentage of the common shares offered to the public is increased by a resolution, existing shareholders of the company have a preemptive right to acquire the remaining 75% to 80% of the issue in proportion to their existing shareholdings. According to the Corporate Merger and Acquisition Act of the R.O.C., as effective on February 8, 2002 and amended on May 5, 2004 and July 8, 2015 which took effect on January 8, 2016, if new shares issued by our company are solely for the purpose of merger, acquisition, share swap or spin-off, the above-mentioned restrictions, including the employee stock ownership plan, the preemptive rights of the existing shareholders and the publicity requirement of a listed company, to such issuance of new common shares may not be applied.

Shareholder

We only recognize persons registered in our register as our shareholders. We may set a record date and close our register of shareholders for specified periods to determine which shareholders are entitled to various rights pertaining to our common shares.

Transfer of Common Shares

Under the R.O.C. Company Act, a company may issue individual share certificates or no certificate at all, to evidence common shares. Our articles of incorporation provide that we may deliver common shares in book-entry form instead of by means of issuing physical share certificates. We have issued our common shares in uncertificated/scripless form since 2007. Therefore, the transfer of our common shares is carried out on the book-entry system. The settlement of trading of our common shares is normally carried out on the book-entry system maintained by the Taiwan Depository and Clearing Corporation. Transferees must have their names and addresses registered on our register in order to assert shareholder's rights against us. Our shareholders are required to file their respective specimen seals with our share registrar, Horizon Securities Co., Ltd.

Shareholders' Meetings

We are required to hold an annual ordinary shareholders' meeting once every calendar year within six months from the end of each fiscal year. Our board of directors may convene an extraordinary meeting whenever the directors deem necessary, and they may do so if requested in writing by shareholders holding no less than 3% of our issued shares who have held these common shares for more than a year. At least 15 days' advance written notice must be given of every extraordinary shareholders' meeting and at least 30 days' advance written notice must be given of every annual ordinary shareholders' meeting. In addition, shareholder(s) who have continuously held more than 50% of our issued common shares for a period of three months or longer may convene an extraordinary shareholders' meeting without any approval of our board of directors. The period during which a shareholder holds the shares and the number of shares held by a shareholder shall be determined based on our register of shareholders as of the book close date of the relevant extraordinary shareholders' meeting. Unless otherwise required by law or by our articles of incorporation, voting for an ordinary resolution requires an affirmative vote of a simple majority of those present. A distribution of cash dividends would be an example of an ordinary resolution. The R.O.C. Company Act and, in the case of certain merger and acquisition deals, the Corporate Merger and Acquisition Act, also provides that in order to approve certain major corporate actions, including any amendment of our articles of incorporation, dissolution, merger or spin-off, share swap, entering into, amendment, or termination of any contract for lease of the company's business in whole, or for entrusted business, or for joint operation with others, on regular basis, the transfer of all or an essential part of the business or assets, accept all of the business or assets of any other company which would have a significant impact on our operations, removing directors or the distribution of dividend in stock form, a special resolution shall be adopted by the holders of the majority of our common shares represented at a shareholders' meeting at which holders of at least two-thirds of our issued and outstanding common shares are present; provided that, in the case of a public company, such as our company, such resolution may be adopted by the holders of at least two-thirds of the common shares represented at a shareholders' meeting at which holders of at least a majority of our issued and outstanding common shares are present; provided, further, that in the case of merger, spin-off, transfer of all or essential part of business or asset, or share swap which meets the specific criteria provided under the Corporate Merger and Acquisition Act, such as short-form merger/spin-off/share swap or whale-minnow merger/spin-off/share-swap (as defined therein), such corporate action can be approved by a board resolution adopted by majority consent at a meeting with at least two-thirds of our directors' present without shareholders' approval. Notwithstanding the foregoing, in the event such transaction will result in our delisting, the approval from holders of at least two-thirds of our issued and outstanding common shares is required.

Voting Rights

Each common share and Class A preferred share, if issued, is generally entitled to one vote and no voting discount will be applied. However, treasury shares and our shares held by (i) an entity in which we own more than 50% of the voting shares or paid-in capital, or (ii) a third party in which we and an entity controlled by us jointly own, directly or indirectly, more than 50% of the voting shares or paid-in capital are not entitled to any vote. Except as otherwise provided by law or our articles of incorporation, a resolution can be adopted by the holders of a simple majority of the issued and outstanding shares represented at a shareholders' meeting. The quorum for a shareholders' meeting to discuss the ordinary resolutions is a majority of the issued and outstanding shares. Pursuant to the R.O.C. Company Act amended on December 28, 2011, the election of directors by our shareholders shall be conducted by means of cumulative voting rather than other voting mechanisms adopted in our articles of incorporation. Except as otherwise provided under applicable laws and regulations, in all other matters, a shareholder must cast all his or her votes in the same manner when voting on any of these matters.

Our shareholders may be represented at an ordinary or extraordinary shareholders' meeting by proxy if a valid proxy form is delivered to us five days before the commencement of the ordinary or extraordinary shareholders' meeting, unless such proxy has been revoked no later than two days before the date of the shareholders' meeting. Voting rights attached to our common shares exercised by our shareholders' proxy are subject to the proxy regulation promulgated by the R.O.C. FSC.

Authorized by the R.O.C. Company Act, the R.O.C. FSC has issued an administrative order on February 20, 2012 to require Taiwan Stock Exchange-listed companies, such as our company, and Taipei Exchange (previously known as "GreTai Securities Market")-listed companies in the R.O.C. with NT\$10 billion or more of paid-in share capital and with 10,000 or more shareholders as of the first date of the close period applicable to the shareholders' meeting to adopt an e-voting system for the shareholders' meeting. According to the administrative order by the R.O.C. FSC, commencing from January 1, 2018, all listed companies shall adopt the e-voting system for the shareholders' meeting. The e-voting system provides a new platform for shareholders to exercise their voting rights online. As a company that meets the foregoing criteria, we have successfully adopted the e-voting system in the 2012 shareholders' meeting and voted by poll on each agenda item for discussion.

Any shareholder who has a personal interest in a matter to be discussed at our shareholders' meeting, the outcome of which may impair our interests, shall not vote or exercise voting rights on behalf of another shareholder on such matter.

According to the R.O.C. Company Act amended on January 4, 2012, a shareholder of a public company who holds common shares for others, such as a depositary, may choose to exercise his/her/its voting power separately. On April 13, 2012, R.O.C. FSC promulgated the Regulations Governing the Split Voting of the Shareholders and Compliance Matters for Public Companies, the implementation rules of such split voting method, which stipulates that the depository of the overseas depositary receipts may exercise its voting power separately in accordance with the instructions of the respective holders of the ADS. Notwithstanding the foregoing, before any amendment to the currently effective Deposit Agreement is made, holders of our ADSs generally will not be able to exercise voting rights on the common shares underlying their ADSs on an individual basis.

Dividends and Distributions

We are not allowed under R.O.C. law to pay dividends on our treasury shares. We may distribute dividends on our issued and outstanding shares if we have earnings. Before distributing a dividend to shareholders, among other things, we must recover any past losses, pay all outstanding taxes and set aside a legal reserve equivalent to 10% of our net income and other profit (or loss) items adjusted to the current year's undistributed earnings other than net income until our legal reserve equals our paid-in capital, and a special reserve, if any.

At an annual ordinary shareholders' meeting, our board of directors submits to the shareholders for their approval proposals for the distribution of dividends or the making of any other distribution to shareholders from our net income or reserves for the preceding fiscal year. Dividends are paid to shareholders proportionately. Dividends may be distributed either in cash or in common shares or a combination of cash and shares, as determined by the shareholders at such meeting. Previously, the employee bonus and directors' remuneration were categorized as "profit sharing" items and were calculated and distributed based on earnings after tax basis. However, according to Articles 235 and 235-1 of the R.O.C. Company Act, both amended and added on May 20, 2015, employee bonus and directors' remuneration shall no longer be a profit-sharing item but shall be calculated based on earnings before tax and distributed as "expenses." Our articles of incorporation currently in effect, provide that where we make profits before tax for the annual financial year, subject to a board resolution adopted by majority consent at a meeting with at least two-thirds of our directors' present, we shall appropriate (i) no less than 5% of such annual profits before tax as employee bonus, and (ii) a maximum of 0.2% as directors' remunerations. The employees eligible for the distribution include our employees and employees of our subsidiaries and the form of employee bonus may be made in stock or cash. The qualification of such employees is to be determined by our board of directors. Notwithstanding the foregoing, if we have accumulated losses of the previous years, we shall set aside the amount of such accumulated losses prior to the allocation of the employee bonus and the above directors' remuneration. For the purpose of calculation of the above employee bonus and the directors' remunerations, such "annual profits before tax" shall be without giving effect of the deduction and distribution of such employee bonus and the directors' remunerations.

The remaining amount may be distributed according to the distribution plan proposed by our board of directors based on our dividend policy, and submitted to the shareholders' meeting for approval. Our articles of incorporation also specify that the amount distributable as dividend shall be the sum of (x) the balance of our earnings deducted by (i) payment of all taxes and dues, (ii) deduction of any past losses, (iii) allocation of 10% of our net income as a statutory reserve (which may be exempted if the accumulated amount of legal reserve has amounted to our paid-in capital); and (iv) special reserve, if any, plus (y) the retained earnings of previous years; provided, however, that the cash dividend to Class A preferred shares, if issued, shall be distributed in priority to the distribution of dividend to the common shares. In the annual general meeting held in June 2005, our shareholders approved a change of the percentage of stock dividend issued to our shareholders, if any, to no more than 80% and cash dividend, if any, to no less than 20%.

In addition to permitting dividends to be paid out of net income, we are permitted under the R.O.C. Company Act to make distributions to our shareholders of additional common shares by capitalizing reserves, including the legal reserve and capital surplus of premiums from issuing stock and earnings from gifts received, or make such distributions by cash, if we do not have losses. However, where legal reserve is distributed by capitalization or in cash, only the portion of legal reserve which exceeds 25 percent of the paid-in capital may be distributed.

For information as to R.O.C. taxes on dividends and distributions, see "—R.O.C. Tax Considerations" in this Item.

Repurchase of Our Common Shares

An R.O.C. company may not acquire its own common shares, except under certain exceptions provided in the R.O.C. Company Act or the R.O.C. Securities and Exchange Act. Under the R.O.C. Company Act, a company may purchase up to 5% of its issued common shares for transfer to employees as employee compensation in accordance with a resolution of its board of directors, passed by a majority vote, at a meeting with at least two-thirds of the directors' present.

Under Article 28-2 of the R.O.C. Securities and Exchange Act, we may, by a board resolution adopted by majority consent at a meeting with two-thirds or more of our directors' present, purchase up to 10% of our issued common shares on the Taiwan Stock Exchange or by a tender offer, in accordance with the procedures prescribed by the R.O.C. FSC, for any of the following purposes:

- to transfer our common shares to our employees as employee compensation;
- to transfer upon conversion of bonds with warrants, preferred shares with warrants, convertible bonds, convertible preferred shares or certificates of warrants issued by us; or
- if necessary, to maintain our credit and our shareholders' equity; provided that the common shares so purchased shall be canceled thereafter.

We have from time to time announced plans, none of which was binding on us, to buy back up to a fixed amount of our common shares on the Taiwan Stock Exchange at the price range set forth in the plans disclosed in "Item 16E—Purchase Of Equity Securities By The Issuer And Affiliated Purchasers." We may not spend more than the aggregate amount of the retained earnings, the premium from issuing stock and the realized portion of the capital reserve to purchase our common shares. Historically, we have cancelled some of the repurchased common shares and transferred some of the repurchased common shares to our employees as employee compensation. From June 8, 2020 through August 7, 2020, we purchased 105 million of our common shares on the Taiwan Stock Exchange at an average price of NT\$15.98 per share to transfer to our employees as employee compensation. During 2022, 2023, and 2024, we did not purchase any of our common shares, and transfer such common shares that we repurchased under these plans to our employees as employee compensation.

We may not pledge or hypothecate any purchased common shares. In addition, we may not exercise any shareholders' rights attached to such common shares. In the event that we purchase our common shares on the Taiwan Stock Exchange, our affiliates, directors, managers and their respective spouses and minor children and/or nominees are prohibited from selling any of our common shares during the period in which we purchase our common shares.

In addition to the share purchase restriction, the R.O.C. Company Act provides that our subsidiaries may not acquire our common shares or the equity securities of our majority-owned subsidiaries if the majority of the outstanding voting equity securities or paid-in capital of such subsidiary is directly or indirectly held by us.

Liquidation Rights

In the event of a liquidation, shareholders will be entitled to participate in any surplus assets after payment of all debts, liquidation expenses and taxes proportionately.

Rights to Bring Shareholders' Suits

Under the R.O.C. Company Act, a shareholder may bring suit against us in the following events:

- within 30 days from the date on which a shareholders' resolution is adopted, a shareholder may file a lawsuit to annul a shareholders' resolution if the procedure for convening a shareholders' meeting or the method of resolution violates any law or regulation or our articles of incorporation. However, if the court is of the opinion that such violation is not material and does not affect the result of the resolution, the court may reject the shareholder's claim.
- if the substance of a resolution adopted at a shareholders' meeting contradicts any applicable law or regulation or our articles of incorporation, a shareholder may bring a suit to determine the validity of such resolution.

Shareholders may bring suit against our directors under the following circumstances:

- Shareholder(s) who have continuously held 1% or more of our issued common shares for a period of six months or longer may request in writing that the audit committee institutes an action against a director on our behalf. In case the audit committee fails to institute an action within 30 days after receiving such request, the shareholder (s) may institute an action on our behalf. In the event shareholder(s) institute an action, a court may, upon the defendant's motion, order such shareholder (s) to furnish appropriate security.
- Shareholder (s) who hold more than 3% or more of our total issued common shares may institute an action with a court to remove a director of ours who has materially violated the applicable laws or our articles of incorporation or has materially damaged the interests of our company if a resolution for removal on such grounds has first been voted on and rejected by our shareholders and such suit is filed within 30 days of such shareholders' vote.

- In the event that any director, manager or shareholder holding more than 10% of our common shares or any respective spouses or minor children and/or nominees of any of them sells common shares within six months after acquisition of such common shares, or repurchases the common shares within six months after the sale, we may claim for recovery of any profits realized from the sale and purchase. If our board of directors or audit committee fail to claim for recovery, any shareholder may set forth a 30-day period for our board of directors or audit committee to exercise the right. In the event our directors or audit committee fail to exercise the right during such 30-day period, such requesting shareholder shall have the right to claim such recovery on our behalf. Our directors shall be jointly and severally liable for damages suffered by us as a result of their failure to exercise the right of claim.

Other Rights of Shareholders

Under the R.O.C. Company Act and the Corporate Merger and Acquisition Act, dissenting shareholders are entitled to appraisal rights in the event of a spin-off or a merger and various other major corporate actions. Dissenting shareholders may request us to redeem all their common shares at a then fair market price to be determined by mutual agreement. If no agreement can be reached, the valuation will be determined by a court. Subject to applicable law, dissenting shareholders may, among other things, exercise their appraisal rights by notifying us in writing before the related shareholders' meeting and/or by raising and registering their dissent at the shareholders' meeting and also waive their voting rights.

One or more shareholders who have held 3% or more of the issued and outstanding shares one year or longer may require our board of directors to call an extraordinary shareholders' meeting by sending a written request to our board of directors. In addition, shareholder(s) who have continuously held more than 50% of our issued shares for a period of three months or longer may convene an extraordinary shareholders' meeting without any approval of our board of directors. The period during which a shareholder holds the shares and the number of shares held by a shareholder shall be determined based on our register of shareholders as of the book close date of the relevant extraordinary shareholders' meeting.

Moreover, the R.O.C. Company Law allows shareholder(s) holding 1% or more of the total issued shares of a company to, during the period of ten days or more prescribed by the company, submit one proposal in writing or by way of electronic transmission containing no more than three hundred words (in terms of Chinese characters) for discussion at the annual ordinary shareholders' meeting.

Financial Statements

For a period of at least 10 days before our annual ordinary shareholders' meeting, we must make available our annual financial statements at our principal offices in Hsinchu, Taiwan, and our share registrar in Taipei for our shareholders' inspection.

Transfer Restrictions

Our directors, managers and shareholders holding more than 10% of our shares are required to report any changes in their shareholding to us on a monthly basis. In addition, the number of common shares that they can sell or transfer on the Taiwan Stock Exchange on a daily basis is limited by R.O.C. law. Further, they may sell or transfer our common shares on the Taiwan Stock Exchange only after reporting to the R.O.C. FSC at least three days before the transfer, provided that such reporting is not required if the number of common shares transferred does not exceed 10,000 in one business day.

C. Material Contracts

Development Collaboration

Contract Type	Contracted Party	Contract Period	Key Content	Restrictive Clause
Development Collaboration	Intel Inc.	Jan. 25, 2024~ Jan. 24, 2034	UMC and Intel announce a collaboration on a development of a 12nm semiconductor process platform	Duty of confidentiality

Patent and Technology Licenses

We value and protect intellectual property rights. With over 40 years of commitment to developing and securing semiconductor patents, we have achieved a predominant position in the semiconductor industry. We also enter into patent or technology license contracts with major semiconductor or technology patent holders to ensure that our customers are not subject to the risk of wafer process infringement. The following are patent licensing contracts received and given by us:

Contract Type	Contracted Party	Contract Period	Key Content	Restrictive Clause
Patent cross-license	International Business Machines Corporation	Jun. 25, 2009~ Jun. 30, 2029	Patent cross-licensing for semiconductor process, semiconductor device and semiconductor design.	None
Technology license	International Business Machines Corporation	From Jun. 29, 2012	IBM licensed its 20nm CMOS and FinFET technology to UMC.	None
Patent license	Conversant Intellectual Property Management Inc. & Conversant IP (Taiwan) Inc.	From Feb. 08, 2018	License for specific patents.	None
Patent cross-license	International Business Machines Corporation	Jun. 13, 2013~ Dec. 30, 2035	Patent cross-license for semiconductor process, semiconductor device and semiconductor design.	None
Technology license	Hejian Technology (Suzhou) Co., Ltd.	Jul. 11, 2013~ Jul. 10, 2028	UMC licensed its 0.13um process technology to Hejian Technology (Suzhou) Co., Ltd.	UMC signed and implemented the contract in accordance with the scope approved by the Department of Investment Review, Ministry of Economic Affairs.
Patent cross-license	Katana Silicon Technologies, LLC	From Nov. 05, 2019	License for specific patents.	None
Technology license	United Semiconductor (Xiamen) Co., Ltd.	Apr. 01, 2017~ Mar. 31, 2032	UMC licensed its 28nm process technology to United Semiconductor (Xiamen) Co., Ltd.	UMC signed and implemented the contract in accordance with the scope approved by the Department of Investment Review, Ministry of Economic Affairs.
Technology license	United Semiconductor (Xiamen) Co., Ltd.	Nov. 23, 2018~ Nov. 22, 2028	UMC licensed its 80/90nm process technology to United Semiconductor (Xiamen) Co., Ltd.	UMC signed and implemented the contract in accordance with the scope approved by the Department of Investment Review, Ministry of Economic Affairs.
Patent cross-license	Polaris Innovation Limited	From Mar. 20, 2020	License for specific patents.	None

Construction

Contract Type	Contracted Party	Contract Date	Key Content	Restrictive Clause
Construction	L&K Engineering Co., Ltd., Mega Union Technology Inc. and others.	From Jan. 2021	For building the facilities of Fab 12A in the Southern Taiwan Science Park, UMC signed construction contracts with the vendors including but not limited to those major vendors listed in the second column. The total contracted amount exceeded NT\$6.8 billion.	None
Construction	ECOVE Environment Services Corporation	From Jan. 2023	For building the solvent treatment facilities of Fab 12A in the Southern Taiwan Science Park, UMC signed construction contracts with the vendor listed in the second column. The total contracted amount exceeded NT\$683 million.	None
Construction	Gang-Wei Construction Ltd.	From Feb. 2023	For building the facilities of Fab 12A in the Southern Taiwan Science Park, UMC signed construction contracts with the vendor listed in the second column. The total contracted amount exceeded NT\$905 million.	None
Construction	Gang-Wei Construction Ltd.	From Jun. 2022	For building the facilities of Fab 12A in the Southern Taiwan Science Park, UMC signed construction contracts with the vendor listed in the second column. The total contracted amount exceeded NT\$697 million.	None
Construction	Liying Environmental Protection Technology Co.,Ltd. ECOVE Environment Services Corporation	From Apr. 2024	For building the sludge treatment and waste solvent treatment facilities of Fab 12A in the Southern Taiwan Science Park, UMC signed construction contracts with the vendor listed in the second column. The total contracted amount exceeded NT\$603 million.	None

Other Agreements

Contract Type	Contracted Party	Contract Date	Key Content	Restrictive Clause
Other	Chenya Power Co., Ltd., Holdgood Energy Co., Ltd.	From Jan. 2024	For procuring the solar photovoltaic systems, UMC signed construction contracts with the vendors listed in the second column. The total contracted amount exceeded NT\$5.39 billion.	None
Other	Fengmiao Wind Power Co., Ltd.	From Dec. 2024	For procuring the offshore wind power, UMC signed contracts with the vendors listed in the second column.	None

D. Exchange Controls

Foreign Investment and Exchange Controls in Taiwan

We have extracted from publicly available documents the information presented in this section. Please note that citizens of the People's Republic of China and entities organized in the People's Republic of China are subject to special R.O.C. laws, rules and regulations, which are not discussed in this section.

General

Historically, foreign investments in the securities market of Taiwan were restricted. However, commencing in 1983, the Taiwan government has from time to time enacted legislation and adopted regulations to make foreign investment in the Taiwan securities market possible. Initially, only overseas investment trust funds of authorized securities investment trust enterprises established in Taiwan were permitted to invest in the Taiwan securities market. Since January 1, 1991, qualified foreign institutional investors are allowed to make investments in the Taiwan public securities market. Since March 1, 1996, non-resident foreign institutional and individual investors, called "general foreign investors," are permitted to make direct investments in the Taiwan public securities market. On September 30, 2003, the Executive Yuan amended the Regulations Governing Investment in Securities by Overseas Chinese and Foreign Nationals, or the Investment Regulations, under which the "Qualified Foreign Institutional Investors," or QFII, designations have been abolished and the restrictions on foreign portfolio investors have been revised. According to the Investment Regulations, "Foreign Institutional Investor," or FINI, means an entity which is incorporated under the laws of countries other than the R.O.C. or the branch of a foreign entity that is established within the territory of the R.O.C., and "Foreign Individual Investor," or FIDI, means an overseas Chinese or a foreign natural person. In addition, the Investment Regulations also lifted some restrictions and simplified procedures of investment application.

On April 30, 2009, the R.O.C. FSC promulgated regulations allowing QDIIs under PRC regulations and certain other PRC persons to invest in the securities of R.O.C. companies. However, prior approval from the Department of Investment Review of the R.O.C. Ministry of Economic Affairs (formerly known as the Investment Commission of the R.O.C. Ministry of Economic Affairs) is required for QDIIs or certain other PRC persons to own 10% or more of the issued and outstanding share capital of a listed R.O.C. company.

Foreign Ownership Limitations

Foreign ownership of the issued share capital in a Taiwan Stock Exchange-listed company or a Taipei Exchange-listed company has been limited to 50% in the past. Since December 30, 2000, the 50% limit has been lifted. Foreign investors can now hold such investments without any foreign ownership percentage limitations, unless the law has imposed restrictions otherwise.

Foreign Investors

Each FINI who wishes to invest directly in the R.O.C. securities market is required to register with the Taiwan Stock Exchange and obtain an investment identification number if the FINI is a non-resident and has no sub-investment accounts in the R.O.C. Each FIDI who wishes to invest directly in the R.O.C. securities market is also required to register with the Taiwan Stock Exchange and obtain an investment identification number. The R.O.C. FSC has lifted the limitation on the amount of investment in the R.O.C. securities market for a non-resident FIDI. Except for some restrictions imposed by specific laws and regulations, the individual and aggregate foreign ownership of the issued share capital in a Taiwan Stock Exchange-listed company or a Taipei Exchange-listed company is not restricted. An R.O.C. custodian for a non-resident FINI or FIDI is required to submit to the CBC, and the Taiwan Stock Exchange a report of trading activities, inward and outward remittance of capital and status of assets under custody and other matters every month. Foreign institutional investors are not subject to any ceiling for investment in the R.O.C. securities market.

Foreign Investment Approval

Foreign investors (both institutional and individual) who wish to make direct investments in the common shares of R.O.C. companies are required to submit a “foreign investment approval” application to the Department of Investment Review of the R.O.C. MOEA, or other government authority and enjoy benefits granted under the Statute for Foreigner’s Investment and the Statute for Overseas Chinese’s Investment. The Department of Investment Review of the R.O.C. MOEA or other government authority reviews each foreign investment approval application and approves or disapproves the application after consultation with other governmental agencies, if necessary. Any non-R.O.C. person possessing a foreign investment approval may repatriate annual net profits and interests attributable to an approved investment. Investment capital and capital gains attributable to the investment may be repatriated with approval of the Department of Investment Review of the R.O.C. MOEA or other government authority.

In addition to the general restrictions against direct investments by foreign investors in R.O.C. companies, foreign investors are currently prohibited from investing in certain prohibited industries in Taiwan under the “Negative List.” The prohibition on direct foreign investment in the prohibited industries in the Negative List is absolute in the absence of a specific exemption from the application of the Negative List. Under the Negative List, some other industries are restricted so that foreign investors may directly invest only up to a specified level and with the specific approval of the relevant authority responsible for enforcing the legislation that the Negative List is intended to implement. Our business does not operate in a restricted industry under the Negative List.

In June 2009, the R.O.C. MOEA further allowed PRC persons to make direct investments in Taiwan. However, such direct investment is still subject to various restrictions, such as that only the industries listed in the Positive List, as promulgated by the Executive Yuan, are legally permitted targets and that all the PRC persons who wish to make direct investments in the R.O.C. are required to submit an “investment approval” application to the Department of Investment Review of the R.O.C. MOEA.

Exchange Controls

Taiwan’s Foreign Exchange Control Statute and regulations provide that all foreign exchange transactions must be executed by banks designated to handle foreign exchange transactions by the Ministry of Finance and the CBC. Current regulations favor trade-related foreign exchange transactions. Consequently, foreign currency earned from exports of merchandise and services may now be retained and used freely by exporters. All foreign currency needed for the importation of merchandise and services may be purchased from the designated foreign exchange banks.

Aside from trade-related foreign exchange transactions, R.O.C. companies and residents may remit to and from Taiwan foreign currencies of up to US\$100 million (or its equivalent) and US\$10 million, (or its equivalent) respectively in each calendar year; provided, however, that depending on the economic and financial situation as well as the need to maintain the order of foreign exchange market, the CBC may, at its discretion, to adjust such limits. These limits apply to remittances involving a conversion between NT dollars and U.S. dollars or other foreign currencies. A requirement is also imposed on all private enterprises to register all medium- and long-term foreign debt with the CBC.

In addition, foreign currency earned from or needed to be paid for direct investment or portfolio investments, which are approved by the competent authorities, may be retained or sold by the investors or purchased freely from the designated bank.

Aside from the transactions discussed above, a foreign person without an alien resident card (or who has relevant resident card with a validity of less than one year) or an unrecognized foreign entity may remit to and from Taiwan foreign currencies of up to US\$100,000 per remittance without obtaining prior approval or permit if required documentation is provided to Taiwan authorities. This limit applies to remittances involving a conversion between NT dollars and U.S. dollars or other foreign currencies.

Depository Receipts

In April 1992, the R.O.C. SFB (the predecessor of the R.O.C. FSC) began allowing R.O.C. companies listed on the Taiwan Stock Exchange to sponsor the issuance and sale of depository receipts evidencing depositary shares. Notifications for these issuances are still required. In December 1994, the Ministry of Finance began allowing companies whose shares are traded on the Taipei Exchange to sponsor the issuance and sale of depository receipts evidencing depositary shares. On October 24, 2002, the R.O.C. SFB began allowing public companies that are not listed on the Taiwan Stock Exchange or the Taipei Exchange to sponsor the issuance and sale of depository receipts by way of private placements outside the R.O.C.

A holder of depositary shares wishing to withdraw common shares underlying depositary shares is required to appoint a local agent or representative with qualifications set forth by the R.O.C. FSC to, among other things, open a securities trading account with a local brokerage firm, pay R.O.C. taxes, remit funds, and exercise shareholders' right. In addition, the withdrawing holder is also required to appoint a custodian bank or a securities firm with qualifications set forth by the R.O.C. FSC to hold payments and the securities in safekeeping, make confirmations, settle trades and report all relevant information in which the securities firm is appointed as the custodian, and the payments be held in safekeeping in a special account opened in a bank approved by the R.O.C. FSC. Without making this appointment and the opening of accounts, the withdrawing holder would be unable to subsequently sell the common shares withdrawn from a depository receipt facility on either the Taiwan Stock Exchange or the Taipei Exchange.

After the issuance of a depository share, a holder of the depository share may immediately, comparing to a three-month waiting period restriction which was lifted in 2003, request the depository issuing the depository share to cause the underlying common shares to be sold in the R.O.C. or to withdraw the common shares represented by the depository receipt and deliver the common shares to the holder. On April 30, 2009 and July 3, 2009, the R.O.C. Executive Yuan approved the Regulations Governing Securities Investment and Futures Trading in Taiwan by Mainland Area Investors and the Regulations Governing Investment in Taiwan by Mainland Area Persons, respectively, under which qualified PRC persons are permitted to invest in Taiwan companies under limited circumstances, including purchase of the depository receipts issued by a Taiwan company. However, prior approval from the Department of Investment Review of the R.O.C. Ministry of Economic Affairs is required for a qualified PRC person's ownership of 10% or more of the issued and outstanding share capital of a listed R.O.C. company or certain other manners of investment by a qualified PRC person.

No deposits of common shares may be made in a depository receipt facility and no depository receipts may be issued against deposits without specific R.O.C. FSC approval, unless they are:

- (A) stock dividends;
- (B) free distributions of common shares;
- (C) due to the exercise by a holder of his or her preemptive rights in the event of capital increases for cash; or
- (D) permitted under the deposit agreement and the custody agreement, due to the direct purchase of common shares or purchase through the depository in the domestic market or the surrender of common shares under the possession of investors and then delivery of such common shares to the custodian for deposit in the depository receipt facility, provided that the total number of depository receipts outstanding after an issuance cannot exceed the number of issued depository shares previously approved by the R.O.C. FSC in connection with the offering plus any depository shares issued pursuant to the events described in (A), (B) and (C) above. These issuances may only be made to the extent previously issued depository shares have been withdrawn.

A depository may convert New Taiwan dollars from the proceeds of the sale of common shares or cash distributions received into other currencies, including U.S. dollars. A depository may be required to obtain foreign exchange approval from the CBC on a payment-by-payment basis for conversion into New Taiwan dollars of subscription payments for rights offerings or conversion into foreign currencies from the proceeds from the sale of subscription rights for new common shares. It is expected that the CBC will grant this approval as a routine matter.

A holder of depositary shares may convert NT dollars into other currencies from proceeds from the sale of any underlying common shares. Proceeds from the sale of the underlying common shares withdrawn from the depositary receipt facility may be used for reinvestment in securities listed on both the Taiwan Stock Exchange and the Taipei Exchange, provided that the investor designates a local securities firm or financial institution as agent to open an NT dollar bank account in advance.

E. Taxation

R.O.C. Tax Considerations

The following summarizes the principal R.O.C. tax consequences of owning and disposing of the ADSs or common shares to a holder of ADSs or common shares that is not a resident of the R.O.C. A foreign individual holder will be considered as not a resident of the R.O.C., or a non-R.O.C. resident, for the purposes of this section if he or she is not physically present in Taiwan for 183 days or more during any calendar year. An entity holder will be considered as not a resident of the R.O.C., or a non-R.O.C. resident, if it is organized under the laws of a jurisdiction other than Taiwan for profit making purpose and has no fixed place of business or other permanent establishment or business agent in the R.O.C. Prospective purchasers of ADSs or common shares should consult their own tax advisors concerning the tax consequences of owning ADSs or common shares in the R.O.C. and any other relevant taxing jurisdiction to which they are subject.

Dividends

Dividends, whether in cash or common shares, declared by us out of retained earnings and paid out to a holder that is not an R.O.C. resident in respect of common shares represented by ADSs are subject to R.O.C. withholding tax at the time of distribution. The rate of withholding is currently 21% of the amount of the distribution in the case of cash dividends or of the par value of the common shares distributed in the case of stock dividends. Under current practice adopted by tax authorities, a 21% withholding rate is applied to a non-R.O.C. resident ADS holder without requiring the holder to apply for or obtain foreign investment approval. As discussed in the section “—Tax Reform” below, certain of our retained earnings will be subject to a certain percentage of undistributed retained earnings tax. There is no withholding tax with respect to stock dividends declared out of our capital surplus of premiums from issuing stock resulting from the capital paid by the shareholders.

Capital Gains

In 2015, an amendment to the R.O.C. Income Tax Act then in effect, which deleted the provisions regarding the capital gain from securities transaction, was adopted and took effect from January 1, 2016. Accordingly, under the R.O.C. law currently in effect, gains realized on R.O.C. securities transactions are primarily exempt from income tax.

Subject to the AMT Act, gains realized from various securities transactions by an R.O.C.-resident entity shall be calculated as taxable income for the purpose of the AMT Act and may further be subject to income tax. If the above entity has held common shares for more than three (3) years, 50% of capital gain may be exempted from AMT. In addition, gains realized from transfers of ADSs by non-R.O.C. resident holders are not regarded as income from sources in the R.O.C. and, as a result, any gains derived therefrom are currently not subject to R.O.C. income tax.

Securities Transaction Tax

The R.O.C. government imposes a securities transaction tax that will apply to sales of common shares, but not to sales of ADSs. The securities transaction tax, which is payable by the seller, is generally levied on sales of common shares at the rate of 0.3% of the sales proceeds. Withdrawals of our common shares from our depositary facility are not subject to the R.O.C. securities transaction tax.

Preemptive Rights

Distribution of statutory preemptive rights for common shares by us in compliance with the R.O.C. Company Act is not subject to R.O.C. tax. Proceeds derived from sales of statutory preemptive rights evidenced by securities are subject to the R.O.C. securities transaction tax, currently at the rate of 0.3% of the gross amount received. Proceeds derived from sales of statutory preemptive rights that are not evidenced by securities are subject to capital gains tax at the rate of 20% of the gains realized for non-R.O.C. resident entities and non-R.O.C. resident individuals. Subject to compliance with the R.O.C. law, we have sole discretion to determine whether statutory preemptive rights are evidenced by securities or not.

Estate Taxation and Gift Tax

R.O.C. estate tax is payable on any property within the R.O.C. of a deceased individual who is a non-resident individual or a non-R.O.C. citizen and R.O.C. gift tax is payable on any property located within the R.O.C. donated by any such person. Under the Articles 13 and 19 of the R.O.C. Estate and Gift Tax Act, which became effective on May 12, 2017, tax brackets and rates of estate tax are as follows: (1) if the net taxable estate is no more than NT\$50,000,000, the tax rate shall be 10%; (2) if the net taxable estate is more than NT\$50,000,000 but no more than NT\$100,000,000, the estate tax payable shall be NT\$5,000,000 plus 15% for the amount in excess of NT\$50,000,000; and (3) if the net taxable estate is more than NT\$100,000,000, the estate tax payable shall be NT\$12,500,000 plus 20% for the amount in excess of NT\$100,000,000; tax brackets and rates of gift tax are as follows: (1) if the net taxable gifts are no more than NT\$25,000,000, the tax rate shall be 10%; (2) if the net taxable gifts are more than NT\$25,000,000 but no more than NT\$50,000,000, the gift tax payable shall be NT\$2,500,000 plus 15% for the amount in excess of NT\$25,000,000; and (3) if the net taxable gifts are more than NT\$50,000,000, the gift tax payable shall be NT\$6,250,000 plus 20% for the amount in excess of NT\$50,000,000. Under R.O.C. estate and gift tax laws, the common shares will be deemed located in the R.O.C. irrespective of the location of the owner. It is unclear whether a holder of ADSs will be considered to own common shares for this purpose.

Tax Treaties

The Republic of China does not have an income tax treaty with the United States. On the other hand, the Republic of China has income tax treaties with Indonesia, Singapore, South Africa, Australia, Vietnam, New Zealand, Malaysia, North Macedonia, Eswatini, the Netherlands, the United Kingdom, Gambia, Senegal, Sweden, Belgium, Denmark, Israel, Paraguay, Hungary, France, India, Slovakia, Switzerland, Germany, Thailand, Kiribati, Luxembourg, Italy, Japan, Canada, Poland, Austria, Czech Republic, Saudi Arabia, and Republic of Korea (South Korea) which may limit the rate of Republic of China withholding tax on dividends paid with respect to common shares in Taiwan companies. It is unclear whether a non-R.O.C. holder of ADSs will be considered to own common shares for the purposes of such treaties. Accordingly, a holder of ADSs who is otherwise entitled to the benefit of a treaty should consult its own tax advisors concerning eligibility for benefits under the treaty with respect to the ADSs.

Tax Reform

An amendment to the R.O.C. Income Tax Act was enacted on January 1, 1998, to integrate the corporate income tax and the shareholder dividend tax with the aim of eliminating the double taxation effect for resident shareholders of Taiwanese corporations. In order to improve Taiwan's tax system and to keep up with the trend of international tax reform, the R.O.C. Income Tax Act was further amended in 2018 to replace the old tax system which integrated the corporate income tax and the shareholder dividend tax. Except for limited exceptions, the amendment took effect retroactively from January 1, 2018.

Under this amendment, a 10% retained earnings tax will be imposed on a company for its after-tax earnings generated after January 1, 1998 that are not distributed in the following year; while a 5% retained earning tax will be imposed for after-tax earnings generated from January 2018. The retained earnings tax so paid will further reduce the retained earnings available for future distribution. Under the old tax system, when we declared dividends out of those retained earnings, up to a maximum amount of half of the amount of such tax of the declared dividends was credited against the withholding tax imposed on the non-R.O.C. resident holders of our ADSs or common shares; while from January 1, 2019, the benefit no longer exists and no retained earnings tax is credited.

U.S. Federal Income Tax Considerations for U.S. Persons

The following is a summary of certain U.S. federal income tax consequences for beneficial owners of our common shares or ADSs that hold the common shares or ADSs as capital assets and that are U.S. holders that are not citizens of the R.O.C., do not have a permanent establishment in the R.O.C. and are not physically present in the R.O.C. for 183 days or more within a calendar year. You are a U.S. holder if you are, for U.S. federal income tax purposes, any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source;
- a trust that is subject to the primary supervision of a court within the United States and that has one or more U.S. persons with the authority to control all substantial decisions of the trust; or
- a trust that has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

This summary is based on the provisions of the Internal Revenue Code of 1986, as amended, or the Code, and regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be replaced, revoked or modified so as to result in U.S. federal income tax consequences different from those discussed below. It is for general purposes only and you should not consider it to be tax advice. In addition, it assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms. This summary does not represent a detailed description of all the U.S. federal income tax consequences to you in light of your particular circumstances and does not address the Medicare tax on net investment income or the effects of any state, local or non-U.S. tax laws (or other U.S. federal tax consequences, such as U.S. federal estate or gift tax consequences). In addition, it does not represent a detailed description of the U.S. federal income tax consequences applicable to you if you are subject to special treatment under the U.S. federal income tax laws, including if you are:

- a dealer in securities or currencies;
- a trader in securities if you elect to use a mark-to-market method of accounting for your securities holdings;
- a financial institution or an insurance company;
- a tax-exempt organization;
- a regulated investment company;
- a real estate investment trust;
- a person liable for alternative minimum tax;
- a person holding common shares or ADSs as part of a hedging, integrated or conversion transaction, constructive sale or straddle;
- a partnership or other pass-through entity for U.S. federal income tax purposes;
- a person owning, actually or constructively, 10% or more of our stock (by vote or value);
- a person required to accelerate the recognition of any item of gross income with respect to our common shares or ADSs as a result of such income being recognized on an applicable financial statement; or
- a U.S. holder whose “functional currency” is not the U.S. dollar.

We cannot assure you that a later change in law will not alter significantly the tax considerations that we describe in this summary.

If a partnership (or other entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our common shares or ADSs, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our common shares or ADSs, you should consult your tax advisor.

You should consult your own tax advisor concerning the particular U.S. federal income tax consequences to you of the ownership and disposition of the common shares or ADSs, as well as the consequences to you arising under the laws of any other taxing jurisdiction.

In general, for U.S. federal income tax purposes, a U.S. person who is the beneficial owner of an ADS will be treated as the owner of the common shares underlying its ADS. Accordingly, deposits or withdrawals of common shares by U.S. holders for ADSs generally will not be subject to U.S. federal income tax.

Taxation of Dividends

Except as discussed below with respect to the passive foreign investment company rules, the amount of distributions (including amounts withheld in respect of R.O.C. withholding taxes) you receive on your common shares or ADSs (other than certain pro rata distributions of common shares or ADSs to all shareholders, including holders of ADSs) will generally be treated as dividend income to you if the distributions are made from our current and accumulated earnings and profits as calculated according to U.S. federal income tax principles. Such income (including withheld taxes) will be includible in your gross income as ordinary income on the day you actually or constructively receive it, which in the case of an ADS will be the date actually or constructively received by the depositary. The amount of any distribution of property other than cash will be the fair market value of such property on the date it is distributed. You will not be entitled to claim a dividend received deduction with respect to distributions you receive from us.

Subject to certain conditions and limitations (including a minimum holding period requirement), dividends received by non-corporate U.S. holders (including individuals) from a qualified foreign corporation may be treated as “qualified dividend income” that is subject to reduced rates of taxation. A foreign corporation is treated as a qualified foreign corporation with respect to dividends paid by that corporation on common shares (or ADSs backed by such common shares) that are readily tradable on an established securities market in the United States. U.S. Treasury Department guidance indicates that our ADSs (which are listed on the NYSE), but not our common shares, are readily tradable on an established securities market in the United States. Thus, subject to the applicable conditions and limitations and the discussion below with respect to the passive foreign investment company rules, we believe that dividends we pay on our ADSs will meet the conditions required for these reduced tax rates. Since we do not expect that our common shares will be listed on an established securities market in the United States, we do not believe that dividends we pay on our common shares that are not represented by ADSs currently meet the conditions required for these reduced tax rates. Moreover, there can be no assurance that our ADSs will continue to be readily tradable on an established securities market in the United States in later years. Non-corporate U.S. holders will also not be eligible for the reduced rates of taxation on dividends if we are a passive foreign investment company (as discussed below under “—Passive Foreign Investment Company”) in the taxable year in which such dividends are paid or in the preceding taxable year. U.S. holders should consult their own tax advisors regarding the application of these rules given their particular circumstances.

The amount of any dividend paid in NT dollars will equal the U.S. dollar value of the NT dollars you receive (calculated by reference to the exchange rate in effect on the date you actually or constructively receive the dividend, which in the case of an ADS will be the date actually or constructively received by the depositary), regardless of whether the NT dollars are actually converted into U.S. dollars. If the NT dollars received as a dividend are converted into U.S. dollars on the date they are actually or constructively received, you generally will not be required to recognize foreign currency gain or loss in respect of the dividend income. If the NT dollars received as a dividend are not converted into U.S. dollars on the date of receipt, you will have a basis in the NT dollars equal to their U.S. dollar value on the date of receipt. Any gain or loss you realize if you subsequently sell or otherwise dispose of the NT dollars will be ordinary income or loss from sources within the United States for foreign tax credit limitation purposes.

Subject to certain conditions and limitations (including a minimum holding period requirement), you may be entitled to a credit against your U.S. federal income tax liability for any R.O.C. taxes that are withheld from dividend distributions made to you. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. For this purpose, dividends we pay with respect to common shares or ADS will generally be considered passive category income from sources outside the United States. The rules governing the foreign tax credit are complex. For example, U.S. Treasury regulations addressing foreign tax credits impose additional requirements for foreign taxes to be eligible for a foreign tax credit, and there can be no assurance that those requirements will be satisfied. The Department of the Treasury and the Internal Revenue Service, or the IRS, are considering proposing amendments to these regulations. In addition, recent notices from the IRS provide temporary relief by allowing taxpayers that comply with applicable requirements to apply many aspects of the foreign tax credit regulations as they previously existed (before the release of the current regulations) for taxable years ending before the date that a notice or other guidance withdrawing or modifying the temporary relief is issued (or any later date specified in such notice or other guidance). Instead of claiming a foreign tax credit, you may be able to deduct R.O.C. withholding taxes on dividends in computing your taxable income, subject to generally applicable limitations under U.S. federal income tax law (including that a U.S. holder is not eligible for a deduction for otherwise creditable foreign income taxes paid or accrued in a taxable year if such U.S. holder claims a foreign tax credit for any foreign income taxes paid or accrued in the same taxable year). You are urged to consult your tax advisors regarding the availability of the foreign tax credit or a deduction under your particular circumstances.

To the extent that the amount of any distribution you receive exceeds our current and accumulated earnings and profits for a taxable year, as determined under U.S. federal income tax principles, the distribution will first be treated as a tax-free return of capital, causing a reduction in your adjusted basis in the common shares or ADSs and thereby increasing the amount of gain, or decreasing the amount of loss, you will recognize on a subsequent disposition of the common shares or ADSs. The balance in excess of adjusted basis, if any, will be taxable to you as capital gain recognized on a sale or exchange. However, we do not expect to keep earnings and profits in accordance with U.S. federal income tax principles. Therefore, you should expect that a distribution will generally be reported and treated as a dividend (as discussed above).

It is possible that pro rata distributions of common shares or ADSs to all shareholders, including holders of ADSs, may be made in a manner that is not subject to U.S. federal income tax. In the event that such distributions are tax-free, the basis of any new common shares or ADSs so received will generally be determined by allocating the U.S. holder’s basis in the old common shares or ADSs between the old common shares or ADSs and the new common shares or ADSs, based on their relative fair market values on the date of distribution. For U.S. federal income tax purposes, any such tax-free share or ADS distribution generally would not result in foreign source income to you. Consequently, you may not be able to use a foreign tax credit associated with any R.O.C. withholding tax imposed on such distributions unless you can use the credit against U.S. federal income tax due on other foreign source income in the appropriate category for foreign tax credit purposes. You should consult your own tax advisors regarding all aspects of the foreign tax credit.

Taxation of Capital Gains

Except as discussed below with respect to the passive foreign investment company rules, when you sell or otherwise dispose of your common shares or ADSs, you will generally recognize capital gain or loss in an amount equal to the difference between the U.S. dollar value of the amount realized for the common shares or ADSs and your basis in the common shares or ADSs, determined in U.S. dollars. If you are an individual or other non-corporate holder, and the common shares or ADSs being sold or otherwise disposed of are capital assets that you have held for more than one year, any gain recognized will generally be eligible for reduced rates of taxation. Your ability to deduct capital losses is subject to limitations. Any gain or loss you recognize will generally be treated as U.S. source gain or loss for foreign tax credit limitation purposes.

If you pay any R.O.C. securities transaction tax in connection with the sale of common shares, such tax is not treated as an income tax for U.S. federal income tax purposes, and therefore will not be a creditable foreign tax for U.S. federal income tax purposes. You are urged to consult your tax advisors regarding the U.S. federal income tax consequences of these taxes.

Passive Foreign Investment Company

Based on the past and projected composition of our income and assets and the valuation of our assets, including goodwill, we do not believe that we were a passive foreign investment company, or PFIC, for 2024 and we do not expect to become one in the foreseeable future, although there can be no assurance in this regard.

In general, a foreign company is considered a PFIC for any taxable year if either:

- at least 75% of its gross income is passive income, which generally includes income derived from certain dividends, interest, royalties and rents (other than royalties and rents derived in the active conduct of a trade or business and not derived from a related person), annuities or property transactions; or
- at least 50% of the value of its assets is attributable to assets that produce or are held for the production of passive income.

The 50% of value test is generally based on the average of the value of our assets for each quarter during the taxable year. Cash and other assets readily convertible into cash are generally considered passive assets for purposes of this test. If we own at least 25% by value of another corporation's stock, we will be treated, for purposes of the PFIC rules, as owning our proportionate share of the assets and receiving our proportionate share of the income of that corporation.

In addition, the determination of whether we are a PFIC is made annually. Accordingly, it is possible that we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition. The calculation of the value of our assets will be based, in part, on the quarterly market value of our common shares and ADSs, which is subject to change. A decrease in the price of our common shares and ADSs may also result in our becoming a PFIC. If we are a PFIC for any taxable year during which you hold common shares or ADSs, you will be subject to special tax rules discussed below.

If we are a PFIC for any taxable year during which you hold common shares or ADSs and you do not make a timely mark-to market election as described below, you will be subject to special tax rules with respect to any "excess distribution" that you receive and any gain you realize from a sale or other disposition (including a pledge) of common shares or ADSs. Distributions you receive in a taxable year that are greater than 125% of the average annual distributions you received during the shorter of the three preceding taxable years or your holding period for the common shares or ADSs will be treated as excess distributions. Under these special tax rules:

- the excess distribution or gain will be allocated ratably over your holding period for the common shares or ADSs;
- the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we were a PFIC, will be treated as ordinary income; and
- the amount allocated to each other year will be subject to tax at the highest tax rate in effect for that year for individuals or corporations, as applicable, and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

If you hold common shares or ADSs in any year in which we are a PFIC, you are generally required to file IRS Form 8621.

If we are a PFIC for any taxable year during which you hold common shares or ADSs and any of our non-U.S. subsidiaries is also a PFIC, you would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC for purposes of the application of these rules. You are urged to consult your tax advisors about the application of the PFIC rules to any of our subsidiaries.

Under certain circumstances, a U.S. holder, in lieu of being subject to the rules discussed above with respect to excess distributions and recognized gains, may make an election to include gain on the stock of a PFIC as ordinary income under a mark-to-market method, provided that such stock is regularly traded on a qualified exchange (within the meaning of the applicable Treasury regulations). Under this method, any difference between the stock's fair market value and its adjusted basis at the end of the year is accounted for by either an inclusion in income or, subject to limitations, a deduction from income, as described below. Under current U.S. Treasury Department guidance, the mark-to-market election may be available to holders of ADSs because the ADSs are listed on the NYSE, which constitutes a qualified exchange, although there can be no assurance that the ADSs will be "regularly traded" for purposes of the mark-to-market election. You should also note that only the ADSs and not the common shares are listed on the NYSE. Our common shares are listed on the Taiwan Stock Exchange, which must meet certain trading, listing, financial disclosure and other requirements to be treated as a qualified exchange under applicable U.S. Treasury regulations for purposes of the mark-to-market election, and no assurance can be given that the common shares will be "regularly traded" for purposes of the mark-to-market election.

If you make an effective mark-to-market election, in each year that we are a PFIC you will include in income as ordinary income the excess of the fair market value of your common shares or ADSs at the end of the year over your adjusted tax basis in the common shares or ADSs. You will be entitled to deduct as an ordinary loss in each such year the excess of your adjusted tax basis in the common shares or ADSs over their fair market value at the end of the year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. If you make an effective mark-to-market election, in each year that we are a PFIC any gain you recognize upon the sale or other disposition of your common shares or ADSs will be treated as ordinary income, and any loss will be treated as ordinary loss, but such loss will be ordinary only to the extent of the net amount of previously included income as a result of the mark-to-market election, and thereafter will be capital loss.

Your adjusted tax basis in common shares or ADSs will be increased by the amount of any income inclusion and decreased by the amount of any deductions under the mark-to-market rules. If you make a mark-to-market election, it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the common shares or ADSs are no longer regularly traded on a qualified exchange or the IRS consents to the revocation of the election. You will not, however, be able to make a mark-to-market election in respect of any lower-tier PFIC as described above. You should consult your tax advisors about the availability of the mark-to-market election, and whether making the election would be advisable under your particular circumstances.

Alternatively, a U.S. holder of common shares or ADSs in a PFIC can sometimes avoid the rules described above by electing to treat the PFIC as a "qualified electing fund" under Section 1295 of the Code. This option is not available to you because we do not intend to comply with the requirements necessary to permit you to make this election.

Non-corporate U.S. holders will not be eligible for reduced rates of taxation on any dividends received from us if we are a PFIC in the taxable year in which such dividends are paid or in the preceding taxable year. You should consult your own tax advisors concerning the U.S. federal income tax consequences of holding common shares or ADSs if we are considered a PFIC in any taxable year.

Information Reporting and Backup Withholding

In general, unless you are an exempt recipient such as a corporation, information reporting will apply to dividends in respect of your common shares or ADSs and to the proceeds from the sale, exchange or other disposition of your common shares or ADSs that are paid to you within the United States (and in some cases, outside of the United States). Additionally, if you fail to provide your taxpayer identification number and a certification that you are not subject to backup withholding, or fail to report in full dividend and interest income, you may be subject to backup withholding.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your U.S. federal income tax liability, provided you furnish the required information to the IRS.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

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

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

I. Subsidiary Information

Not applicable.

ITEM 11 QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of loss related to adverse changes in market prices, including interest rates and foreign exchange rates, of financial instruments. We are exposed to various types of market risks, including changes in interest rates and foreign currency exchange rates, in the normal course of business.

We use financial instruments, including variable rate debt and swaps and foreign exchange spot transactions, to manage risks associated with our interest rate and foreign currency exposures through a controlled program of risk management in accordance with established policies. These policies are reviewed and approved by our board of directors and shareholders' meeting. Our treasury operations are subject to internal audit on a regular basis. We do not hold or issue derivative financial instruments for speculatively purposes.

Our primary market risk exposures relate to interest rate movements on borrowings and exchange rate movements on foreign currency-denominated accounts receivable, capital expenditures relating to equipment used in manufacturing processes (including lithography, etching and chemical vapor deposition) and purchased primarily from Europe, Japan and the United States.

The following table provides information as of December 31, 2024 on our market risk sensitive financial instruments.

	As of December 31, 2024	
	Carrying Amount (in NT\$ millions)	Fair Amount
Time Deposits	77,247	77,247
Accounts Receivable (denominated in foreign currency)	24,137	24,137
Accounts Payable (denominated in foreign currency)	3,483	3,483
Bonds Payable	30,052	30,020
Long-term Loans	36,477	36,477

Interest Rate Risk

Our major market risk exposure is changing interest rates. Our exposure to market risk for changes in interest rates relates primarily to our long-term debt obligations. We primarily enter into debt obligations to support general corporate purposes including capital expenditures and working capital needs.

The tables below provide information of our company as of December 31, 2024 about our financial instruments that are sensitive to changes in interest rates, including debt obligations and certain assets. For debt obligations, the table presents principal cash flows and related weighted average interest rates by expected maturity dates. The information is presented in the currencies in which the instruments are denominated.

	Expected Maturity Dates					As of December 31, 2024	
	2025	2026	2027	2028	2029 and thereafter (in millions, except percentages)	Total	Fair Value
Time Deposits:							
Fixed Rate (US\$)	1,145					1,145	1,145
Average Interest Rate	4.32%					4.32%	4.32%
Fixed Rate (NT\$)	1,110					1,110	1,110
Average Interest Rate	1.29%					1.29%	1.29%
Short-term Loans:							
Variable Rate (NT\$)	8,515					8,515	8,515
Average Interest Rate	1.95%					1.95%	1.95%
Unsecured Long-term Loans:							
Variable Rate (NT\$)	1,666	2,449	2,642	5,312	12,650	24,719	24,719
Average Interest Rate	1.84%	1.88%	1.92%	1.92%	1.97%	1.94%	1.94%
Variable Rate (US\$)	25	14				39	39
Average Interest Rate	5.49%	5.49%				5.49%	5.49%
Secured Long-term Loans:							
Variable Rate (NT\$)	128	128	90	80	69	495	495
Average Interest Rate	2.64%	2.68%	2.43%	2.35%	1.70%	2.44%	2.44%
Variable Rate (RMB¥)	653	544	446	408	176	2,227	2,227
Average Interest Rate	2.66%	2.66%	2.66%	2.66%	2.66%	2.66%	2.66%
Bonds:							
Unsecured (NT\$)	5,500					5,500	5,410
Fixed Rate	0.57%					0.57%	0.57%
Unsecured (NT\$)	5,000					5,000	4,912
Fixed Rate	0.63%					0.63%	0.63%
Unsecured (NT\$)		2,000				2,000	2,000
Fixed Rate		0.63%				0.63%	0.63%
Unsecured (NT\$)			2,100			2,100	2,100
Fixed Rate			0.68%			0.68%	0.68%
Unsecured (NT\$)		10,000				10,000	9,988
Fixed Rate			1.62%			1.62%	1.62%

Foreign Currency Risk

Although the majority of our transactions are in NT dollars, some transactions are based in other currencies. The primary foreign currency to which we are exposed is the U.S. dollar. We have in the past, and may in the future, enter into short-term, foreign currency forward contracts to hedge the impact of foreign currency fluctuations on certain underlying assets, liabilities, and firm commitments for operating expenses and capital expenditures denominated in U.S. dollars and other foreign currencies. The purpose of entering into these hedges is to minimize the impact of foreign currency fluctuations on the results of operations. We use the policy of natural hedging to reduce our foreign exchange exposure arising out of changes in the rates of exchange among the U.S. dollar and other foreign currencies. As a general matter, our natural hedging strategy relies on matching revenues and costs for the same currency or offsetting losses in one currency with gains in another.

As of December 31, 2024, we had US\$24 million outstanding in foreign currency forward contracts to sell U.S. dollars against NT dollars.

	Expected Maturity Dates					As of December 31, 2024	
	2025	2026	2027	2028	2029 and thereunder (in millions, except percentages)	Total	Fair Value
Foreign Currency Forward Contracts:							
Sell US\$ against NT\$							
Contract Amount	US\$ 24					US\$ 24	US\$0
Average Contractual Exchange Rate	US\$1=NT\$32.900					US\$1=NT\$32.900	

We believe we do not have material market risk as of December 31, 2024.

ITEM 12 DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depository Shares

Depository Fees and Charges

Under the terms of the deposit agreement for our ADSs, an ADS holder may have to pay the following service fees to the depositary:

Service	Fees
Issuance of ADSs	Up to US\$0.05 per ADS issued
Cancellation of ADSs	Up to US\$0.05 per ADS canceled
Distribution of cash dividends or other cash distributions	Up to US\$0.05 per ADS held
Distribution of ADSs pursuant to stock dividends, free stock distributions or exercises of rights	Up to US\$0.05 per ADS held
Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to US\$0.05 per ADS held

In addition, an ADS holder shall be responsible for the following charges:

- taxes (including applicable interest and penalties) and other governmental charges;
- such registration fees as may from time to time be in effect for the registration of common shares or other deposited securities on the share register and applicable to transfers of common shares or other deposited securities to or from the name of the custodian, the depositary or any nominees upon the making of deposits and withdrawals, respectively;
- such cable, telex and facsimile transmission and delivery expenses as are expressly provided in the deposit agreement to be at the expense of ADS holders and beneficial owners of ADSs;
- the expenses and charges incurred by the depositary in the conversion of foreign currency;

- such fees and expenses as are incurred by the depositary in connection with compliance with exchange control regulations and other regulatory requirements applicable to common shares, deposited securities, ADSs and ADRs;
- the fees and expenses incurred by the depositary, the custodian or any nominee in connection with the servicing or delivery of deposited securities; and
- Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary by the brokers (on behalf of their clients) receiving the newly-issued ADSs from the depositary and by the brokers (on behalf of their clients) delivering the ADSs to the depositary for cancellation. The brokers in turn charge these transaction fees to their clients.

Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary to the holders of record of ADSs as of the applicable ADS record date. The depositary fees payable for cash distributions are generally deducted from the cash being distributed. In the case of distributions other than cash (i.e., stock dividends, rights offerings), the depositary charges the applicable fee to the ADS record date holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or un-certificated in direct registration), the depositary sends invoices to the applicable record date ADS holders. In the case of ADSs held in brokerage and custodian accounts via the central clearing and settlement system, The Depository Trust Company, or DTC, the depositary generally collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients' ADSs in DTC accounts in turn charge their clients' accounts the amount of the fees paid to the depositary.

In the event of refusal to pay the depositary fees, the depositary may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary fees from any distribution to be made to the ADS holder.

The fees and charges ADS holders may be required to pay may vary over time and may be changed by us and by the depositary. ADS holders will receive prior notice of such changes.

Depository Payments

In 2024, pursuant to the terms of the deposit agreement, we received reimbursement of US\$2.1 million from JPMorgan Chase & Co., the depositary for our ADR program. The reimbursement was to cover our expense related to ADR program, including:

- investor relations efforts
- NYSE listing fees, SEC filing fees and accounting supporting fees for FASB & PCAOB
- fees in connection with annual financial and Sarbanes-Oxley Act of 2002 audit
- other ADR program-related expenses

PART II.

ITEM 13 DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

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

None.

ITEM 15 CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

For the period ended on December 31, 2024, an evaluation has been performed under the supervision and with the participation of our management, including our Co-presidents and our Chief Financial Officer, regarding the effectiveness of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on that evaluation, our Co-presidents and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2024.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended, for our company. A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with International Financial Reporting Standards as issued by International Accounting Standards Board.

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

As required by Section 404 of the Sarbanes-Oxley Act of 2002 and related rules as promulgated by the Securities and Exchange Commission, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2024 using the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), or the COSO criteria, as amended regularly. Based on this assessment, our management concluded that our internal control over financial reporting was effective as of December 31, 2024 based on the COSO criteria. Our independent registered public accounting firm, Ernst & Young has issued an attestation report with unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2024, which is included immediately following this report.

Changes in Internal Control over Financial Reporting

During 2024, there was no material change to our internal control over financial reporting.

Attestation Report of the Independent Registered Public Accounting Firm

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of United Microelectronics Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited United Microelectronics Corporation and subsidiaries' internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control— Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, United Microelectronics Corporation and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2024 and 2023, the related consolidated statements of comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the "consolidated financial statements") and our report dated April 24, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young
Taipei, Taiwan
Republic of China
April 24, 2025

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that Kuang Si Shiu, Wen-Hsin Hsu and Su Lin Wang, three of our independent directors and members of the audit committee, qualify as audit committee financial experts as defined in Item 16A of Form 20-F and are independent in accordance with the applicable requirements of Rule 10A-3 of the Securities Exchange Act of 1934, as amended.

The SEC has indicated that the designation of Mr. Shiu, Dr. Hsu and Mrs. Wang as the audit committee financial experts does not: (i) make Mr. Shiu, Dr. Hsu or Mrs. Wang an “expert” for any purpose, including without limitation for purposes of Section 11 of the Securities Act as a result of this designation; (ii) impose any duties, obligations or liability on Mr. Shiu, Dr. Hsu or Mrs. Wang that are greater than those imposed on them as a member of the audit committee and our board of directors in the absence of such designation; or (iii) affect the duties, obligations or liability of any other member of the audit committee or our board of directors.

ITEM 16B. CODE OF ETHICS

We amended the Code of Ethics for Directors and Officers in November 2017, and the Employee Code of Conduct in February 2020. The Employee Code of Conduct, which is applicable to all employees, replaced the code of ethics filed with the SEC in our 2003 annual report on Form 20-F. We have also created a separate code of ethics applicable to our directors and officers. A copy of each of the Code of Ethics for Directors and Officers and the Employee Code of Conduct are displayed on our website at http://www.umc.com/english/pdf/Code_of_Ethics.pdf and http://www.umc.com/english/pdf/Employee_Code_of_Conduct-e.pdf, respectively. Shareholders may request a hard copy of the Code of Ethics for Directors and Officers and the Employee Code of Conduct free of charge. Please contact the investor relations department of our company at ir@umc.com.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by Ernst & Young, our principal external auditors, for the years indicated.

	Years ended December 31,		
	2023	2024	
	NT\$	NT\$	US\$
Audit Fees ⁽¹⁾	65,829	71,068	2,167
Audit-related Fees ⁽²⁾	5,279	6,013	183
Tax Fees ⁽³⁾	10,035	4,448	136
Total	<u>81,143</u>	<u>81,529</u>	<u>2,486</u>

- (1) Audit fees consist of fees associated with the annual audit, review of our quarterly financial statements, statutory audits and internal control review. They also include fees billed for those services that are normally provided by the independent accountants in connection with statutory and regulatory filings.
- (2) Audit-related fees consist of fees billed for assurance and services related to the performance of the audit or review of our financial statements but not described in footnote (1) above. These services include certification of our Singapore Branch to Singapore authorities and application for corporation registration.
- (3) Tax fees include fees billed for professional services rendered by Ernst & Young, primarily in connection with our tax compliance activities.

All audit and non-audit services performed by Ernst & Young were pre-approved by our audit committee. In certain circumstances, the audit committee delegates to a designated member to pre-approve such audit and non-audit services. Pre-approval by a designated member should be reported to the audit committee at its upcoming meeting.

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

Not applicable.

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

Not applicable.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

As a R.O.C. company listed on the New York Stock Exchange, or NYSE, we are subject to the U.S. corporate governance rules to the extent that these rules are applicable to foreign private issuers as defined under SEC rules. The following summary details the significant differences between our corporate governance practices and corporate governance standards for U.S. companies (i.e. non-foreign private issuers) under the NYSE listing standards.

The Legal Framework. In general, corporate governance principles for Taiwanese companies are set forth in the Company Act of the Republic of China, or the R.O.C. Company Act, the R.O.C. Securities Exchange Act and, to the extent they are listed on the Taiwan Stock Exchange, under listing rules of the Taiwan Stock Exchange. Corporate governance principles under provisions of R.O.C. law may differ in significant ways to corporate governance standards for U.S. companies listed on the NYSE. Committed to high standards of corporate governance, we have generally brought our corporate governance in line with U.S. regulations, including the formation and independence of an audit committee. However, we have not adopted certain recommended NYSE corporate governance standards where such standards are contrary to R.O.C. laws or regulations or generally prevailing business practices in Taiwan, as discussed in more detail below.

Independent Board Members. Under the NYSE listing standards applicable to U.S. companies, independent directors must comprise a majority of the board of directors. We currently have six independent directors out of a total of nine directors on our board of directors. Our standards for determining director independence substantially comply with the NYSE listing standards, which include detailed tests for determining director independence. In addition, even though our independent directors meet in committee meetings of which they are committee members, we do not hold executive sessions of non-management directors. Such requirement is contrary to the R.O.C. Company Act.

Board Committees. Under the NYSE listing standards, companies are required to have a nominating/corporate governance committee, composed entirely of independent directors. In addition to identifying individuals qualified to become board members, the nominating/corporate committee must develop and recommend to the board a set of corporate governance principles. Our nominating committee currently consists of six of our independent directors. The nominating committee is expected to assist our board to constitute a nomination policy and succession plans of the directors and the executives. We currently do not have a corporate governance committee, as such committee is not required under R.O.C. requirements. Our board of directors is responsible for regularly reviewing our corporate governance standards and practices.

Under the NYSE listing standards, companies are required to have a compensation committee, composed entirely of independent directors. Under the R.O.C. Company Act, however, companies incorporated in the R.O.C. are not required to have a compensation committee with the same standards as the NYSE listing standards, but publicly listed companies in the R.O.C. must have a remuneration committee in accordance with the applicable laws and rules in the R.O.C. We have established a remuneration committee composed of all the independent directors and convened meetings in accordance with the applicable laws and rules in the R.O.C. The remuneration committee is responsible for determining the form and amount of compensation for each of our directors and executive officers under our articles of incorporation and the remuneration committee charter. In addition to the compensation approved at the annual general meeting, in the event we have net income in any fiscal year, we will distribute 0.1% of our earnings after payment of all income taxes, deduction of any past losses and allocation of 10% of our net income for legal reserves, as remuneration to our directors pursuant to our articles of incorporation.

Equity Compensation Plans. The NYSE listing standards also require that a company's shareholders must approve equity compensation plans. Under the corresponding requirements in the R.O.C. Company Act and the R.O.C. Securities Exchange Act, shareholders' approval is required for the distribution of employee bonuses in the form of stock, while the board of directors has authority, subject to the approval of the R.O.C. Securities and Futures Bureau, to approve employee stock option plans and to grant options to employees pursuant to such plans and also has authority to approve share buy-back programs for the purpose of selling common shares so purchased to employees and the sale of such common shares to employees pursuant to such programs. We intend to continue to follow only the R.O.C. requirements.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

ITEM 16J. INSIDER TRADING POLICIES

We have adopted an insider trading policy governing the purchase, sale, and other dispositions of our securities by directors, senior management and employees. A copy of the insider trading policy has been filed herewith as Exhibit 11.3.

ITEM 16K. CYBERSECURITY

Risk management and strategy

The assessment, identification and management of material risks from cybersecurity threats are integrated into the Company's overall risk management processes. The Enterprise Information Security Committee (EISC) is responsible for assessing the risk level of information security and cybersecurity, taking appropriate actions and regularly reviewing the effectiveness of these actions. Cybersecurity risks and related matters are reported to the Enterprise Risk Management Committee, which manages and provides oversight of overall enterprise risk, regularly reviews the possibility of risk occurrence and the potential change of severity over time, and understands and assesses the effectiveness of risk management programs and related control operations.

We engage third parties in connection with such information security risk management processes. We strengthened our information security process and cybersecurity risk management by introducing information security management system certification such as ISO27001, ISO15408, etc. to reduce security risk and production anomaly. Continuous improvement is carried out through annual recertification audit by third parties. We also conduct regular penetration tests by third parties as well as reinforcements and repairs to reduce information security risks.

We have established processes to oversee and identify risks from cybersecurity threats associated with use of any third-party service provider. We also built a comprehensive multi-layer defense mechanism including firewall, intrusion detection, antivirus system, vulnerability scanning, patch management procedure and penetration testing. While using third-party service, we have implemented information security and cybersecurity management measures, including encrypting data and tracing logs, to achieve effective information protection.

The risks from cybersecurity threats may not only expose the Company to the risks of data leakage and ransom threats, but may also interrupt the production system, causing serious operating losses or even damaging the reputation of the Company. In response to previous cybersecurity incidents and potential cyber-attacks, we have enhanced cybersecurity protection mechanisms such as upgrading the antivirus software with behavior-based detection capability and implemented strict information device in/out management to minimize potential impact. We also obtained information security insurance since 2019 as one of the measures to mitigate information security risks. Besides, we joined SEMICON TAIWAN cybersecurity committee to contribute as a local enterprise responsibility.

Governance

Our information security and cybersecurity policy, which is deployed in us and our subsidiaries, is based on the following principles: (i) to establish Information Security Management rules in accordance to customer requirements, (ii) to reach a consensus that information security is everyone's responsibility through full awareness, (iii) to protect information confidentiality, integrity and availability for us and our customers, and (iv) to provide a safe production environment to ensure sustainable operation of our business. The major information security and cybersecurity objectives are aimed at antivirus, anti-intrusion and anti-leakage through the building of multiple internal controls such as firewalls, intrusion detection and antivirus systems to enhance our ability to defend against external attacks and to protect internal confidential information. For our written information security and cybersecurity policy, please refer to our website: http://www.umc.com/en/Html/information_security_risk_management.

The EISC is responsible for implementing our information security management plan, establishing and maintaining the information security management system, and coordinating the formulation and compliance of related policies. The EISC management objectives include assessing, identifying and managing material risks from cybersecurity threats, and being informed about and monitor the prevention, detection, mitigation and remediation of cybersecurity incidents through building the multi-layer information security protection mechanism. The Information Security Technology task members of the EISC have relevant expertise in information security such as network management, system management, database management, application development and information security protection.

The Vice President of Digital Function organization serves as Chief Information Security Officer (CISO) of EISC, and is responsible for establishing and maintaining the information security/cyber security strategy and processes that protect information assets. The EISC holds semiannual meetings to review information security risks and measures and strategies adopted by us, ensuring the adequacy, suitability and effectiveness of our information security management system. The EISC reports to the board of directors on the effectiveness of the information security strategy annually. Our independent director Jyuo-Min Shyu, who has relevant experience in information security, oversees and regularly reviews our information security and cyber security strategy.

PART III.

ITEM 17 FINANCIAL STATEMENTS

Not applicable.

ITEM 18 FINANCIAL STATEMENTS

The following is a list of the audited consolidated financial statements and report of independent registered public accounting firm included in this Annual Report beginning on page F-1.

	Page
<u>Consolidated Financial Statements of United Microelectronics Corporation and Subsidiaries</u>	F-1
<u>Report of Independent Registered Public Accounting Firm (PCAOB ID: 1443)</u>	F-2
<u>Consolidated Balance Sheets as of December 31, 2023 and 2024</u>	F-4
<u>Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2023 and 2024</u>	F-5
<u>Consolidated Statements of Changes in Equity for the years ended December 31, 2022, 2023 and 2024</u>	F-6
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2023 and 2024</u>	F-9
<u>Notes to the Consolidated Financial Statements</u>	F-11

ITEM 19 EXHIBITS

<u>Exhibit Number</u>	<u>Description of Exhibits</u>
*1.1	Articles of Incorporation of the Company as last amended on May 30, 2024 (English Translation)
2.1	Amended and Restated Deposit Agreement by and among the Company, JPMorgan Chase Bank, N.A., as depositary, and the Holders and Beneficial Owners of American Depository Shares evidenced by American Depository Receipts issued thereunder dated as of October 21, 2009⁽¹⁾
2.2	Form of Amendment No. 1 to the Amended and Restated Deposit Agreement among the Company, JPMorgan Chase Bank, N.A., as depositary, and the Holders and Beneficial Owners of American Depository Shares evidenced by American Depository Receipts issued thereunder⁽²⁾
2.3	Description of Securities Registered Under Section 12 of the Exchange Act⁽¹⁶⁾
4.1	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, Ko-Kuan Section, No. 20-22, Hsinchu, Taiwan, R.O.C., the site of Fab 6A (in Chinese with English summary translation)^{(3)(P)}
4.2	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, third section of first phase, Hsinchu, Taiwan, R.O.C., the site of Fab 8A and United Tower (in Chinese with English summary translation) ^{(4)(P)}
4.3	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, third section of first phase, Hsinchu, Taiwan, R.O.C., the site of Fab 8C (in Chinese with English summary translation) ^{(5)(P)}
4.4	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, third section of first phase, Hsinchu, Taiwan, R.O.C., the site of Fab 8D (in Chinese with English summary translation) ^{(6)(P)}
4.5	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, third section of second phase, Hsinchu, Taiwan, R.O.C., the site of Fab 8E (in Chinese with English summary translation) ^{(7)(P)}
4.6	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, Gin-Shan section, Hsinchu, Taiwan, R.O.C., the site of Fab 8F (in Chinese with English summary translation) ^{(8)(P)}
4.7	Lease Agreement with Southern Taiwan Science Park Administration in relation to government-owned land located at Southern Taiwan Science Park, Tainan, Taiwan, R.O.C., the site of Fab 12A (in Chinese with English summary translation) ^{(9)(P)}
4.8	Merger Agreement, entered into as of February 26, 2004, between United Microelectronics Corporation and SiS Microelectronics Corporation (English Translation)⁽¹⁰⁾
4.9	Lease Agreement with Hsinchu Science Park Administration in relation to government-owned land located at Hsinchu Science Park, Ko-Kuan section, Hsinchu, Taiwan, R.O.C., the site of Fab 8S (in Chinese with English summary translation)⁽¹¹⁾
4.10	Lease Agreement with JTC Corporation in relation to land located at Pasir Ris Wafer Fab Park, Singapore, the site of Fab12i (summary)⁽¹²⁾
4.11	Merger Agreement, entered into as of April 29, 2009, among United Microelectronics Corporation, Infoshine Technology Limited and Best Elite International Limited⁽¹³⁾

<u>Exhibit Number</u>	<u>Description of Exhibits</u>
*8.1	List of Significant Subsidiaries of United Microelectronics Corporation
11.1	Code of Ethics for Directors and Officers⁽¹⁴⁾
11.2	Employee Code of Conduct⁽¹⁵⁾
*11.3	Policies and Procedures for Refraining from Insider Trading
*12.1	Certification of our Co-president pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*12.2	Certification of our Co-president pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*12.3	Certification of our Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
**13.1	Certification of our Co-president pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**13.2	Certification of our Co-president pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**13.3	Certification of our Chief Financial Officer pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*15.1	Consent of Independent Registered Public Accounting Firm
97.1	Policy Relating to Recovery of Erroneously Awarded Compensation⁽¹⁷⁾
*101.INS	Inline XBRL Instance Document. the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
*101.SCH	Inline XBRL Taxonomy Extension Schema Document
*101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
*101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
*101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
*104	Cover Page Interactive Data File (embedded within the inline XBRL document)

* Filed herewith.

** Furnished herewith.

- (1) Incorporated by reference to Exhibit (a) to our Registration Statement on Form F-6 (File No. 333-162437) filed with the SEC on October 13, 2009.
- (2) Incorporated by reference to Exhibit (a)(2) to our Registration Statement on Form F-6 (File No. 333-172990) filed with the SEC on April 12, 2017.
- (3) Incorporated by reference to Exhibit 4.1 to our Annual Report on Form 20-F for the fiscal year ended December 31, 2006 (File No. 001-15128) filed with the SEC on May 9, 2007.
- (4) Incorporated by reference to Exhibit 10.7 to our Registration Statement on Form F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.
- (5) Incorporated by reference to Exhibit 10.8 to our Registration Statement on Form F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.
- (6) Incorporated by reference to Exhibit 10.9 to our Registration Statement on Form F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.
- (7) Incorporated by reference to Exhibit 10.10 to our Registration Statement on Form F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.
- (8) Incorporated by reference to Exhibit 10.11 to our Registration Statement on F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.
- (9) Incorporated by reference to Exhibit 10.12 to our Registration Statement on F-1 (File No. 333-12444) filed with the SEC on August 28, 2000, as amended.

- (10) Incorporated by reference to Exhibit 4.8 to our Annual Report on Form 20-F for the fiscal year ended December 31, 2003 (File No. 001-15128) filed with the SEC on June 17, 2004.
 - (11) Incorporated by reference to Exhibit 4.9 to our Annual Report on Form 20-F for the fiscal year ended December 31, 2006 (File No. 001-15128) filed with the SEC on May 9, 2007.
 - (12) Incorporated by reference to Exhibit 4.10 to our Annual Report on Form 20-F for the fiscal year ended December 31, 2006 (File No. 001-15128) filed with the SEC on May 9, 2007.
 - (13) Incorporated by reference to Exhibit 99.1 to the Form 6-K furnished to the SEC on May 8, 2009.
 - (14) Incorporated by reference to Exhibit 99.1 to the Form 6-K furnished to the SEC on March 25, 2005.
 - (15) Incorporated by reference to Exhibit 99.2 to the Form 6-K furnished to the SEC on May 26, 2006.
 - (16) Incorporated by reference to Item 12.D. in this Annual Report on Form 20-F for the fiscal year ended December 31, 2024.
 - (17) Incorporated by reference to Exhibit 97.1 to our Annual Report on Form 20-F for the fiscal year ended December 31, 2023 (File No. 001-15128) filed with the SEC on April 25, 2024.
- (P) Paper exhibits

SIGNATURES

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

UNITED MICROELECTRONICS CORPORATION

By: /s/ Chitung Liu
Name: Chitung Liu
Title: Chief Financial Officer and Senior Vice President

Date: April 24, 2025

United Microelectronics Corporation and Subsidiaries

Consolidated Financial Statements for years ended December 31, 2022, 2023 and 2024

Together with Report of Independent Registered Public Accounting Firm

F-1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of United Microelectronics Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of United Microelectronics Corporation and subsidiaries (the Company) as of December 31, 2024 and 2023, the related consolidated statements of comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated April 24, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation for Slow-Moving Inventories

Description of the Matter

As of December 31, 2024, the Company's net inventories amounted to NT\$35,782 million. As the semiconductor industry is characterized by rapid changes in technology, management has to evaluate and estimate a reserve for slow-moving inventories that are expected to be written-off or otherwise disposed of at a future date.

Auditing the valuation for slow-moving inventories was complex due to the judgmental nature of the Company's estimation of the appropriate amount of the slow-moving inventories reserve, utilizing key inputs including historical usage, write-off activities and inventory aging.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls over the Company's slow-moving inventories reserve process. For example, we tested the control over management's review of the reserve method and the key inputs used in the valuation process.

To test the slow-moving inventories reserve, our audit procedures included, amongst others, evaluate the appropriateness of management's methodology to determine inventory aging and inventory reserve percentages, compare slow-moving inventories reserve to historical usage and write-off activities, and test the accuracy and completeness of the underlying data used in such determination. We also recalculated inventory reserve for the application of the reserve percentages to the inventory aging categories. In addition, we evaluated the adequacy of disclosures of inventories. Please refer to Notes 5 and 6 to the Company's consolidated financial statements.

/s/ Ernst & Young

We have served as the Company's auditor since 2000.

Taipei, Taiwan
Republic of China

April 24, 2025

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
As of December 31, 2023 and 2024
(Expressed in Thousands, Except for Par Value)

	Notes	As of December 31,		
		2023 NTS	2024 NTS	US\$
Assets				
Current assets				
Cash and cash equivalents	4, 6(1)	132,553,615	105,000,226	3,202,203
Financial assets at fair value through profit or loss, current	4, 5, 6(2)	443,601	606,018	18,482
Financial assets at fair value through other comprehensive income, current	4, 5, 6(3)	5,753,379	5,893,377	179,731
Financial assets measured at amortized cost, current	4, 6(4)	6,131,077	3,739,224	114,035
Contract assets, current	4, 6(21)	739,528	625,713	19,082
Accounts receivable, net	4, 6(5)	29,237,550	32,723,426	997,970
Accounts receivable-related parties, net	4, 7	347,964	620,013	18,909
Other receivables	4	2,707,400	1,651,494	50,366
Current tax assets	4	130,123	83,944	2,560
Inventories, net	4, 5, 6(6)	35,712,558	35,782,464	1,091,261
Other current assets	6(21)	3,040,597	2,951,985	90,027
Total current assets		<u>216,797,392</u>	<u>189,677,884</u>	<u>5,784,626</u>
Non-current assets				
Financial assets at fair value through profit or loss, noncurrent	4, 5, 6(2)	16,694,860	17,850,914	544,401
Financial assets at fair value through other comprehensive income, noncurrent	4, 5, 6(3)	11,930,581	11,315,951	345,104
Financial assets measured at amortized cost, noncurrent	4, 6(4)	222,691	—	—
Investments accounted for under the equity method	4, 6(7), 7	32,785,800	33,274,869	1,014,787
Property, plant and equipment	4, 6(8), 8	239,123,248	279,059,037	8,510,492
Right-of-use assets	4, 6(9), 8	7,000,355	8,039,015	245,167
Intangible assets	4, 6(10), 7	4,372,555	4,154,315	126,695
Deferred tax assets	4, 6(26)	5,130,411	5,224,503	159,332
Prepayment for equipment		4,725,583	4,932,505	150,427
Refundable deposits	8	2,708,823	1,992,400	60,762
Other noncurrent assets		5,084,533	4,647,562	141,737
Total non-current assets		<u>329,779,440</u>	<u>370,491,071</u>	<u>11,298,904</u>
Total assets		<u>546,576,832</u>	<u>560,168,955</u>	<u>17,083,530</u>
Liabilities and Equity				
Current liabilities				
Short-term loans	6(11), 6(28)	13,530,000	8,515,000	259,683
Financial liabilities at fair value through profit or loss, current	4, 6(12)	1,019,362	901,000	27,478
Contract liabilities, current	4, 6(21)	3,250,712	2,200,561	67,111
Accounts payable		7,526,159	7,633,427	232,797
Other payables	4, 6(20), 6(22), 7	25,670,984	24,103,882	735,099
Payables on equipment		19,196,256	10,522,489	320,905
Current tax liabilities	4	9,539,764	5,504,166	167,861
Lease liabilities, current	4, 6(9), 6(28)	514,324	636,357	19,407
Current portion of long-term liabilities	4, 6(13), 6(14), 6(28)	16,006,797	10,994,998	335,316
Other current liabilities	4, 6(16), 6(17), 6(18), 6(28)	5,642,792	6,387,463	194,799
Total current liabilities		<u>101,897,150</u>	<u>77,399,343</u>	<u>2,360,456</u>
Non-current liabilities				
Contract liabilities, noncurrent	4, 6(21)	430,640	459,620	14,017
Bonds payable	4, 6(13), 6(28)	24,579,651	24,584,979	749,771
Long-term loans	6(14), 6(28)	20,656,248	30,948,500	943,840
Deferred tax liabilities	4, 6(26)	5,631,964	8,118,251	247,583
Lease liabilities, noncurrent	4, 6(9), 6(28)	4,878,863	5,782,659	176,354
Net defined benefit liabilities, noncurrent	4, 6(15)	2,205,085	1,432,249	43,679
Guarantee deposits	6(28)	40,122,956	41,953,360	1,279,456
Other noncurrent liabilities	4, 6(16), 6(18), 6(20), 6(28)	2,457,307	3,783,283	115,379
Total non-current liabilities		<u>100,962,714</u>	<u>117,062,901</u>	<u>3,570,079</u>
Total liabilities		<u>202,859,864</u>	<u>194,462,244</u>	<u>5,930,535</u>
Commitments and contingencies				
Equity attributable to the parent company			9	
Capital				
Common stock - NTS10 par value	4, 6(19)			
Authorized: 26,000,000 thousand shares		125,298,222	125,607,164	3,830,655
Issued: 12,529,822 thousand shares as of December 31, 2023				
Issued: 12,560,716 thousand shares as of December 31, 2024				
Additional paid-in capital				
Premiums	4, 6(19), 6(20)			
Treasury stock transactions		3,997,662	4,960,958	151,295
Transactions with noncontrolling interests		8,277,564	9,067,812	276,542
Share-based payment		3,156,983	3,150,745	96,089
Other		2,373,830	1,877,097	57,246
Retained earnings				
Legal reserve	6(19)	19,396	20,858	636
Special reserve		30,472,125	36,727,862	1,120,093
Unappropriated earnings		2,734,058	—	—
Other components of equity				
Exchange differences on translation of foreign operations	4, 6(20)	(8,439,670)	915,373	27,916
Unrealized gains or losses on financial assets measured at fair value through other comprehensive income		10,889,828	10,684,860	325,857
Unearned employee compensation		(1,991,331)	(1,992,034)	(60,751)
Treasury stock				
Total equity attributable to the parent company		<u>343,376,109</u>	<u>365,450,098</u>	<u>11,145,169</u>
Non-controlling interests		<u>6(19)</u>	<u>340,859</u>	<u>256,613</u>
Total equity		<u>343,716,968</u>	<u>365,706,711</u>	<u>11,152,995</u>
Total liabilities and equity		<u>546,576,832</u>	<u>560,168,955</u>	<u>17,083,530</u>

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the years ended December 31, 2022, 2023 and 2024

(Expressed in Thousands, Except for Earnings per Share)

	Notes	For the years ended December 31,			
		2022		2023	
		NT\$	NT\$	NT\$	US\$
Operating revenues					
Operating costs	4, 6(21), 7	278,705,264	222,533,000	232,302,584	7,084,556
Gross profit	4, 6(6), 6(10), 6(15), 6(20), 6(21), 6(22), 7	(152,940,887)	(144,789,162)	(156,648,504)	(4,777,326)
Operating expenses					
Sales and marketing expenses		(4,182,929)	(3,225,154)	(2,701,483)	(82,387)
General and administrative expenses		(9,672,613)	(7,477,037)	(7,117,416)	(217,060)
Research and development expenses		(12,953,534)	(13,283,830)	(15,616,039)	(476,244)
Expected credit impairment gains (losses)		(2,723)	130,518	69,519	2,120
Subtotal		(26,811,799)	(23,855,503)	(25,365,419)	(773,571)
Net other operating income and expenses	4, 6(16), 6(23)	5,339,647	4,002,326	3,123,909	40,375
Operating income		104,292,225	57,890,661	51,612,570	1,574,034
Non-operating income and expenses					
Interest income	4	2,022,314	4,853,124	3,670,218	111,931
Other income	4	2,163,043	1,773,498	1,253,376	38,224
Other gains and losses	4, 6(24)	(1,134,540)	223,096	(302,704)	(9,232)
Finance costs	6(24)	(1,866,329)	(1,570,374)	(1,756,100)	(53,556)
Share of profit or loss of associates and joint ventures	4, 6(7)	1,626,103	4,307,614	1,238,628	37,775
Bargain purchase gain in acquisition of equity investee	4, 6(7)	—	494,001	—	—
Exchange gain, net	4	2,522,844	478,784	1,328,832	40,526
Subtotal		5,333,435	10,559,743	5,432,250	165,668
Income from continuing operations before income tax		109,625,660	68,450,404	57,044,820	1,739,702
Income tax expense	4, 6(26)	(19,326,895)	(8,311,270)	(8,370,194)	(255,267)
Net income		90,298,765	60,139,134	48,674,626	1,484,435
Other comprehensive income (loss)	6(25)				
Items that will not be reclassified subsequently to profit or loss					
Remeasurements of defined benefit pension plans	4, 6(15)	296,804	402,234	188,451	5,747
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	4	(4,646,064)	5,530,359	(539,327)	(16,448)
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss		(1,694,965)	1,610,116	301,134	9,184
Income tax related to items that will not be reclassified subsequently	4, 6(26)	(6,999)	(414,395)	16,216	495
Subtotal		(6,051,224)	7,128,314	(33,526)	(1,022)
Items that may be reclassified subsequently to profit or loss					
Exchange differences on translation of foreign operations		9,292,308	(2,386,278)	8,902,745	271,508
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss		91,442	(74,418)	323,374	9,862
Income tax related to items that may be reclassified subsequently	4, 6(26)	859,566	390,428	129,000	3,934
Subtotal		10,243,316	(2,070,268)	9,355,119	285,304
Total other comprehensive income (loss)		4,192,092	5,058,046	9,321,593	284,282
Total comprehensive income (loss)		94,490,857	65,197,180	57,996,219	1,768,717
Net income (loss) attributable to:					
Shareholders of the parent		89,478,805	59,688,950	48,779,300	1,487,627
Non-controlling interests		819,960	450,184	(104,674)	(3,192)
Comprehensive income (loss) attributable to:		90,298,765	60,139,134	48,674,626	1,484,435
Shareholders of the parent		93,670,889	64,747,010	58,100,817	1,771,907
Non-controlling interests		819,968	450,170	(104,598)	(3,190)
Earnings per share (NTD)	4, 6(27)	94,490,857	65,197,180	57,996,219	1,768,717
Earnings per share-basic		7.40	4.92	4.01	0.12
Earnings per share-diluted		7.16	4.82	3.94	0.12

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
For the year ended December 31, 2022
(Expressed in Thousands)

	Capital	Equity Attributable to the Parent Company										Non-Controlling Interests	Total Equity
		Retained Earnings			Other Components of Equity								
	Common Stock	Additional Paid-in Capital	Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translation of Foreign Operations	Unrealized Gains or Losses on Financial Assets Measured at Fair Value through Other Comprehensive Income	Unearned Employee Compensation	Treasury Stock	Total			
	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS
Balance as of January 1, 2022	124,832,476	50,080,596	15,734,416	8,164,648	83,155,758 (153,843)	(16,612,724)	9,201,181	(2,212,441)	(8,192,044)	264,151,866 (153,843)	223,181 (66,089)	264,375,047 (219,932)	
Impact of retroactive applications													
Adjusted balance as of January 1, 2022	124,832,476	50,080,596	15,734,416	8,164,648	83,001,915	(16,612,724)	9,201,181	(2,212,441)	(8,192,044)	263,998,023	157,092	264,155,115	
Appropriation and distribution of 2021 retained earnings													
Legal reserve	—	—	5,832,570	—	(5,832,570)	—	—	—	—	—	—	—	—
Special reserve reversed	—	—	—	(3,250,434)	3,250,434	—	—	—	—	—	—	—	—
Cash distributed from additional paid-in capital	—	(37,446,370)	—	—	—	—	—	—	—	(37,446,370)	—	(37,446,370)	
Net income for the year ended December 31, 2022	—	—	—	—	89,478,805	—	—	—	—	89,478,805	819,960	90,298,765	
Other comprehensive income (loss) for the year ended December 31, 2022	—	—	—	—	258,171	10,243,308	(6,309,395)	—	—	4,192,084	8	4,192,092	
Total comprehensive income (loss)	—	—	—	—	89,736,976	10,243,308	(6,309,395)	—	—	93,670,889	819,968	94,490,857	
Share-based payment transaction	215,014	755,313	—	—	(1,490)	—	—	381,411	—	1,350,248	1,490	1,351,738	
Share of changes in net assets of associates and joint ventures accounted for using equity method	—	55,392	—	—	(797)	—	797	—	—	55,392	—	55,392	
Changes in subsidiaries' ownership	—	—	—	—	(429,097)	—	—	—	—	(429,097)	(1,339)	(430,436)	
Adjustments due to reciprocal stockholdings held by subsidiaries and associates	—	635,761	—	—	—	—	—	—	(429,904)	205,857	—	205,857	
Non-Controlling Interests	—	—	—	—	—	—	—	—	—	—	5,456	5,456	
Others	—	1,062,327	—	—	—	—	—	—	—	—	(638,988)	423,339	
Balance as of December 31, 2022	125,047,490	15,143,019	21,566,986	4,914,214	169,725,371	(6,369,416)	2,892,583	(1,831,030)	(8,621,948)	322,467,269	343,679	322,810,948	

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
For the year ended December 31, 2023
(Expressed in Thousands)

	Equity Attributable to the Parent Company												
	Capital		Retained Earnings			Other Components of Equity							
	Common Stock	Additional Paid-in Capital	Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translation of Foreign Operations	Unrealized Gains or Losses on Financial Assets Measured at Fair Value through Other Comprehensive Income	Unearned Employee Compensation	Treasury Stock	Total	Non-Controlling Interests	Total Equity	
	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	NTS	
Balance as of January 1, 2023	125,047,490	15,143,019	21,566,986	4,914,214	169,725,371	(6,369,416)	2,892,583	(1,831,030)	(8,621,948)	322,467,269	343,679	322,810,948	
Appropriation and distribution of 2022 retained earnings													
Legal reserve	—	—	8,905,139	—	(8,905,139)	—	—	—	—	—	—	—	
Special reserve reversed	—	—	—	(2,180,156)	2,180,156	—	—	—	—	—	—	—	
Cash dividends	—	—	—	—	(45,017,096)	—	—	—	(45,017,096)	—	(45,017,096)	—	
Net income for the year ended December 31, 2023	—	—	—	—	59,688,950	—	—	—	59,688,950	450,184	60,139,134	—	
Other comprehensive income (loss) for the year ended December 31, 2023	—	—	—	—	327,156	(2,070,254)	6,801,158	—	—	5,058,060	(14)	5,058,046	
Total comprehensive income (loss)	—	—	—	—	60,016,106	(2,070,254)	6,801,158	—	—	64,747,010	450,170	65,197,180	
Share-based payment transaction	250,732	934,945	—	—	(5,170)	—	—	(160,301)	—	1,020,206	5,817	1,026,023	
Share of changes in net assets of associates and joint ventures accounted for using equity method	—	46,265	—	—	403,488	—	(432,357)	—	—	17,396	—	17,396	
Disposal of investments accounted for under the equity method	—	5	—	—	(56)	—	56	—	—	5	—	5	
The differences between the fair value of the consideration paid or received from acquiring or disposing subsidiaries and the carrying amounts of the subsidiaries	—	2,572,818	—	—	—	—	—	—	—	2,572,818	—	2,572,818	
Changes in subsidiaries' ownership	—	3,485	—	—	(292,225)	—	—	—	—	(288,740)	456	(288,284)	
Adjustments due to reciprocal stockholdings held by subsidiaries and associates	—	851,695	—	—	(85,827)	—	—	—	(1,181,830)	(415,962)	—	(415,962)	
Disposal of equity instruments investments measured at fair value through other comprehensive income	—	—	—	—	(1,628,388)	—	1,628,388	—	—	—	—	—	
Non-Controlling Interests	—	—	—	—	—	—	—	—	—	4,187	4,187	—	
Others	—	(1,726,797)	—	—	—	—	—	—	—	(1,726,797)	(463,450)	(2,190,247)	
Balance as of December 31, 2023	125,298,222	17,825,435	30,472,125	2,734,058	176,391,220	(8,439,670)	10,889,828	(1,991,331)	(9,803,778)	343,376,109	340,859	343,716,968	—

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

For the year ended December 31, 2024

(Expressed in Thousands)

	Equity Attributable to the Parent Company											
	Capital			Retained Earnings			Other Components of Equity					
	Common Stock NT\$	Additional Paid-in Capital NT\$	Legal Reserve NT\$	Special Reserve NT\$	Unappropriated Earnings NT\$	Exchange Differences on Translation of Foreign Operations NT\$	Unrealized Gains or Losses on Financial Assets Measured at Fair Value through Other Comprehensive Income NT\$	Unearned Employee Compensation NT\$	Treasury Stock NT\$	Total NT\$	Non-Controlling Interests NT\$	Total Equity NT\$
Balance as of January 1, 2024	125,298,222	17,825,435	30,472,125	2,734,058	176,391,220	(8,439,670)	10,889,828	(1,991,331)	(9,803,778)	343,376,109	340,859	343,716,968
Appropriation and distribution of 2023 retained earnings												
Legal reserve	—	—	6,255,737	—	(6,255,737)	—	—	—	—	—	—	—
Special reserve reversed	—	—	—	(2,734,058)	2,734,058	—	—	—	—	—	—	—
Cash dividends	—	—	—	—	(37,587,102)	—	—	—	(37,587,102)	—	(37,587,102)	—
Net income (loss) for the year ended December 31, 2024	—	—	—	—	48,779,300	—	—	—	48,779,300	(104,674)	48,674,626	—
Other comprehensive income (loss) for the year ended December 31, 2024	—	—	—	—	171,373	9,355,043	(204,899)	—	—	9,321,517	76	9,321,593
Total comprehensive income (loss)	—	—	—	—	48,950,673	9,355,043	(204,899)	—	—	58,100,817	(104,598)	57,996,219
Share-based payment transaction	308,942	466,981	—	—	—	—	—	(703)	—	775,220	1,913	777,133
Share of changes in net assets of associates and joint ventures accounted for using equity method	—	(26,085)	—	—	69	—	(69)	—	—	(26,085)	—	(26,085)
Changes in subsidiaries' ownership	—	19,429	—	—	—	—	—	—	—	19,429	(7,910)	11,519
Adjustments due to reciprocal stockholdings held by subsidiaries and associates	—	790,248	—	—	—	—	—	—	—	790,248	—	790,248
Non-Controlling Interests	—	—	—	—	—	—	—	—	—	—	26,349	26,349
Others	—	1,462	—	—	—	—	—	—	—	1,462	—	1,462
Balance as of December 31, 2024	<u>125,607,164</u>	<u>19,077,470</u>	<u>36,727,862</u>	<u>—</u>	<u>184,233,181</u>	<u>915,373</u>	<u>10,684,860</u>	<u>(1,992,034)</u>	<u>(9,803,778)</u>	<u>365,450,098</u>	<u>256,613</u>	<u>365,706,711</u>

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended December 31, 2022, 2023 and 2024
(Expressed in Thousands)

	For the years ended December 31,			
	2022	2023	2024	
	NT\$	NT\$	NT\$	US\$
Cash flows from operating activities:				
Net income before tax	109,625,660	68,450,404	57,044,820	1,739,702
Adjustments to reconcile net income before tax to net cash provided by operating activities:				
Depreciation	41,328,374	37,757,556	45,472,102	1,386,767
Amortization	2,841,334	2,726,481	2,695,564	82,207
Expected credit impairment losses (gains)	2,723	(130,518)	(69,519)	(2,120)
Net loss of financial assets and liabilities at fair value through profit or loss	1,247,962	40,553	320,956	9,788
Interest expense	1,785,311	1,473,729	1,678,702	51,196
Interest income	(2,022,314)	(4,853,124)	(3,670,218)	(111,931)
Dividend income	(2,163,043)	(1,773,498)	(1,202,714)	(36,679)
Share-based payment	1,351,738	1,031,896	788,849	24,058
Share of profit of associates and joint ventures	(1,626,103)	(4,307,614)	(1,238,628)	(37,775)
Gain on disposal of property, plant and equipment	(482,983)	(268,293)	(72,402)	(2,208)
Gain on disposal of subsidiary	—	—	(352)	(11)
Loss (gain) on disposal of investments accounted for under the equity method	(50,553)	(163,395)	2,093	64
Loss on repurchases of bonds	203,851	—	—	—
Exchange loss on financial assets and liabilities	2,436,159	85,353	1,331,907	40,619
Bargain purchase gain in acquisition of equity investee	—	(494,001)	—	—
Gain on lease modification	(1,162)	(113)	(8,599)	(262)
Amortization of deferred government grants	(4,163,746)	(2,663,843)	(841,091)	(25,651)
Income and expense adjustments	40,687,548	28,461,169	45,186,650	1,378,062
Changes in operating assets and liabilities:				
Financial assets and liabilities at fair value through profit or loss	14,825	1,945,525	(543,068)	(16,562)
Contract assets	(47,842)	(381,105)	110,439	3,368
Notes receivable and accounts receivable	(1,115,482)	7,201,939	(3,269,237)	(99,702)
Other receivables	(914,736)	(526,223)	662,553	20,206
Inventories	(7,637,528)	(4,944,756)	365,305	11,141
Other current assets	(4,041,038)	939,912	192,256	5,863
Contract fulfillment costs	(97,027)	(164,316)	303,311	9,250
Contract liabilities	(252,594)	(267,858)	(599,528)	(18,284)
Accounts payable	490,949	(1,341,114)	14,590	445
Other payables	9,230,484	(5,683,081)	(1,173,347)	(35,784)
Other current liabilities	791,279	1,470,483	1,056,250	32,213
Net defined benefit liabilities	(711,115)	(262,084)	(584,384)	(17,822)
Other noncurrent liabilities	(8,039)	(89,593)	(4,947)	(151)
Cash generated from operations	146,015,344	94,809,302	98,761,663	3,011,945
Interest received	1,852,783	4,579,972	4,151,879	126,620
Dividend received	4,132,529	3,649,805	2,274,607	69,369
Interest paid	(1,422,337)	(1,027,500)	(1,339,730)	(40,858)
Income tax paid	(4,717,790)	(16,011,870)	(9,976,377)	(304,251)
Net cash provided by operating activities	145,860,529	85,999,709	93,872,042	2,862,825
Cash flows from investing activities:				
Acquisition of financial assets at fair value through profit or loss	(1,041,792)	(1,182,248)	(1,894,858)	(57,788)
Proceeds from disposal of financial assets at fair value through profit or loss	773,318	525,237	989,051	30,163
Acquisition of financial assets at fair value through other comprehensive income or loss	—	—	(64,694)	(1,973)
Acquisition of financial assets measured at amortized cost	(1,682,788)	(6,296,321)	(4,167,692)	(127,102)
Proceeds from redemption of financial assets measured at amortized cost	30,179,933	678,907	6,702,256	204,399
Acquisition of investments accounted for under the equity method	—	—	(533,973)	(16,285)
Proceeds from disposal of investments accounted for under the equity method	—	293,266	—	—
Proceeds from capital reduction of investments accounted for under the equity method	—	1,303,106	1,601,874	48,853
Increase in prepayment for investments	—	—	(7,135)	(217)
Disposal of subsidiary	—	—	(196,009)	(5,978)
Acquisition of property, plant and equipment	(80,127,628)	(91,473,668)	(88,543,595)	(2,700,323)
Proceeds from disposal of property, plant and equipment	669,282	323,385	120,939	3,688
Increase in refundable deposits	(558,491)	(44,100)	(769,153)	(23,457)
Decrease in refundable deposits	186,175	83,856	1,519,269	46,333
Acquisition of intangible assets	(2,756,155)	(2,546,516)	(2,799,420)	(85,374)
Government grants related to assets acquisition	173,909	591,086	2,131,264	64,997
Increase in other noncurrent assets	(243,084)	(42,532)	(29,227)	(891)
Decrease in other noncurrent assets	55	—	—	—
Net cash used in investing activities	(54,427,266)	(97,786,542)	(85,941,103)	(2,620,955)

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended December 31, 2022, 2023 and 2024
(Expressed in Thousands)

	For the years ended December 31,			
	2022 NT\$	2023 NT\$	2024 NT\$	US\$
Cash flows from financing activities:				
Increase in short-term loans	228,980	29,120,960	30,683,900	935,770
Decrease in short-term loans	(2,194,664)	(15,590,960)	(35,698,900)	(1,088,713)
Cash payments for the principal portion of the lease liability	(712,854)	(666,439)	(731,138)	(22,298)
Proceeds from bonds issued	—	10,000,000	—	—
Bonds issuance costs	—	(10,755)	(465)	(14)
Redemption of bonds	(13,305,050)	—	(8,500,000)	(259,225)
Proceeds from long-term loans	2,319,371	15,416,130	36,286,030	1,106,619
Repayments of long-term loans	(21,135,630)	(11,558,426)	(23,107,596)	(704,715)
Increase in guarantee deposits	15,823,396	11,651,109	68,041	2,075
Decrease in guarantee deposits	(838,455)	(1,227,764)	(640,362)	(19,529)
Decrease in other financial liabilities	—	(21,209,443)	—	—
Cash dividends and cash distributed from additional paid-in capital	(37,445,300)	(45,014,783)	(37,585,606)	(1,146,252)
Change in non-controlling interests	5,456	4,187	26,349	803
Net cash used in financing activities	<u>(57,254,750)</u>	<u>(29,086,184)</u>	<u>(39,199,747)</u>	<u>(1,195,479)</u>
Effect of exchange rate changes on cash and cash equivalents	7,018,133	(392,145)	3,715,419	113,310
Net increase (decrease) in cash and cash equivalents	41,196,646	(41,265,162)	(27,553,389)	(840,299)
Cash and cash equivalents at beginning of year	<u>132,622,131</u>	<u>173,818,777</u>	<u>132,553,615</u>	<u>4,042,502</u>
Cash and cash equivalents at end of year	<u>173,818,777</u>	<u>132,553,615</u>	<u>105,000,226</u>	<u>3,202,203</u>

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

UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in Thousands of New Taiwan Dollars unless Otherwise Specified)

1. HISTORY AND ORGANIZATION

United Microelectronics Corporation (UMC) was incorporated in Republic of China (R.O.C.) in May 1980 and commenced operations in April 1982. UMC is a full service semiconductor wafer foundry, and provides a variety of services to satisfy customer needs. UMC's ordinary shares were publicly listed on the Taiwan Stock Exchange (TWSE) in July 1985 and its American Depository Shares (ADSs) were listed on the New York Stock Exchange (NYSE) in September 2000.

The address of its registered office and principal place of business is No. 3, Li-Hsin 2nd Road, Hsinchu Science Park, Hsinchu, Taiwan. The principal operating activities of UMC and its subsidiaries (collectively as "the Company") are described in Notes 4(3) and 12.

2. DATE AND PROCEDURES OF AUTHORIZATION OF FINANCIAL STATEMENTS FOR ISSUE

The consolidated financial statements of the Company were approved and authorized for issue by the audit committee of the Board of Directors on April 23, 2025.

3. NEW ACCOUNTING PRONOUNCEMENT UNDER INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRSs)

- (1) The Company applied International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), and Interpretations issued, revised or amended which have been issued by the International Accounting Standards Board (IASB) and become effective for annual periods beginning on or after January 1, 2024. There are no newly adopted or revised standards and interpretations that have material impact on the Company's financial position and performance.

- (2) The Company has not adopted the following new, revised or amended IFRSs that have been issued by the IASB but not yet effective:

New, Revised or Amended Standards and Interpretations	Effective Date issued by IASB
IFRS 10 “Consolidated Financial Statements” and IAS 28 “Investments in Associates and Joint Ventures” - Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	To be determined by IASB
Amendments to IAS 21 “The Effects of Changes in Foreign Exchange Rates” - Lack of Exchangeability	January 1, 2025
IFRS 18 “Presentation and Disclosure in Financial Statements”	January 1, 2027
IFRS 19 “Disclosure Initiative - Subsidiaries without Public Accountability: Disclosures”	January 1, 2027
Amendments to IFRS 9 “Financial Instruments” and IFRS 7 “Financial Instruments: Disclosures” - Amendments to the Classification and Measurement of Financial Instruments	January 1, 2026
Annual Improvements to IFRS Accounting Standards - Volume 11	January 1, 2026
Amendments to IFRS 9 “Financial Instruments” and IFRS 7 “Financial Instruments: Disclosures” - Contracts Referencing Nature-dependent Electricity	January 1, 2026

- (3) The potential effects of adopting the standards or interpretations issued by IASB on the Company’s financial statements in future periods are summarized as below:

a. Amendments to IFRS 10 “Consolidated Financial Statements” (IFRS 10) and IAS 28 “Investments in Associates and Joint Ventures” (IAS 28) - Sale or Contribution of Assets between an Investor and its Associate or Joint Venture

The amendments address the inconsistency between the requirements in IFRS 10 and IAS 28, in dealing with the loss of control of a subsidiary that is contributed to an associate or a joint venture. IAS 28 restricts gains and losses arising from contributions of non-monetary assets to an associate or a joint venture to the extent of the interest attributable to the other equity holders in the associate or joint venture. IFRS 10 requires full profit or loss recognition on the loss of control of a subsidiary. IAS 28 was amended so that the gain or loss resulting from the sale or contribution of assets that constitute a business as defined in IFRS 3 “Business Combinations” (IFRS 3) between an investor and its associate or joint venture is recognized in full.

IFRS 10 was also amended so that the gain or loss resulting from the sale or contribution of a subsidiary that does not constitute a business as defined in IFRS 3 between an investor and its associate or joint venture is recognized only to the extent of the unrelated investors’ interests in the associate or joint venture. The effective date of this amendment has been deferred indefinitely, but early adoption is allowed.

b. Amendments to IAS 21 “The Effects of Changes in Foreign Exchange Rates” - Lack of Exchangeability

These amendments specify whether a currency is exchangeable into another currency and, when it is not, to determine the exchange rate to use and the disclosures to provide.

c. IFRS 18 “Presentation and Disclosure in Financial Statements” (IFRS 18)

IFRS 18 replaces IAS 1 “Presentation of Financial Statements”. The main changes in the new standard are as below:

i. Improved comparability in the statement of profit or loss (income statement)

IFRS 18 requires entities to classify all income and expenses within their statement of profit or loss into one of five categories: operating; investing; financing; income taxes; and discontinued operations. The first three categories are new, to improve the structure of the income statement, and requires all entities to provide new defined subtotals, including operating profit or loss. The improved structure and new subtotals will give investors a consistent starting point for analyzing entities' performance and make it easier to compare entities.

ii. Enhanced transparency of management-defined performance measures

IFRS 18 requires entities to disclose explanations of those entity-specific measures that are related to the income statement, referred to as management-defined performance measures.

iii. Useful grouping of information in the financial statements

IFRS 18 sets out enhanced guidance on how to organize information and whether to provide it in the primary financial statements or in the notes. The changes are expected to provide more detailed and useful information. IFRS 18 also requires entities to provide more transparency about operating expenses, helping investors to find and understand the information they need.

d. [Amendments to IFRS 9 “Financial Instruments” \(IFRS 9\) and IFRS 7 “Financial Instruments: Disclosures” \(IFRS 7\) - Amendments to the Classification and Measurement of Financial Instruments](#)

The amendments include:

- i. Clarify that a financial liability is derecognised on the settlement date and describe the accounting treatment for settlement of financial liabilities using an electronic payment system before the settlement date.
- ii. Clarify how to assess the contractual cash flow characteristics of financial assets that include environmental, social and governance (ESG)-linked features and other similar contingent features.
- iii. Clarify the treatment of non-recourse assets and contractually linked instruments.
- iv. Require additional disclosures in IFRS 7 for financial assets and liabilities with contractual terms that reference a contingent event (including those that are ESG-linked), and equity instruments classified at fair value through other comprehensive income.

e. [Amendments to IFRS 9 “Financial Instruments” \(IFRS 9\) and IFRS 7 “Financial Instruments: Disclosures” \(IFRS 7\) - Contracts Referencing Nature-dependent Electricity](#)

The amendments include:

- i. Clarify the application of the “own-use” requirements.
- ii. Permit hedge accounting if these contracts are used as hedging instruments.
- iii. Add new disclosure requirements to enable investors to understand the effect of these contracts on a company’s financial performance and cash flows.

The Company is currently evaluating the potential impact of the aforementioned standards and interpretations listed (c) - (e) to the Company’s financial position and performance, and the related impact will be disclosed when the evaluation is completed.

The rest of the standards listed are not expected to have material impact on the Company’s financial position and performance.

4. **SUMMARY OF MATERIAL ACCOUNTING POLICIES**

(1) **Statement of Compliance**

The Company’s consolidated financial statements were prepared in accordance with IFRSs, including IFRS, IAS, IFRIC Interpretations and SIC Interpretations, as issued by IASB.

(2) Basis of Preparation

The consolidated financial statements have been prepared on a historical cost basis, except for financial instruments measured at fair value.

(3) General Description of Reporting Entity

a. Principles of consolidation

Subsidiaries are fully consolidated from the date of acquisition (the date on which the Company obtains control), and continue to be consolidated until the date that such control ceases. The Company controls an entity when the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. All intra-group balances, transactions, unrealized gains and losses and dividends resulting from intra-group transactions are eliminated in full.

A change in the ownership interest of a subsidiary, without a change of control, is accounted for as an equity transaction. Total comprehensive income of subsidiaries is attributed to the shareholders of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

If the Company loses control over a subsidiary, the Company derecognizes the assets and liabilities of the subsidiary, as well as any non-controlling interests previously recorded by the Company. A gain or loss is recognized in profit or loss and is calculated as the difference between: (a) the aggregate of the fair value of consideration received and the fair value of any retained interest at the date when control is lost; and (b) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. Any gain or loss previously recognized in the other comprehensive income would be reclassified to profit or loss or transferred directly to retained earnings if required by other IFRSs. The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the cost on initial recognition of an investment.

b. The consolidated entities as of December 31, 2023 and 2024 were as follows:

Investor	Subsidiary	Business nature	Percentage of ownership (%) As of December 31,	
			2023	2024
UMC	UMC GROUP (USA)	IC Sales	100.00	100.00
UMC	UNITED MICROELECTRONICS (EUROPE) B.V. (UME BV)	Marketing support activities	100.00	100.00
UMC	UMC CAPITAL CORP.	Investment holding	100.00	100.00
UMC	GREEN EARTH LIMITED (GE)	Investment holding	100.00	100.00
UMC	TLC CAPITAL CO., LTD. (TLC)	Venture capital	100.00	100.00
UMC	UMC INVESTMENT (SAMOA) LIMITED	Investment holding	100.00	100.00
UMC	FORTUNE VENTURE CAPITAL CORP. (FORTUNE)	Consulting and planning for venture capital	100.00	100.00
UMC	UMC KOREA CO., LTD. (UMC KOREA)	Marketing support activities	100.00	100.00
UMC	OMNI GLOBAL LIMITED (OMNI)	Investment holding	100.00	100.00
UMC	SINO PARAGON LIMITED	Investment holding	100.00	100.00
UMC	BEST ELITE INTERNATIONAL LIMITED (BE)	Investment holding	100.00	100.00
UMC	UNITED SEMICONDUCTOR JAPAN CO., LTD. (USJC)	Sales and manufacturing of integrated circuits	100.00	100.00
UMC and FORTUNE	WAVETEK MICROELECTRONICS CORPORATION (WAVETEK)	Sales and manufacturing of integrated circuits	80.00	79.54
TLC	SOARING CAPITAL CORP.	Investment holding	100.00	100.00
SOARING CAPITAL CORP.	UNITRUTH ADVISOR (SHANGHAI) CO., LTD.	Investment holding and advisory	100.00	100.00
GE	UNITED MICROCHIP CORPORATION	Investment holding	100.00	100.00
FORTUNE	TERA ENERGY DEVELOPMENT CO., LTD. (TERA ENERGY)	Energy technical services	99.01	94.93
TERA ENERGY	EVERRICH ENERGY INVESTMENT (HK) LIMITED (EVERRICH-HK)	Investment holding	100.00	100.00
EVERRICH-HK	EVERRICH (JINING) NEW ENERGY TECHNOLOGY CO., LTD. (formerly EVERRICH (SHANDONG) ENERGY CO., LTD.)	Solar engineering integrated design services	100.00	100.00
OMNI	UNITED MICROTECHNOLOGY CORPORATION (CALIFORNIA)	Research and development	100.00	100.00
OMNI	ECP VITA PTE. LTD.	Insurance	100.00	100.00
WAVETEK	WAVETEK MICROELECTRONICS CORPORATION (USA)	Marketing service	100.00	100.00
BE	INFOSHINE TECHNOLOGY LIMITED (INFOSHINE)	Investment holding	100.00	100.00
INFOSHINE	OAKWOOD ASSOCIATES LIMITED (OAKWOOD)	Investment holding	100.00	100.00
OAKWOOD	HEJIAN TECHNOLOGY (SUZHOU) CO., LTD. (HEJIAN)	Sales and manufacturing of integrated circuits	99.9985	99.9985
HEJIAN	UNITEDDS SEMICONDUCTOR (SHANDONG) CO., LTD. (UDS) (Note)	Integrated circuits design services	100.00	—
UNITED MICROCHIP CORPORATION and HEJIAN	UNITED SEMICONDUCTOR (XIAMEN) CO., LTD. (USCXM)	Sales and manufacturing of integrated circuits	100.00	100.00

Note: In August 2024, HEJIAN has disposed of its 100% of ownership interest in the subsidiary, UDS. Please refer to Note 7.

(4) Business Combinations and Goodwill

Business combinations are accounted for using the acquisition method. The consideration transferred, the identifiable assets acquired and liabilities assumed are measured at the acquisition date fair value. For the components of non-controlling interests in the acquiree that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation, the acquirer measures at either fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and are classified under administrative expenses.

When the Company acquires a business, it assesses the assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date.

If the business combination is achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree is remeasured at fair value as at the acquisition date through profit or loss.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration which is deemed to be an asset or liability, will be recognized in accordance with IFRS 9, either in profit or loss or other comprehensive income. If the contingent consideration is classified as equity, it should not be remeasured until it is finally settled within equity.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred and non-controlling interests, the difference is recognized as a gain on bargain purchase.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each cash-generating unit (CGU) that is expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. Each unit or groups of units to which the goodwill is so allocated represents the lowest level within the Company at which the goodwill is monitored for internal management purposes and cannot be larger than an operating segment before aggregation.

Where goodwill forms part of a CGU and part of the operation within that unit is disposed, the goodwill associated with the operation disposed is included in the carrying amount of the operation. Goodwill disposed in this circumstance is measured based on the relative values of the operation disposed and the portion of the CGU retained.

(5) Foreign Currency Transactions

The Company's consolidated financial statements are presented in New Taiwan Dollars (NTD), which is also the parent company's functional currency. Each entity in the Company determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the Company's entities at their respective functional currency rates prevailing at the transaction date. Monetary assets and liabilities denominated in foreign currencies are translated into functional currency at the closing rates of exchange at the reporting date. Non-monetary items measured at fair value in foreign currencies are translated using the exchange rates at the date when the fair value is determined. Non-monetary items that are measured at historical cost in foreign currencies are translated using the exchange rates as at the dates of the initial transactions.

All exchange differences arising on the settlement of monetary items or on translating monetary items are taken to profit or loss in the period in which they arise except for the following:

- a. Exchange differences arising from foreign currency borrowings for an acquisition of a qualifying asset to the extent that they are regarded as an adjustment to interest costs are included in the borrowing costs that are eligible for capitalization.
- b. Foreign currency derivatives within the scope of IFRS 9 are accounted for based on the accounting policy for financial instruments.
- c. Exchange differences arising on a monetary item that is part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss upon disposal of such investment.

When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. When a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss.

(6) Translation of Foreign Currency Financial Statements

The assets and liabilities of foreign operations are translated into NTD at the closing rate of exchange prevailing at the reporting date and their income and expenses are translated at an average exchange rate for the period. The exchange differences arising on the translation are recognized in other comprehensive income. On disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation, recognized in other comprehensive income and accumulated in the separate component of equity, is reclassified from equity to profit or loss when the gain or loss on disposal is recognized.

On partial disposal of a subsidiary that includes a foreign operation that does not result in a loss of control, the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income is re-attributed to the non-controlling interests in that foreign operation. On partial disposal of an associate or a joint venture that includes a foreign operation that does not result in a loss of significant influence or joint control, only the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income is reclassified to profit or loss.

Any goodwill and any fair value adjustments to the carrying amounts of assets and liabilities arising from the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and expressed in its functional currency.

(7) Convenience Translation into U.S. Dollars

Translations of amounts from NTD into U.S. dollars (USD) for the reader's convenience were calculated at the rate of USD1.00 to NTD 32.79 on December 31, 2024 released by Board of Governors of the Federal Reserve System. No representation is made that the NTD amounts could have been, or could be, converted into USD at this rate.

(8) Current and Non-Current Distinction

An asset is classified as current when:

- a. the Company expects to realize the asset, or intends to sell or consume it, in its normal operating cycle;
- b. the Company holds the asset primarily for the purpose of trading;
- c. the Company expects to realize the asset within twelve months after the reporting period; or
- d. the asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- a. the Company expects to settle the liability in normal operating cycle;
- b. the Company holds the liability primarily for the purpose of trading;
- c. the liability is due to be settled within twelve months after the reporting period; or
- d. the Company does not have the right at the end of the reporting period to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

(9) Cash Equivalents

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and with maturity dates that do not present significant risks of changes in value resulting from changes in interest rates, including time deposits with original maturities of three months or less and repurchase agreements collateralized by government bonds and corporate bonds.

(10) Financial Instruments

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Purchase or sale of financial assets and liabilities are recognized using trade date accounting. All financial assets are recognized initially at fair value plus, in the case of investments not at fair value through profit or loss, directly attributable costs. Financial assets at fair value through profit or loss are initially recognized at fair value, and transaction costs are expensed in the statement of comprehensive income.

Financial Assets

a. Classification and subsequent measurement

The Company determines the classification of its financial assets at initial recognition. In accordance with IFRS 9, financial assets of the Company are classified as financial assets at fair value through profit or loss, financial assets at fair value through other comprehensive income, and financial assets measured at amortized cost.

i. Financial assets at fair value through profit or loss

Financial assets that are not measured at amortized cost or at fair value through other comprehensive income are measured at fair value with changes in fair value and dividends recognized in profit or loss.

ii. Financial assets at fair value through other comprehensive income

At initial recognition, the Company may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument that is not held for trading. When there is a disposal of such equity instrument, accumulated amounts presented in other comprehensive income are not subsequently transferred to profit or loss but are transferred directly to the retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Company's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

iii. Financial assets measured at amortized cost

The financial assets are measured at amortized cost (including cash and cash equivalent, notes, accounts and other receivables and other financial assets) if both of the following conditions are met.

- (i) the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- (ii) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition for financial assets measured at amortized cost, interest income, measured by the effective interest method amortization process, and impairment losses are recognized during circulation period. Gains and losses are recognized in profit or loss when the financial assets are derecognized.

b. Derecognition of financial assets

A financial asset is derecognized when:

- i. the contractual rights to receive cash flows from the asset have expired;
- ii. the Company has transferred assets and substantially all the risks and rewards of the asset have been transferred; or
- iii. the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the consideration received or to be received including any cumulative gain or loss that had been recognized in other comprehensive income is recognized in profit or loss (for debt instruments) or directly in retained earnings (for equity instruments).

If the transferred asset is part of a larger financial asset and the part transferred qualifies for derecognition in its entirety, the Company allocates the previous carrying amount of the larger financial asset between the part that continues to be recognized and the part that is derecognized, based on the relative fair values of those parts on the date of the transfer. Any cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is derecognized, based on the relative fair values of those parts. The difference between the carrying amount allocated to the part derecognized and the sum of the consideration received for the part derecognized and any cumulative gain or loss allocated that had been recognized in other comprehensive income, is recognized in profit or loss or directly in retained earnings.

c. Impairment policy

The Company measures, at each reporting date, an allowance for expected credit losses (ECLs) for debt instrument investments measured at fair value through other comprehensive income and financial assets measured at amortized cost by assessing reasonable and supportable information including forward-looking information. Where the credit risk on a financial asset has not increased significantly since initial recognition, the loss allowance is measured at an amount equal to 12-month ECLs. Where the credit risk on a financial asset has increased significantly since initial recognition, the loss allowance is measured at an amount equal to the lifetime ECLs.

For notes, accounts receivable and contract assets, the Company applies a simplified approach in calculating ECLs. Therefore, the Company does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. ECLs are measured based on the Company's historical credit loss experience and customers' current financial condition, adjusted for forward-looking factors, such as customers' economic environment.

Financial Liabilities

a. Classification and subsequent measurement

The Company classifies the instrument issued as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement and the definitions of a financial liability and an equity instrument.

i. Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Excluding changes in own credit risk, gains or losses on the subsequent measurement including interest paid are recognized in profit or loss.

ii. Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost include interest bearing loans and borrowings that are subsequently measured using the effective interest method after initial recognition. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the effective interest method amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or transaction costs.

b. Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified (whether or not attributable to the financial difficulty of the debtor), such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

(11) Inventories

Inventories are accounted for on a perpetual basis. Raw materials are stated at actual purchase costs, while the work in process and finished goods are stated at standard costs and subsequently adjusted to weighted-average costs at the end of each month. The cost of work in progress and finished goods comprises raw materials, direct labor, other direct costs and related production overheads. Allocation of fixed production overheads to the costs of conversion is based on the normal capacity of the production facilities. Cost associated with underutilized capacity is expensed as incurred. Inventories are valued at the lower of cost and net realizable value item by item. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

(12) Investments Accounted for Under the Equity Method

The Company's investments in associates and joint ventures are accounted for using the equity method other than those that meet the criteria to be classified as non-current assets held for sale.

An associate is an entity over which the Company has significant influence and that is neither a subsidiary nor a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of an entity, but is not control or joint control over those policies.

A joint venture is a type of joint arrangement whereby the Company that has joint control of the arrangement has rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement where no single party controls the arrangement on its own, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Any difference between the acquisition cost and the Company's share of the net fair value of the identifiable assets and liabilities of associates and joint ventures is accounted for as follows:

- a. Any excess of the acquisition cost over the Company's share of the net fair value of the identifiable assets and liabilities of an associate or a joint venture at the date of acquisition is recognized as goodwill and is included in the carrying amount of the investment. Amortization of goodwill is not permitted.
- b. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities of an associate or a joint venture over the acquisition cost, after reassessing the fair value, is recognized as a gain in profit or loss on the acquisition date.

Under the equity method, the investments in associates and joint ventures are carried on the balance sheet at cost plus post acquisition changes in the Company's share of profit or loss and other comprehensive income of associates and joint ventures. The Company's share of changes in associates' and joint ventures' profit or loss and other comprehensive income are recognized directly in profit or loss and other comprehensive income, respectively. Distributions received from an associate or a joint venture reduce the carrying amount of the investment. Any unrealized gains and losses resulting from transactions between the Company and the associate or the joint venture are eliminated to the extent of the Company's interest in the associate or the joint venture.

Financial statements of associates and joint ventures are prepared for the same reporting period as the Company. Where necessary, adjustments are made to bring the accounting policies in line with those of the Company.

Upon an associate's issuance of new shares, if the Company takes up more shares than its original proportionate holding while maintaining its significant influence over that associate, such increase would be accounted for as an acquisition of an additional equity interest in the associate. Upon an associate's issuance of new shares, if the Company does not take up proportionate shares resulting in decrease in its stockholding percentage while maintaining its significant influence over that associate, the Company treats the transaction as deemed disposal and reclassifies to profit or loss or other appropriate account(s) the proportion of the gain or loss previously recognized in other comprehensive income relating to that reduction in ownership interest.

The Company ceases to use the equity method upon loss of significant influence over an associate. Any difference between the carrying amount of the investment in an associate upon loss of significant influence and the fair value of the retained investment plus proceeds from disposal will be recognized in profit or loss. If an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate, the Company continues to apply the equity method and does not remeasure the retained interest.

The Company determines at each reporting date whether there is any objective evidence that the investments in associates and joint ventures are impaired. An impairment loss, being the difference between the recoverable amount of the associate or joint venture and its carrying amount, is recognized in profit or loss in the statement of comprehensive income and forms part of the carrying amount of the investments.

(13) Property, Plant and Equipment

Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. The cost of an item of property, plant and equipment comprises the acquisition cost, the costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management, and the initial estimate of costs for dismantling, removing the item and restoring the site on which it is located. Significant renewals, improvements and major inspections meeting the recognition criteria are treated as capital expenditures, and the carrying amounts of those replaced parts are derecognized. Maintenance and repairs are recognized in expenses as incurred. Any gain or loss arising from derecognition of the assets is recognized in other operating income and expenses.

Depreciation is calculated on a straight-line basis over the estimated useful lives. A significant part of an item of property, plant and equipment which has a different useful life from the remainder of the item is depreciated separately.

The depreciation methods, useful lives and residual values for the assets are reviewed at each fiscal year end, and the changes from the previous estimation are recorded as changes in accounting estimates.

Except for land, which is not depreciated, the depreciation of the assets is calculated mainly over the following estimated useful lives: buildings - 20 to 56 years; machinery and equipment - 6 years; transportation equipment - 6 years; furniture and fixtures - 6 years; leasehold improvement - the shorter of lease terms or useful lives.

(14) Lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange of consideration, and to obtain substantially all economic benefits from use of the identified asset. The Company accounts for a lease contract as a single lease and separates the lease and non-lease components included in the contract.

The Company as a lessor

The Company recognizes lease payments from operating leases as rental income on a straight-line basis over the term of the lease.

The Company as a lessee

At the commencement date of a lease, a lessee is required to recognize right-of-use assets and lease liabilities, except for short-term leases and low-value asset leases.

- a. At the commencement date, lease liabilities should be recognized and measured at the present value of the lease payments that have not been paid at that date, using the Company's incremental borrowing rate. The payments comprise:
 - i. fixed payments less any lease incentives receivable;
 - ii. variable lease payments that depend on an index or rate;
 - iii. amounts expected to be payable by the Company under residual value guarantees;
 - iv. the exercise price of a purchase option if the Company is reasonably certain to exercise; and
 - v. payments for terminating the lease unless it is reasonably certain that early termination will not occur.

Lease liabilities are measured in subsequent periods using the effective interest method, and the interest expenses are recognized over the lease terms. In addition, the carrying amount of lease liabilities is remeasured if there is a modification which is not accounted as a separate lease, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

- b. At the commencement date, the right-of-use assets should be measured at cost, which comprise of:
 - i. the amount of the initial measurement of the lease liabilities;
 - ii. any lease payments made at or before the commencement date; and
 - iii. any initial direct costs incurred.

Subsequent to initial recognition, the right-of-use assets are measured using cost model. Right-of-use assets measured under the cost model are depreciated from the commencement date to the earlier of the end of the useful life of the right-of-use assets or the end of the lease terms. Any remeasurement of the lease liabilities results in a corresponding adjustment of the right-of-use assets.

The Company presents right-of-use assets and lease liabilities on the balance sheets, and depreciation expenses and interest expenses are separately presented in the statements of comprehensive income. The Company recognizes the lease payments associated with short-term leases and low-value asset leases as expenses on a straight-line basis over the lease terms.

(15) Intangible Assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses, if any. Internally generated intangible assets which fail to meet the recognition criteria are not capitalized and the expenditures are reflected in profit or loss in the period incurred.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite useful lives are amortized over the useful lives and assessed for impairment whenever there is an indication that the intangible assets may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each fiscal year. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and is treated as changes in accounting estimates.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the CGU level. The assessment of indefinite useful life is reviewed annually to determine whether the indefinite useful life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from derecognition of an intangible asset are recognized in other operating income and expenses.

Accounting policies of the Company's intangible assets are summarized as follows:

- a. Goodwill arising from business combinations is not amortized, and is tested for impairment annually or more frequently if events or changes in circumstances suggest that the carrying amount may not be recoverable. If an event occurs or circumstances change which indicates that the goodwill is impaired, an impairment loss is recognized. Goodwill impairment losses cannot be reversed once recognized.

- b. Software is amortized over the contract term or estimated useful life (3 years) on a straight-line basis.
- c. Patent and technology license fee: Upon signing of contract and obtaining the right to intellectual property, any portion attributable to non-cancellable and mutually agreed future fixed license fees for patent and technology is discounted, and recognized as an intangible asset and related liability. The cost of the intangible asset is not revalued once determined on initial recognition, and is amortized over the shorter of the contract term or estimated useful life (5 - 10 years) on a straight-line basis. Interest expenses from the related liability are recognized and calculated based on the effective interest method. Based on the timing of payments, the liability is classified as current and non-current.
- d. Others are mainly the intellectual property license fees, amortized over the shorter of the contract term or estimated useful life (3 years) of the related technology on a straight-line basis.

(16) Impairment of Non-Financial Assets

The Company assesses at each reporting date whether there is an indication that an asset in the scope of IAS 36 “Impairment of Assets” may be impaired. If any indication exists, the Company completes impairment testing for the CGU to which the individual assets belong. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. The recoverable amount of an individual asset or a CGU is the higher of its fair value less costs of disposal and its value in use. If circumstances indicate that previously recognized impairment losses may no longer exist or may have decreased at each reporting date, the Company re-assesses the asset’s or CGU’s recoverable amount. A previously recognized impairment loss is reversed only if there has been an increase in the estimated service potential of an asset which in turn increases the recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation or amortization, had no impairment loss been recognized for the asset in prior years.

A CGU, or group of CGUs, to which goodwill has been allocated is tested for impairment annually at the same time every year, irrespective of whether there is any indication of impairment. Where the carrying amount of a CGU (including the carrying amount of goodwill) exceeds its recoverable amount, the CGU is considered impaired. If an impairment loss is to be recognized, it is first allocated to reduce the carrying amount of any goodwill allocated to the CGU (group of units), then to the other assets of the unit (group of units) pro rata on the basis of the carrying amount of each asset in the unit (group of units). Impairment losses relating to goodwill cannot be reversed in future periods.

The recognition or reversal of impairment losses is classified as other operating income and expenses.

(17) Bonds

Exchangeable bonds

In accordance with IFRS 9, if the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host, the derivative financial instruments embedded in exchangeable bonds would be separated from the host and accounted for as financial assets or liabilities at fair value through profit or loss.

UMC has issued exchangeable bonds where the bondholders may exchange the bonds into ordinary shares of certain public entities which UMC holds as financial assets ("reference shares"). When exchangeable bondholders exercise their right to exchange their bonds for reference shares, the carrying amount of the bonds and the related assets or liabilities accounts will be derecognized, and the difference will be recognized in profit or loss.

Both the host and embedded derivative financial instrument in exchangeable bonds are classified as current liabilities as the bondholders have the right to demand settlement by exercising the exchange option of the bonds within 12 months.

(18) Post-Employment Benefits

Under defined contribution pension plans, the contribution payable to the plan in exchange for the service rendered by an employee during a period shall be recognized as an expense. The contribution payable, after deducting any amount already paid, is recognized as a liability.

Under defined benefit pension plans, the net defined benefit liability (asset) shall be recognized as the amount of the present value of the defined benefit obligation, deducting the fair value of any plan assets and adjusting for any effect of the asset ceiling. Service cost and net interest on the net defined benefit liability (asset) are recognized as expenses in the period of service. Remeasurement of the net defined benefit liability (asset), which comprises actuarial gains and losses, the return on plan assets and any change in the effect of the asset ceiling, excluding any amounts included in net interest, is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and shall not be reclassified to profit or loss in a subsequent period.

(19) Government Grants

In accordance with IAS 20 “Accounting for Government Grants and Disclosure of Government Assistance”, the Company recognizes the government grants when there is reasonable assurance that such grants will be received and the conditions attaching to them will be complied with.

An asset related government grant is recorded as deferred income and recognized in profit or loss on a straight-line basis over the useful lives of the assets. An expense related government grant is recognized in profit or loss on a systematic basis over the periods in which the Company recognizes as expenses the related costs for which the grant is intended to compensate. A government grant that compensates for expenses or losses already incurred or for the purpose of giving immediate financial support to the Company with no future related costs is recognized in profit or loss when it becomes receivable.

(20) Provision

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Company expects some or all of a provision to be reimbursed, the reimbursement is recognized as a separate asset when, and only when it is virtually certain that reimbursement will be received. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

Decommissioning Liabilities

The amount of the decommissioning liability, arising from dismantling, removing the items of property, plant and equipment and restoring the site on which they are located, are provided at the present value of expected costs to settle the obligation using estimated cash flows, while the decommissioning costs are recognized as part of the cost of the particular items. The discount rate shall be a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the decommissioning liability. The periodic unwinding of the discount shall be recognized in profit or loss as a finance cost as it occurs. The estimated future costs of decommissioning are reviewed at the end of each reporting period and adjusted as appropriate. Changes in the estimated future costs or in the discount rate applied are added to or deducted from the cost of the items of property, plant and equipment.

Onerous contracts

An onerous contract is a contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. The present obligation under the onerous contract shall be recognized and measured as a provision. The unavoidable costs under a contract reflect the least net cost of exiting from the contract, which is the lower of the cost of fulfilling it and any compensation or penalties arising from failure to fulfill it. The aforementioned cost of fulfilling a contract comprises the costs that relate directly to the contract, which includes the incremental costs of fulfilling that contract and the allocation of other costs that relate directly to fulfilling contracts.

(21) Treasury Stock

UMC's own equity instruments repurchased (treasury stocks) are recognized at repurchase cost and deducted from equity. No gain or loss shall be recognized in profit or loss on the purchase, sale, issue or cancellation of UMC's own equity instruments. Any difference between the carrying amount and the consideration is recognized in equity.

(22) Share-Based Payment Transactions

Equity-settled share-based payment transactions

The compensation cost of equity-settled transactions between the Company and its employees is measured at the fair value of the equity instruments on the grant date, and is recognized as expense, together with a corresponding increase in equity, over the vesting period. When issuing restricted stocks for employees, the unvested restricted stocks issued on the grant date for employees are recognized in unearned employee compensation as a transitional contra equity account and such account shall be amortized as compensation expense over the vesting period. The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has passed and the Company's best estimate of the quantity of equity instruments that will ultimately vest. The movement in cumulative cost recognized at the beginning and end of the period is recognized through profit or loss for the period.

No expense is recognized for awards that do not ultimately vest, except for equity-settled transactions where vesting is conditional upon a market or non-vesting condition. The Company shall recognize the services received in expense irrespective of whether or not the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

Where the terms of an equity-settled transaction award are modified, the minimum expense recognized is the expense as if the terms had not been modified, if the original terms of the award are met. An additional expense is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee as measured at the date of modification.

Where an equity-settled award is cancelled, it is treated as if it fully vests on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. This includes any award where non-vesting conditions within the control of either the entity or the employee are not met. However, if a new award substitutes for the cancelled award and is designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award.

Cash-settled share-based payment transactions

The compensation cost of cash-settled share-based payment transactions between the Company and its employees is measured at the fair value of the liability incurred and recognized as expense with corresponding liability over the vesting period. The fair value of the liability is remeasured at the end of each reporting period and at the settlement date with the movement in fair value recognized through profit or loss for the period until the liability is settled.

(23) Revenue from Contracts with Customers

The Company recognizes revenue from contracts with customers by applying the following steps of IFRS 15 “Revenue from Contracts with Customers”:

- a. identify the contract with a customer;
- b. identify the performance obligations in the contract;
- c. determine the transaction price;

- d. allocate the transaction price to the performance obligations in the contract; and
- e. recognize revenue when (or as) the entity satisfies its performance obligations.

Revenues on the Company's contracts with customers for the sales of wafers and joint technology development are recognized as the Company satisfies its performance obligations to customers upon transfer of control of promised goods and services. The Company recognizes revenue at transaction price that are determined using contractual prices reduced by sales returns and allowances which the Company estimates based on historical experience having determined that a significant reversal in the amount of cumulative revenue recognized are not probable to occur. The Company recognizes refund liabilities for estimated sales return and allowances based on the customer complaints, historical experience, and other known factors.

The Company recognizes accounts receivable when the Company transfers control of the goods or services to customers and has a right to an amount of consideration that is unconditional. Such accounts receivable are short term and do not contain a significant financing component. For certain contracts that do not provide the Company unconditional rights to the consideration, and the transfer of control of the goods or services has been satisfied, the Company recognizes contract assets and revenues.

Consideration received from customers prior to the Company having satisfied its performance obligations are accounted for as contract liabilities which are transferred to revenue after the performance obligations are satisfied. The Company recognizes costs to fulfill a contract when the costs relate directly to the contract, generate or enhance resources to be used to satisfy performance obligations in the future, and are expected to be recovered. The costs and revenues are recognized when the Company satisfies its performance obligations to customers upon transfer of control of promised goods and services.

(24) Income Tax

Income tax expense (benefit) is the aggregate amount of current income tax and deferred income tax included in the profit or loss for the period.

Current income tax

Current income tax assets and liabilities for the current period and prior periods are measured using the tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. Current income tax relating to items recognized directly in other comprehensive income or equity is recognized in other comprehensive income or equity rather than profit or loss.

Undistributed earnings, calculated based on Business Entity Accounting Act are subject to a tax in accordance with the Income Tax Law of R.O.C. Accordingly, the undistributed tax impact is provided in the period the income is earned, assuming that no earnings are distributed. Any reduction in the liability will be recognized when the income is distributed upon the shareholders' approval in the subsequent year. Tax on undistributed earnings may be offset by the Company's available tax credits carried forward, where applicable. As such, the incremental tax accrued on undistributed earnings may be offset by a corresponding reduction in deferred income tax assets, where applicable.

Deferred income tax

Deferred income tax is determined using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts in financial statements at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- a. When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and that, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss and does not give rise to equal taxable and deductible temporary differences;
- b. In respect of taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carryforward of unused tax losses and unused tax credits, to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences and the carryforward of unused tax losses and unused tax credits can be utilized, except:

- a. Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and that, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss and does not give rise to equal taxable and deductible temporary differences;

- b. In respect of deductible temporary differences associated with investments in subsidiaries, associates and joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the reporting date. The measurement of deferred tax assets and liabilities reflects the tax consequences that would follow the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Deferred tax relating to items recognized outside profit or loss is not recognized in profit or loss but rather in other comprehensive income or directly in equity. Deferred tax assets are reassessed and recognized at each reporting date. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax assets to be recovered.

Deferred tax assets and liabilities offset each other, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities, and the deferred taxes relate to the same taxable entity and the same taxation authority.

According to the temporary exception in the International Tax Reform – Pillar Two Model Rules (Amendments to IAS 12 “Income Taxes”), deferred tax assets and liabilities related to Pillar Two income tax will not be recognized nor disclosed.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at the acquisition date, might be realized and recognized subsequently as follows:

- a. Acquired deferred tax benefits recognized within the measurement period that result from new information about facts and circumstances that existed at the acquisition date shall be applied to reduce the carrying amount of any goodwill related to that acquisition. If the carrying amount of that goodwill is nil, any remaining deferred tax benefits shall be recognized in profit or loss;

b. All other acquired deferred tax benefits realized shall be recognized in profit or loss, other comprehensive income or equity.

The Company has considered whether it is probable that a taxation authority will accept the uncertain tax treatments used in its income tax filings. If the Company concludes that it is probable that the taxation authority will accept an uncertain tax treatment, the Company determines the taxable profit, tax bases, unused tax losses, unused tax credits or tax rates consistently with the tax treatments used or planned to be used in its income tax filings. If it is not probable that the taxation authority will accept an uncertain tax treatment, the Company makes estimates using either the most likely amount or the expected value of the tax treatment, depending on which method the Company expects to better predict the resolution of the uncertainty. The Company reassesses a judgement or estimate if the facts and circumstance change.

(25) Earnings per Share

Earnings per share is computed according to IAS 33 "Earnings per Share". Basic earnings per share is computed by dividing net income by the weighted-average number of ordinary shares outstanding during the current reporting period. Diluted earnings per share is computed by taking basic earnings per share into consideration plus additional ordinary shares that would have been outstanding if the dilutive share equivalents had been issued. Net income is also adjusted for interest and other income or expenses derived from any underlying dilutive share equivalents. The weighted-average number of shares outstanding is adjusted retroactively for stock dividends and employee stock compensation issues.

5. SIGNIFICANT ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the Company's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets, liabilities, the accompanying disclosures and the disclosure of contingent liabilities. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

The key assumptions concerning the future and other key sources of estimating uncertainty at the reporting date that would have a significant risk for a material adjustment to the carrying amounts of assets or liabilities within the next fiscal year are discussed below.

The Company bases its assumptions and estimates on information available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Company. Such changes are reflected in the assumptions when they occur. Actual results could differ from those estimates, and as such, differences may be material to the consolidated financial statements.

(1) The Fair Value of Level 3 Financial Instruments

Where the fair values of the level 3 financial assets recorded on the balance sheet cannot be derived from active markets, they are determined by the application of an appropriate valuation method which was mainly the market approach. The valuation of these financial assets involves significant judgments such as the selection of comparable companies or equity transaction prices and the application of assumptions such as discounts for lack of marketability, valuation multiples, etc. Changes in assumptions about these factors could affect the reported fair value of the financial assets. Please refer to Note 11 for more details.

(2) Inventories

Inventories are valued at the lower of cost and net realizable value item by item. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. Please refer to Note 6(6). Costs of completion include direct labor and overhead, including depreciation and maintenance of production equipment, indirect labor costs, indirect material costs, supplies, utilities and royalties that is expected to be incurred at normal production level. The Company estimates normal production level taking into account loss of capacity resulting from planned maintenance, based on historical experience and current production capacity.

6. CONTENTS OF SIGNIFICANT ACCOUNTS

(1) Cash and Cash Equivalents

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Cash on hand and petty cash	\$ 6,200	\$ 6,258
Checking and savings accounts	50,322,942	25,388,395
Time deposits	80,276,114	73,507,742
Repurchase agreements collateralized by government bonds and corporate notes	1,948,359	6,097,831
Total	<u>\$132,553,615</u>	<u>\$105,000,226</u>

(2) Financial Assets at Fair Value through Profit or Loss

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Financial assets mandatorily measured at fair value through profit or loss		
Common stocks	\$ 9,170,230	\$ 8,759,564
Preferred stocks	2,862,119	3,475,613
Funds	4,472,097	5,792,863
Convertible bonds	480,715	363,430
Forward exchange contracts	—	2
Others	153,300	65,460
Total	<u>\$17,138,461</u>	<u>\$18,456,932</u>
Current	\$ 443,601	\$ 606,018
Non-current	16,694,860	17,850,914
Total	<u>\$17,138,461</u>	<u>\$18,456,932</u>

(3) Financial Assets at Fair Value through Other Comprehensive Income

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Equity instruments		
Common stocks	\$17,508,897	\$17,004,448
Preferred stocks	175,063	204,880
Total	<u>\$17,683,960</u>	<u>\$17,209,328</u>
Current	\$ 5,753,379	\$ 5,893,377
Non-current	11,930,581	11,315,951
Total	<u>\$17,683,960</u>	<u>\$17,209,328</u>

The fair value of each investment in equity instrument to be measured at fair value through other comprehensive income is as follows:

Type of securities	Name of securities	As of December 31,	
		2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Common stock	UNIMICRON HOLDING LIMITED	\$ 2,514,120	\$ 2,474,388
Common stock	ITE TECH. INC.	2,100,977	2,093,997
Common stock	CHIPBOND TECHNOLOGY CORPORATION	3,843,744	3,423,750
Common stock	NOVATEK MICROELECTRONICS CORP. (NOVATEK)	8,501,851	8,255,183
Common stock	KAI-HONG ENERGY CO., LTD.	—	64,865
Common stock	SHIN-ETSU HANDOTAI TAIWAN CO., LTD.	548,205	692,265
Preferred stock	MTIC HOLDINGS PTE. LTD.	175,063	204,880

- a. These investments in equity instruments are held for medium to long-term purposes and therefore are accounted for as fair value through other comprehensive income.

- b. Dividend income recognized in profit or loss from equity instruments designated as fair value through other comprehensive income were listed below:

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Held at end of period	\$ 1,052,336	\$ 888,826
Derecognized during the period	142,535	—
Total	\$ 1,194,871	\$ 888,826

Please refer to Note 6(7) for derecognition of the equity instrument investment in SILICON INTEGRATED SYSTEMS CORP. (SIS) for the year ended December 31, 2023.

- c. The Company reclassified its equity instrument investment in SIS as investments accounted for under the equity method. Details on derecognition of such investments are as follow:

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Fair value on the date of disposal	\$ —	\$ 3,035,999	\$ —
Cumulative gains (losses) reclassified to retained earnings due to derecognition	\$ —	\$(1,628,388)	\$ —

- d. UMC issued unsecured exchangeable bonds where the bondholders may exchange the bonds at any time on or after October 8, 2021 and prior to June 27, 2026 into NOVATEK common shares which UMC holds and accounts for as equity instruments investments measured at fair value through other comprehensive income. Please refer to Note 6(13) for the Company's unsecured exchangeable bonds.

(4) Financial Assets Measured at Amortized Cost

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Time deposits with original maturities over three months	\$ 6,353,768	\$ 3,739,224
Current	\$ 6,131,077	\$ 3,739,224
Non-current	222,691	—
Total	\$ 6,353,768	\$ 3,739,224

(5) Accounts Receivable, Net

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Accounts receivable	\$29,316,612	\$32,734,422
Less: loss allowance	(79,062)	(10,996)
Net	\$29,237,550	\$32,723,426

Aging analysis of accounts receivable:

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Neither past due	\$25,707,008	\$29,338,097
Past due:		
≤ 30 days	3,008,126	3,292,457
31 to 60 days	78,668	77,929
61 to 90 days	5,599	1,249
91 to 120 days	—	1,115
≥ 121 days	517,211	23,575
Subtotal	3,609,604	3,396,325
Total	\$29,316,612	\$32,734,422

Movement of loss allowance for accounts receivable:

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Beginning balance	\$ 209,101	\$ 79,062
Net recognition (reversal) for the period	(130,039)	(68,066)
Ending balance	<u>\$ 79,062</u>	<u>\$ 10,996</u>

The collection periods for third party domestic sales and third party overseas sales were month-end 30 - 60 days and net 30 - 60 days, respectively.

An impairment analysis is performed at each reporting date to measure expected credit losses (ECLs) of accounts receivable. For the receivables past due within 60 days, including not past due, the Company estimates an expected credit loss rate to calculate ECLs. For the years ended December 31, 2022, 2023 and 2024, the expected credit loss rates were not greater than 0.2%. The rate is determined based on the Company's historical credit loss experience and customer's current financial condition, adjusted for forward-looking factors such as customer's economic environment. For the receivables past due over 60 days, the Company applies the aforementioned rate and assesses individually whether to recognize additional expected credit losses by considering customer's operating condition and debt-paying ability.

(6) Inventories, Net

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Raw materials	\$10,995,569	\$10,731,866
Supplies and spare parts	6,443,172	6,238,353
Work in process	15,560,517	16,051,506
Finished goods	2,713,300	2,760,739
Total	<u>\$35,712,558</u>	<u>\$35,782,464</u>

- a. For the years ended December 31, 2022, 2023 and 2024, the Company recognized NT\$145,979 million, NT\$136,902 million and NT\$148,575 million, respectively, in operating costs, of which NT\$98 million, NT\$1,148 million and NT\$858 million in 2022, 2023 and 2024, respectively, were related to write-down of inventories.
- b. None of the aforementioned inventories were pledged.

(7) Investments Accounted for Under the Equity Method

a. Details of investments accounted for under the equity method are as follows:

Investee companies	As of December 31,			
	2023		2024	
	Amount NT\$ (In Thousands)	Percentage of ownership or voting rights	Amount NT\$ (In Thousands)	Percentage of ownership or voting rights
<u>Listed companies</u>				
SILICON INTEGRATED SYSTEMS CORP. (SIS) (Note A)	\$ 2,373,060	19.02	\$ 1,922,753	19.02
FARADAY TECHNOLOGY CORP. (FARADAY) (Note B)	1,990,073	13.78	2,484,001	13.80
UNIMICRON TECHNOLOGY CORP. (UNIMICRON) (Note C)	13,644,560	13.05	13,824,584	13.01
<u>Unlisted companies</u>				
MTIC HOLDINGS PTE. LTD. (Note D)	—	45.44	—	45.44
UNITECH CAPITAL INC.	625,667	42.00	556,610	42.00
TRIKNIGHT CAPITAL CORPORATION (TRIKNIGHT) (Note E)	2,109,906	40.00	1,298,112	40.00
HSUN CHIEH CAPITAL CORP.	235,098	40.00	266,066	40.00
PURIUMFIL INC.	11,474	40.00	12,340	40.00
HSUN CHIEH INVESTMENT CO., LTD. (HSUN CHIEH) (Note F)	4,126,878	36.49	4,723,930	36.49
YANN YUAN INVESTMENT CO., LTD. (YANN YUAN)	7,516,327	26.78	8,044,460	26.78
UNITED LED CORPORATION HONG KONG LIMITED	93,793	25.14	101,468	25.14
VSENSE CO., LTD. (Note D)	—	23.98	—	23.98
TRANSLINK CAPITAL PARTNERS I, L.P. (Note G)	58,964	10.38	40,545	10.38
Total	<u>\$ 32,785,800</u>		<u>\$ 33,274,869</u>	

Note A: In August 2023, the board chairman of SIS changed and became the same person as the board chairman of UMC. After considering the comprehensive conditions, including ownership interest held and representation on Board of Directors of SIS, etc., the Company determines that it has significant influence over SIS and accounts for its investment in SIS as an associate. SIS was previously measured at fair value through other comprehensive income and reclassified as investments accounted for under the equity method. UMC's share of the net fair value of SIS's identifiable assets and liabilities was in excess of the fair value of the previously held investment in SIS at the acquisition date, and the difference was recognized as bargain purchase gain. Cumulative fair value change that was previously recognized in other comprehensive loss up to reclassification date was reclassified to retained earnings in the current period. SIS executed a capital reduction and refunded NT\$499 million based on UMC's stockholding percentage in July 2024. UMC's stockholding percentage remains unchanged.

- Note B: Beginning from June 2015, the Company accounts for its investment in FARADAY as an associate given the fact that UMC obtained the ability to exercise significant influence over FARADAY through representation on its Board of Directors. The Company participated in the capital increase of FARADAY in March 2024. Please refer to Note 7 for the relevant information.
- Note C: Beginning from June 2020, the Company accounts for its investment in UNIMICRON as an associate given the fact that UMC obtained the ability to exercise significant influence over UNIMICRON through representation on its Board of Directors. On January 6, 2023, UNIMICRON issued new shares to merge with SUBTRON TECHNOLOGY CO., LTD. (SUBTRON) through share conversion. The share conversion ratio was 1 common share of SUBTRON to exchange 0.219 common shares of UNIMICRON. The 23 million shares of SUBTRON held by the Company were exchanged to 5 million common shares newly issued by UNIMICRON.
- Note D: When the Company's share of losses of an associate equals or exceeds its interest in that associate, the Company discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of that associate.
- Note E: TRIKNIGHT executed a capital reduction and refunded NT\$960 million and NT\$760 million based on UMC's stockholding percentage for the years ended December 31, 2023 and 2024, respectively. UMC's stockholding percentage remains unchanged.
- Note F: HSUN CHIEH executed a capital reduction and refunded NT\$343 million and NT\$343 million based on UMC's stockholding percentage for the years ended December 31, 2023 and 2024, respectively. UMC's stockholding percentage remains unchanged.
- Note G: The Company follows international accounting practices in equity accounting for limited partnerships and uses the equity method to account for these investees.

Cash dividends from investments accounted for under the equity method for the years ended December 31, 2023 and 2024 were NT\$1,870 million and NT\$1,071 million, respectively. As of December 31, 2023 and 2024, all of the abovementioned cash dividends has been received.

The carrying amount of investments accounted for using the equity method for which there are published price quotations amounted to NT\$18,008 million and NT\$18,231 million, as of December 31, 2023 and 2024, respectively. The fair value of these investments were NT\$53,726 million and NT\$43,305 million as of December 31, 2023 and 2024, respectively.

Although the Company is the largest shareholder of some associates, after comprehensive assessment, the Company does not own the major voting rights as the remaining voting rights holders are able to align and prevent the Company from ruling the relevant operation. Therefore, the Company does not control but has significant influence over the aforementioned associates.

None of the aforementioned associates were pledged.

b. Financial information of associates:

There is no individually significant associate for the Company. When an associate is a foreign operation, and the functional currency of the foreign entity is different from the Company, an exchange difference arising from translation of the foreign entity will be recognized in other comprehensive income (loss). Such exchange differences recognized in other comprehensive income (loss) in the financial statements for the years ended December 31, 2022, 2023 and 2024 were NT\$103 million, NT\$(3) million and NT\$55 million, respectively, which were not included in the following table.

The aggregate amount of the Company's share of all its individually immaterial associates that are accounted for using the equity method were as follows:

	For the years ended December 31,		
	2022	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)	NT\$ (In Thousands)
Profit from continuing operations	\$ 1,626,103	\$ 4,307,614	\$ 1,238,628
Other comprehensive income (loss)	(1,706,960)	1,540,436	570,493
Total comprehensive income (loss)	\$ (80,857)	\$ 5,848,050	\$ 1,809,121

(8) Property, Plant and Equipment

a. 2023

Assets Used by the Company:

Cost:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Transportation equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Leasehold improvement NT\$ (In Thousands)	Construction in progress and equipment awaiting inspection NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2023	\$ 1,470,216	\$37,597,769	\$ 953,819,688	\$ 64,923	\$ 8,061,993	\$ 63,075	\$ 55,363,943	\$1,056,441,607
Additions	—	223,177	—	—	—	—	82,213,765	82,436,942
Disposals	—	(12,160)	(6,475,636)	—	(112,396)	—	(33,581)	(6,633,773)
Transfers and reclassifications	—	902,122	77,170,979	7,104	953,582	3,379	(54,194,544)	24,842,622
Exchange effect	(39,878)	(341,045)	(3,016,210)	(315)	(29,711)	(631)	(990,932)	(4,418,722)
As of December 31, 2023	<u>\$ 1,430,338</u>	<u>\$38,369,863</u>	<u>\$1,021,498,821</u>	<u>\$ 71,712</u>	<u>\$ 8,873,468</u>	<u>\$ 65,823</u>	<u>\$ 82,358,651</u>	<u>\$1,152,668,676</u>

Accumulated Depreciation and Impairment:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Transportation equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Leasehold improvement NT\$ (In Thousands)	Construction in progress and equipment awaiting inspection NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2023	\$ —	\$22,731,506	\$ 857,737,785	\$ 51,597	\$ 6,697,517	\$ 59,383	\$ —	\$ 887,277,788
Depreciation	—	1,416,727	35,031,869	4,924	490,468	4,149	—	36,948,137
Disposals	—	(12,160)	(6,468,067)	—	(112,330)	—	—	(6,592,557)
Exchange effect	—	(107,933)	(2,212,913)	(264)	(19,642)	(494)	—	(2,341,246)
As of December 31, 2023	<u>\$ —</u>	<u>\$24,028,140</u>	<u>\$ 884,088,674</u>	<u>\$ 56,257</u>	<u>\$ 7,056,013</u>	<u>\$ 63,038</u>	<u>\$ —</u>	<u>\$ 915,292,122</u>
Net carrying amount:								
As of December 31, 2023	<u>\$ 1,430,338</u>	<u>\$14,341,723</u>	<u>\$ 137,410,147</u>	<u>\$ 15,455</u>	<u>\$ 1,817,455</u>	<u>\$ 2,785</u>	<u>\$ 82,358,651</u>	<u>\$ 237,376,554</u>

Assets Subject to Operating Leases:

Cost:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2023	\$ 545,787	\$ 2,443,247	\$ 6,345	\$ 1,334,291	\$ 4,329,670
Transfers and reclassifications	—	—	—	54,469	54,469
Exchange effect	(6,084)	(2,330)	—	(3,020)	(11,434)
As of December 31, 2023	<u>\$ 539,703</u>	<u>\$ 2,440,917</u>	<u>\$ 6,345</u>	<u>\$ 1,385,740</u>	<u>\$ 4,372,705</u>

Accumulated Depreciation and Impairment:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2023	\$ —	\$ 1,202,812	\$ 6,345	\$ 1,302,266	\$ 2,511,423
Depreciation	—	94,944	—	23,395	118,339
Exchange effect	—	(688)	—	(3,063)	(3,751)
As of December 31, 2023	<u>\$ —</u>	<u>\$ 1,297,068</u>	<u>\$ 6,345</u>	<u>\$ 1,322,598</u>	<u>\$ 2,626,011</u>
Net carrying amount:					
As of December 31, 2023	<u>\$ 539,703</u>	<u>\$ 1,143,849</u>	<u>\$ —</u>	<u>\$ 63,142</u>	<u>\$ 1,746,694</u>

b. 2024

Assets Used by the Company:

Cost:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Transportation equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Leasehold improvement NT\$ (In Thousands)	Construction in progress and equipment awaiting inspection NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ 1,430,338	\$ 38,369,863	\$ 1,021,498,821	\$ 71,712	\$ 8,873,468	\$ 65,823	\$ 82,358,651	\$ 1,152,668,676
Additions	—	32,999	—	—	—	—	76,514,788	76,547,787
Disposals	—	(1,019)	(2,198,549)	—	(73,357)	(43)	(708)	(2,273,676)
Disposal of a subsidiary	—	(119,322)	—	—	(40,364)	—	—	(159,686)
Transfers and reclassifications	—	26,772,957	93,484,809	5,087	717,154	—	(117,585,901)	3,394,106
Exchange effect	(19,542)	532,534	13,761,646	1,221	56,331	2,627	3,480,772	17,815,589
As of December 31, 2024	<u>\$ 1,410,796</u>	<u>\$ 65,588,012</u>	<u>\$ 1,126,546,727</u>	<u>\$ 78,020</u>	<u>\$ 9,533,232</u>	<u>\$ 68,407</u>	<u>\$ 44,767,602</u>	<u>\$ 1,247,992,796</u>

Accumulated Depreciation and Impairment:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Transportation equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Leasehold improvement NT\$ (In Thousands)	Construction in progress and equipment awaiting inspection NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ —	\$ 24,028,140	\$ 884,088,674	\$ 56,257	\$ 7,056,013	\$ 63,038	\$ —	\$ 915,292,122
Depreciation	—	1,474,732	42,716,755	4,663	521,994	1,879	—	44,720,023
Disposals	—	(109)	(2,153,787)	—	(72,920)	(43)	—	(2,226,859)
Disposal of a subsidiary	—	(27,083)	—	—	(20,056)	—	—	(47,139)
Exchange effect	—	199,320	12,658,149	813	49,355	2,590	—	12,910,227
As of December 31, 2024	<u>\$ —</u>	<u>\$ 25,675,000</u>	<u>\$ 937,309,791</u>	<u>\$ 61,733</u>	<u>\$ 7,534,386</u>	<u>\$ 67,464</u>	<u>\$ —</u>	<u>\$ 970,648,374</u>
Net carrying amount:								
As of December 31, 2024	<u>\$ 1,410,796</u>	<u>\$ 39,913,012</u>	<u>\$ 189,236,936</u>	<u>\$ 16,287</u>	<u>\$ 1,998,846</u>	<u>\$ 943</u>	<u>\$ 44,767,602</u>	<u>\$ 277,344,422</u>

Assets Subject to Operating Leases:

Cost:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ 539,703	\$ 2,440,917	\$ 6,345	\$ 1,385,740	\$ 4,372,705
Transfers and reclassifications	—	2,000	—	15,166	17,166
Exchange effect	(2,982)	18,095	—	8,558	23,671
As of December 31, 2024	<u>\$ 536,721</u>	<u>\$ 2,461,012</u>	<u>\$ 6,345</u>	<u>\$ 1,409,464</u>	<u>\$ 4,413,542</u>

Accumulated Depreciation and Impairment:

	Land NT\$ (In Thousands)	Buildings NT\$ (In Thousands)	Machinery and equipment NT\$ (In Thousands)	Furniture and fixtures NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ —	\$ 1,297,068	\$ 6,345	\$ 1,322,598	\$ 2,626,011
Depreciation	—	39,193	—	14,235	53,428
Exchange effect	—	10,945	—	8,543	19,488
As of December 31, 2024	<u>\$ —</u>	<u>\$ 1,347,206</u>	<u>\$ 6,345</u>	<u>\$ 1,345,376</u>	<u>\$ 2,698,927</u>
Net carrying amount:					
As of December 31, 2024	<u>\$ 536,721</u>	<u>\$ 1,113,806</u>	<u>\$ —</u>	<u>\$ 64,088</u>	<u>\$ 1,714,615</u>

c. Details of interest expense capitalized were as follows:

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Interest expense capitalized	\$ 9,355	\$ 13,560
Interest rates applied	1.48% - 1.65%	1.52% - 1.96%

d. Please refer to Note 8 for property, plant and equipment pledged as collateral.

(9) Leases

The Company leases various properties, such as land (including land use right), buildings, machinery and equipment, transportation equipment and other equipment with lease terms of 2 to 31 years, except for the land use rights with lease term of 50 years. Most lease contracts of land located in R.O.C state that lease payments will be adjusted based on the announced land value. The Company does not have purchase options of leased land at the end of the lease terms.

a. The Company as a lessee

(a) Right-of-use Assets

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Land (including land use right)	\$ 5,318,986	\$ 5,755,484
Buildings	156,483	168,568
Machinery and equipment	1,506,824	2,082,479
Transportation equipment	16,356	12,561
Other equipment	1,706	19,923
Net	<u>\$ 7,000,355</u>	<u>\$ 8,039,015</u>

	For the years ended December 31,	
	2023 NT\$	2024 NT\$
<u>Depreciation</u>	(In Thousands)	(In Thousands)
Land (including land use right)	\$ 377,593	\$ 377,882
Buildings	93,610	87,486
Machinery and equipment	203,606	220,734
Transportation equipment	13,267	10,852
Other equipment	3,004	1,697
Total	<u>\$ 691,080</u>	<u>\$ 698,651</u>

- i. For the years ended December 31, 2023 and 2024, the Company's addition to right-of-use assets amounted to NT\$206 million and NT\$1,683 million, respectively.
- ii. Please refer to Note 8 for right-of-use assets pledged as collateral.

(b) Lease Liabilities

	As of December 31,	
	2023 NT\$	2024 NT\$
Current	(In Thousands)	(In Thousands)
Non-current	4,878,863	5,782,659
Total	<u>\$ 5,393,187</u>	<u>\$ 6,419,016</u>

Please refer to Note 6(24) for the interest expenses on the lease liabilities.

b. The Company as a lessor

The Company entered into leases on certain property, plant and equipment which are classified as operating leases as they did not transfer substantially all of the risks and rewards incidental to ownership of the underlying assets. The main contracts are to lease the dormitory to the employees with cancellation clauses. Please refer to Note 6(8) for relevant disclosure of property, plant and equipment for operating leases.

(10) Intangible Assets2023Cost:

	<u>Goodwill</u> NT\$ (In Thousands)	<u>Software</u> NT\$ (In Thousands)	<u>Patents and technology license fees</u> NT\$ (In Thousands)	<u>Others</u> NT\$ (In Thousands)	<u>Total</u> NT\$ (In Thousands)
As of January 1, 2023	\$ 15,012	\$ 5,669,787	\$ 3,422,432	\$ 2,953,984	\$ 12,061,215
Additions	—	1,399,699	346,896	999,510	2,746,105
Write-off	—	(1,498,642)	(1,826,383)	(632,860)	(3,957,885)
Reclassifications	—	(5,855)	—	—	(5,855)
Exchange effect	—	(98,912)	(169,404)	(9,993)	(278,309)
As of December 31, 2023	<u>\$ 15,012</u>	<u>\$ 5,466,077</u>	<u>\$ 1,773,541</u>	<u>\$ 3,310,641</u>	<u>\$ 10,565,271</u>

Accumulated Amortization and Impairment:

	<u>Goodwill</u> NT\$ (In Thousands)	<u>Software</u> NT\$ (In Thousands)	<u>Patents and technology license fees</u> NT\$ (In Thousands)	<u>Others</u> NT\$ (In Thousands)	<u>Total</u> NT\$ (In Thousands)
As of January 1, 2023	\$ 7,398	\$ 2,689,397	\$ 2,597,513	\$ 2,491,707	\$ 7,786,015
Amortization	—	1,741,898	277,768	535,944	2,555,610
Write-off	—	(1,498,642)	(1,826,383)	(632,860)	(3,957,885)
Exchange effect	—	(41,822)	(139,933)	(9,269)	(191,024)
As of December 31, 2023	<u>\$ 7,398</u>	<u>\$ 2,890,831</u>	<u>\$ 908,965</u>	<u>\$ 2,385,522</u>	<u>\$ 6,192,716</u>
Net carrying amount:					
As of December 31, 2023	<u>\$ 7,614</u>	<u>\$ 2,575,246</u>	<u>\$ 864,576</u>	<u>\$ 925,119</u>	<u>\$ 4,372,555</u>

2024

Cost:

	Goodwill NT\$ (In Thousands)	Software NT\$ (In Thousands)	Patents and technology license fees NT\$ (In Thousands)	Others NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ 15,012	\$ 5,466,077	\$ 1,773,541	\$ 3,310,641	\$10,565,271
Additions	—	1,328,781	95,245	860,615	2,284,641
Write-off	—	(1,290,196)	(214,874)	(1,215,013)	(2,720,083)
Disposal of a subsidiary	—	(3,151)	—	—	(3,151)
Reclassifications	—	7,363	—	—	7,363
Exchange effect	—	(32,375)	388,567	(4,971)	351,221
As of December 31, 2024	<u>\$ 15,012</u>	<u>\$ 5,476,499</u>	<u>\$ 2,042,479</u>	<u>\$ 2,951,272</u>	<u>\$10,485,262</u>

Accumulated Amortization and Impairment:

	Goodwill NT\$ (In Thousands)	Software NT\$ (In Thousands)	Patents and technology license fees NT\$ (In Thousands)	Others NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ 7,398	\$ 2,890,831	\$ 908,965	\$ 2,385,522	\$ 6,192,716
Amortization	—	1,656,180	216,437	763,921	2,636,538
Write-off	—	(1,290,196)	(214,874)	(1,215,013)	(2,720,083)
Disposal of a subsidiary	—	(2,025)	—	—	(2,025)
Exchange effect	—	(23,675)	252,269	(4,793)	223,801
As of December 31, 2024	<u>\$ 7,398</u>	<u>\$ 3,231,115</u>	<u>\$ 1,162,797</u>	<u>\$ 1,929,637</u>	<u>\$ 6,330,947</u>
Net carrying amount:					
As of December 31, 2024	<u>\$ 7,614</u>	<u>\$ 2,245,384</u>	<u>\$ 879,682</u>	<u>\$ 1,021,635</u>	<u>\$ 4,154,315</u>

The amortization amounts of intangible assets were as follows:

	For the years ended December 31,	
	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)
Operating costs	\$ 1,144,960	\$ 999,321
Operating expenses	<u>\$ 1,410,650</u>	<u>\$ 1,637,217</u>

(11) Short-Term Loans

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Unsecured bank loans	\$ 13,530,000	\$ 8,515,000
Interest rates applied	1.69% - 2.65%	1.87% - 2.99%

(12) Financial Liabilities at Fair Value through Profit or Loss, Current

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Embedded derivatives in exchangeable bonds	\$ 1,019,362	\$ 899,961
Forward exchange contracts	—	1,039
Total	\$ 1,019,362	\$ 901,000

(13) Bonds Payable

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Unsecured domestic bonds payable	\$ 33,100,000	\$ 24,600,000
Unsecured exchangeable bonds payable	5,757,373	5,757,373
Less: Discounts on bonds payable	(498,021)	(305,805)
Total	38,359,352	30,051,568
Less: Current or exchangeable portion due within one year	(13,779,701)	(5,466,589)
Net	\$ 24,579,651	\$ 24,584,979

- a. UMC issued domestic unsecured corporate bonds. The terms and conditions of the bonds are as follows:

Term	Issuance date	Issued amount	Coupon rate	Repayment
Ten-year	In mid-June 2014	NT\$3,000 million	1.95%	Interest was paid annually and the principal was fully repaid in June 2024.
Seven-year	In late March 2017	NT\$2,100 million	1.43%	Interest was paid annually and the principal was fully repaid in March 2024.
Seven-year	In early October 2017	NT\$3,400 million	1.13%	Interest was paid annually and the principal was fully repaid in October 2024.
Five-year	In late April 2021	NT\$5,500 million	0.57%	Interest will be paid annually and the principal will be repayable in April 2026 upon maturity.
Seven-year	In late April 2021	NT\$2,000 million	0.63%	Interest will be paid annually and the principal will be repayable in April 2028 upon maturity.
Ten-year (Green bond)	In late April 2021	NT\$2,100 million	0.68%	Interest will be paid annually and the principal will be repayable in April 2031 upon maturity.
Five-year	In mid-December 2021	NT\$5,000 million	0.63%	Interest will be paid annually and the principal will be repayable in December 2026 upon maturity.
Five-year (Green bond)	In mid-September 2023	NT\$10,000 million	1.62%	Interest will be paid annually and the principal will be repayable in September 2028 upon maturity.

- b. On July 7, 2021, UMC issued SGX-ST listed currency linked zero coupon exchangeable bonds. In accordance with IFRS 9, the value of the exchange right, call option and put option (together referred to as Option) of the exchangeable bonds was separated from the host and accounted for as “financial liabilities at fair value through profit or loss, current”. The effective rate of the host bond was 3.49%. The terms and conditions of the bonds are as follows:

- i. Issue Amount: USD 400 million
- ii. Period: July 7, 2021 - July 7, 2026 (Maturity Date)

iii. Redemption:

- (i) UMC may, at its option, redeem in whole or in part at the principal amount of the bonds with an interest calculated at the rate of -0.625% per annum (the Early Redemption Amount) at any time after the third anniversary from the issue date and prior to the Maturity Date, if the closing price of the common shares of NOVATEK on the TWSE, converted into U.S. dollars at the prevailing exchange rate, for 20 out of 30 consecutive trading days prior to the publication of the redemption notice is at least 130% of the quotient of the Early Redemption Amount multiplied by the then exchange price (converted into U.S. dollars at the Fixed Exchange Rate), divided by the principal amount of the bonds. The Early Redemption Amount will be converted into NTD based on the Fixed Exchange Rate (NTD 27.902=USD 1.00), and this fixed NTD amount will then be converted using the prevailing exchange rate at the time of redemption for payment in USD.
- (ii) UMC may redeem the outstanding bonds in whole, but not in part, at the Early Redemption Amount, in the event that over 90% of the bonds have been previously redeemed, repurchased and cancelled or exchanged.
- (iii) In the event of any change in ROC taxation resulting in increase of tax obligation or the necessity to pay additional interest expense or increase of additional costs to UMC, UMC may redeem the outstanding bonds in whole, but not in part, at the Early Redemption Amount. Bondholders may elect not to have their bonds redeemed but with no entitlement to any additional amounts or reimbursement of additional taxes.
- (iv) All or any portion of the bonds will be redeemable at put price at the option of bondholders on July 7, 2024 at 98.14% of the principal amount.
- (v) In the event that the common shares of NOVATEK cease to be listed or are suspended from trading for a period equal to or exceeding 30 consecutive trading days on the TWSE, each bondholder shall have the right to require UMC to redeem the bonds, in whole but not in part, at the Early Redemption Amount.
- (vi) Upon the occurrence of a change of control (as defined in the indenture) of UMC, each bondholder shall have the right to require UMC to redeem the bonds, in whole but not in part, at the Early Redemption Amount.

iv. Terms of Exchange:

- (i) Underlying Securities: Common Shares of NOVATEK

- (ii) Exchange Period: The bonds are exchangeable at any time on or after October 8, 2021 and prior to June 27, 2026, into NOVATEK common shares. If for any reason UMC does not have sufficient NOVATEK common shares to deliver upon the exchange of any bond, then, UMC will pay to the exchanging bondholder an amount in U.S. dollars equal to the product of the volume-weighted average closing price per NOVATEK common share on the TWSE for five consecutive trading days starting from and including the applicable exercise date (as defined in the indenture) (or such fewer number of trading days as are available within ten days starting from and including the applicable exercise date) each converted into USD at the prevailing rate on the day preceding the applicable trading day and the number of NOVATEK common shares that UMC is unable to deliver. Provided, however, that if the exercise date falls within 5 business days from the beginning of, and during, any closed period, the right of the converting holder of the bonds to vote with respect to the shares it receives will be subject to certain restrictions.
 - (iii) Exchange Price and Adjustment: The exchange price was originally NT\$731.25 per NOVATEK common share. The exchange price will be subject to adjustments upon the occurrence of certain events set out in the indenture. The exchange price was NT\$506.0 per NOVATEK common share on December 31, 2024.
- v. Redemption on the Maturity Date:
- The bonds will be redeemed with 96.92% principal amount on the maturity date unless:
- (i) UMC shall have redeemed the bonds at the option of UMC, or the bonds shall have been redeemed at option of the bondholder,
 - (ii) The bondholders shall have exercised the exchange right before maturity, or
 - (iii) The bonds shall have been redeemed or repurchased by UMC and cancelled.

On July 7, 2024, there were no bondholders that required UMC to redeem the outstanding exchangeable bonds.

As of December 31, 2023 and 2024, UMC has cumulatively repurchased and cancelled the outstanding principal amount of exchangeable bonds totaling USD 187.1 million and USD 187.1 million, respectively with derecognition of the related derivative financial liabilities.

(14) Long-Term Loans

a. Details of long-term loans as of December 31, 2023 and 2024 were as follows:

Lenders	As of December 31,		Redemption
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)	
Secured Long-Term Loan from Mega International Commercial Bank (1)	\$ 4,866	\$ —	Repayable quarterly from October 24, 2019 to October 24, 2024 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Mega International Commercial Bank (2)	13,765	9,529	Repayable quarterly from February 23, 2022 to February 22, 2027 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Mega International Commercial Bank (3)	46,265	32,029	Repayable quarterly from December 22, 2022 to February 23, 2027 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Mega International Commercial Bank (4)	—	41,050	Repayable monthly from April 10, 2024 to March 15, 2031 with monthly interest payments. Interest-only payment for the first three years.
Secured Long-Term Loan from Taiwan Cooperative Bank (1)	23,784	11,892	Repayable quarterly from October 19, 2015 to October 19, 2025 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Taiwan Cooperative Bank (2)	20,000	8,000	Repayable monthly from August 13, 2020 to August 13, 2025 with monthly interest payments.
Secured Long-Term Loan from Taiwan Cooperative Bank (3)	10,345	4,138	Repayable monthly from October 29, 2020 to August 29, 2025 with monthly interest payments.
Secured Long-Term Loan from Taiwan Cooperative Bank (4)	58,916	33,667	Repayable monthly from April 15, 2021 to April 15, 2026 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Taiwan Cooperative Bank (5)	34,400	34,400	Repayable quarterly from December 28, 2023 to December 28, 2028 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Taiwan Cooperative Bank (6)	—	19,500	Repayable monthly from October 15, 2024 to October 15, 2031 with monthly interest payments. Interest-only payment for the first and the second year.
Secured Syndicated Loans from China Development Bank and 6 others	11,766,832	10,025,233	Repayable semi-annually from March 19, 2021 to March 18, 2031 with semi-annually interest payments. Interest-only payment for the first and the second year.
Secured Long-Term Loan from First Commercial Bank (1)	35,668	24,076	Repayable monthly from December 2, 2021 to December 2, 2026 with monthly interest payments. Interest-only payment for the first year.

Lenders	As of December 31,		Redemption
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)	
Secured Long-Term Loan from First Commercial Bank (2)	—	63,080	Repayable monthly from March 22, 2024 to March 15, 2031 with monthly interest payments. Interest-only payment for the first three years.
Secured Long-Term Loan from KGI Bank	21,000	21,000	Settlement due on December 25, 2026 with monthly interest payments.
Secured Long-Term Loan from Shanghai Commercial Bank (1)	16,650	11,100	Repayable monthly from January 19, 2022 to December 15, 2026 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Shanghai Commercial Bank (2)	4,980	4,046	Repayable quarterly from March 23, 2023 to March 15, 2028 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Shanghai Commercial Bank (3)	45,000	36,563	Repayable quarterly from June 6, 2023 to March 15, 2028 with monthly interest payments. Interest-only payment for the first year.
Secured Long-Term Loan from Shanghai Commercial Bank (4)	—	9,100	Repayable quarterly from September 20, 2024 to March 15, 2028 with monthly interest payments.
Secured Long-Term Loan from CTBC Bank	131,750	131,750	Repayable semi-annually from September 25, 2023 to September 25, 2028 with monthly interest payments. Interest-only payment for the first and the second year.
Unsecured Long-Term Loan from Bank of China	1,515,790	1,237,490	Repayable semi-annually from June 24, 2023 to June 24, 2026 with quarterly interest payments.
Unsecured Long-Term Loan from Bank of Taiwan (1)	1,333,333	666,666	Repayable quarterly from March 24, 2023 to December 24, 2025 with monthly interest payments.
Unsecured Long-Term Loan from Bank of Taiwan (2)	—	2,000,000	Repayable quarterly from November 24, 2026 to November 24, 2028 with monthly interest payments.
Unsecured Long-Term Loan from Mega International Commercial Bank	—	77,250	Repayable monthly from April 10, 2024 to March 15, 2031 with monthly interest payments. Interest-only payment for the first three years.
Unsecured Long-Term Loan from Taiwan Cooperative Bank (1)	—	115,970	Repayable monthly from April 10, 2024 to March 15, 2031 with monthly interest payments. Interest-only payment for the first and the second year.

Lenders	As of December 31,		Redemption
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)	
Unsecured Long-Term Loan from Taiwan Cooperative Bank (2)	—	3,000,000	Repayable quarterly from July 17, 2027 to July 17, 2029 with monthly interest payments.
Unsecured Long-Term Loan from Eastern International Bank	—	59,380	Repayable monthly from April 10, 2024 to March 15, 2029 with monthly interest payments. Interest-only payment for the first and the second year.
Unsecured Revolving Loan from First Commercial Bank (1) (Note A)	800,000	—	Settlement due on July 13, 2028 with monthly interest payments.
Unsecured Revolving Loan from First Commercial Bank (2) (Note B)	—	800,000	Settlement due on August 22, 2029 with monthly interest payments.
Unsecured Revolving Loan from Yuanta Commercial Bank (Note C)	3,000,000	2,000,000	Repayable annually from March 2, 2023 to March 2, 2026 with monthly interest payments.
Unsecured Revolving Loan from CTBC Bank (Note D)	4,000,000	—	Settlement due on July 20, 2025 with monthly interest payments.
Unsecured Revolving Loan from Mega International Commercial Bank (Note E)	—	3,000,000	Repayable semi-annually from November 28, 2025 to May 28, 2028 with monthly interest payments.
Unsecured Revolving Loan from Taipei Fubon Bank (Note F)	—	3,000,000	Repayable annually from January 20, 2026 to January 20, 2029 with monthly interest payments.
Unsecured Revolving Loan from DBS Bank (Note G)	—	4,700,000	Settlement due on December 25, 2029 with monthly interest payments.
Unsecured Revolving Loan from DBS Bank (Taiwan) (Note H)	—	4,000,000	Settlement due on December 13, 2029 with monthly interest payments.
Unsecured Revolving Loan from Australia and New Zealand Bank (Note I)	—	1,300,000	Settlement due on September 26, 2029 with monthly interest payments.
Subtotal	22,883,344	36,476,909	
Less: Current portion	(2,227,096)	(5,528,409)	
Total	\$ 20,656,248	\$ 30,948,500	

	As of December 31,	
	2023	2024
Interest rates applied	1.67% - 6.56%	1.53% - 5.49%

- Note A: First Commercial Bank approved the 1-year credit loan on April 25, 2023, which offered UMC a revolving line of credit of NT\$2 billion starting from the approval date to April 24, 2024. As of December 31, 2023, the unused line of credit was NT\$1.2 billion.
- Note B: First Commercial Bank approved the 1-year credit loan on July 9, 2024, which offered UMC a revolving line of credit of NT\$2 billion starting from the approval date to July 9, 2025. As of December 31, 2024, the unused line of credit was NT\$1.2 billion.
- Note C: UMC entered into a 5-year loan agreement with Yuanta Commercial Bank, effective from March 3, 2021. The agreement offered UMC a revolving line of credit of NT\$4 billion. This line of credit will be reduced starting from the end of the second year after the contract date and every twelve months thereafter, with a total of four adjustments. The expiration date of the agreement is March 2, 2026. As of December 31, 2023 and 2024, the unused line of credit were both nil.
- Note D: UMC entered into a 5-year loan agreement with CTBC Bank, effective from December 24, 2021. The agreement offered UMC a revolving line of credit of NT\$4 billion. The expiration date of the agreement is July 20, 2025. As of December 31, 2023 and 2024, the unused line of credit were nil and NT\$4 billion, respectively.
- Note E: UMC entered into a 5-year loan agreement with Mega International Commercial Bank, effective from November 28, 2022. The agreement offered UMC a revolving line of credit of NT\$5 billion. This line of credit will be reduced starting from the end of the two years and five months after the first use and every six months thereafter, with a total of six adjustments. The expiration date of the agreement is May 28, 2028. As of December 31, 2023 and 2024, the unused line of credit were NT\$5 billion and NT\$2 billion, respectively.
- Note F: UMC entered into a 5-year loan agreement with Taipei Fubon Bank, effective from July 20, 2023. The agreement offered UMC a revolving line of credit of NT\$3 billion. This line of credit will be reduced starting from the end of the second year after the first use and every twelve months thereafter, with a total of four adjustments. The expiration date of the agreement is January 20, 2029. As of December 31, 2023 and 2024, the unused line of credit were NT\$3 billion and nil, respectively.

Note G: UMC entered into a 5-year loan agreement with DBS Bank, effective from March 29, 2024. The agreement offered UMC a revolving line of credit of NT\$6 billion. The expiration date of the agreement is March 29, 2029. As of December 31, 2024, the unused line of credit was NT\$1.3 billion.

Note H: UMC entered into a 5-year loan agreement with DBS Bank (Taiwan), effective from October 10, 2024. The agreement offered UMC a revolving line of credit of NT\$4 billion. The expiration date of the agreement is October 10, 2029. As of December 31, 2024, the unused line of credit was nil.

Note I: UMC entered into a 5-year loan agreement with Australia and New Zealand Bank, effective from September 26, 2024. The agreement offered UMC a revolving line of credit of USD 300 million. The expiration date of the agreement is September 26, 2029. As of December 31, 2024, the unused line of credit was NT\$8.5 billion (USD 260 million).

- b. Please refer to Note 8 for property, plant and equipment and right-of-use assets pledged as collateral for long-term loans.
- c. In 2016, HEJIAN resolved to provide endorsement for USCXM's syndicated loan from banks including China Development Bank. The maximum amount of endorsement for the years ended December 31, 2023 and 2024 were NT\$2,934 million and NT\$1,800 million, respectively. As of December 31, 2023 and 2024, the actual amount provided were NT\$1,686 million and NT\$1,437 million, respectively.
- d. In 2017, UMC resolved to provide endorsement for USCXM's syndicated loan from banks including China Development Bank. The maximum amount of endorsement for the years ended December 31, 2023 and 2024 were NT\$10,351 million and NT\$10,620 million, respectively. As of December 31, 2023 and 2024, the actual amount provided were NT\$9,946 million and NT\$8,477 million, respectively.

(15) Post-Employment Benefits

a. Defined contribution plan

The employee pension plan under the Labor Pension Act of R.O.C. is a defined contribution plan. Pursuant to the plan, UMC and its domestic subsidiaries make monthly contributions of 6% based on each individual employee's salary or wage to employees' pension accounts. Pension benefits for employees of the Singapore branch and subsidiaries overseas are provided in accordance with the local regulations. Total pension expenses of NT\$1,880 million, NT\$1,655 million and NT\$1,978 million were contributed by the Company for the years ended December 31, 2022, 2023 and 2024, respectively.

b. Defined benefit plan

The employee pension plan mandated by the Labor Standards Act of R.O.C. is a defined benefit plan. The pension benefits are disbursed based on the units of service years and average monthly salary prior to retirement according to the Labor Standards Act. Two units per year are awarded for the first 15 years of services while one unit per year is awarded after the completion of the 15th year and the total units will not exceed 45 units. UMC contributes an amount equivalent to 2% of the employees' total salaries and wages on a monthly basis to the pension fund deposited with the Bank of Taiwan under the name of a pension fund supervisory committee. The pension fund is managed by the government's designated authorities and therefore is not included in the Company's consolidated financial statements. For the years ended December 31, 2022, 2023 and 2024, total pension expenses of NT\$34 million, NT\$45 million and NT\$35 million, respectively, were recognized by UMC.

i. Movements in present value of defined benefit obligation during the year:

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Defined benefit obligation at beginning of year	\$(5,106,623)	\$(4,665,498)
Items recognized as profit or loss:		
Service cost	(9,893)	(8,435)
Interest cost	(63,322)	(55,986)
Subtotal	<u>(73,215)</u>	<u>(64,421)</u>
Remeasurements recognized in other comprehensive income (loss):		
Arising from changes in demographic assumptions	—	(142,117)
Arising from changes in financial assumptions	166,401	98,669
Experience adjustments	226,634	20,669
Subtotal	<u>393,035</u>	<u>(22,779)</u>
Benefits paid	121,305	359,975
Defined benefit obligation at end of year	<u><u>\$(4,665,498)</u></u>	<u><u>\$(4,392,723)</u></u>

ii. Movements in fair value of plan assets during the year:

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Beginning balance of fair value of plan assets	\$ 2,237,221	\$ 2,460,413
Items recognized as profit or loss:		
Interest income on plan assets	27,742	29,525
Contribution by employer	307,556	619,281
Benefits paid	(121,305)	(359,975)
Remeasurements recognized in other comprehensive income (loss):		
Return on plan assets, excluding amounts included in interest income	9,199	211,230
Fair value of plan assets at end of year	<u>\$ 2,460,413</u>	<u>\$ 2,960,474</u>

The actual returns on plan assets of UMC for the years ended December 31, 2023 and 2024 were NT\$37 million and NT\$241 million, respectively.

iii. The defined benefit plan recognized on the consolidated balance sheets were as follows:

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Present value of the defined benefit obligation	\$ (4,665,498)	\$ (4,392,723)
Fair value of plan assets	2,460,413	2,960,474
Funded status	(2,205,085)	(1,432,249)
Net defined benefit liabilities, noncurrent recognized on the consolidated balance sheets	<u>\$ (2,205,085)</u>	<u>\$ (1,432,249)</u>

iv. The major categories of plan assets as a percentage of the fair value of the total plan assets are as follows:

	As of December 31,	
	2023	2024
Cash	21%	21%
Equity instruments	46%	47%
Debt instruments	23%	21%
Others	10%	11%

Employee pension fund is deposited under a trust administered by the Bank of Taiwan. The overall expected rate of return on assets is determined based on historical trend and actuaries' expectations on the assets' returns in the market over the obligation period. Furthermore, the utilization of the fund is determined by the labor pension fund supervisory committee, which also guarantees the minimum earnings to be no less than the earnings attainable from interest rates offered by local banks for two-year time deposits.

v. The principal underlying actuarial assumptions are as follows:

	As of December 31,	
	2023	2024
Discount rate	1.20%	1.59%
Rate of future salary increase	3.50%	3.50%

vi. Expected future benefit payments are as follows:

Year	As of December 31, 2024 NT\$ (In Thousands)
2025	\$ 404,452
2026	367,702
2027	387,394
2028	384,106
2029	391,245
2030 and thereafter	3,010,989
Total	<u><u>\$ 4,945,888</u></u>

UMC expects to make pension fund contribution of NT\$490 million in 2025. The weighted-average durations of the defined benefit obligation were 6 years and 8 years as of December 31, 2023 and 2024, respectively.

vii. Sensitivity analysis:

	As of December 31, 2023			
	Discount rate		Rate of future salary increase	
	0.5% increase NT\$ (In Thousands)	0.5% decrease NT\$ (In Thousands)	0.5% increase NT\$ (In Thousands)	0.5% decrease NT\$ (In Thousands)
Decrease (increase) in defined benefit obligation	\$ 137,615	\$ (144,683)	\$ (117,784)	\$ 113,478

	As of December 31, 2024			
	Discount rate		Rate of future salary increase	
	0.5% increase NT\$ (In Thousands)	0.5% decrease NT\$ (In Thousands)	0.5% increase NT\$ (In Thousands)	0.5% decrease NT\$ (In Thousands)
Decrease (increase) in defined benefit obligation	\$ 154,095	\$ (163,088)	\$ (137,421)	\$ 131,562

The sensitivity analyses above have been determined based on a method that extrapolates the impact on the net defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

(16) Deferred Government Grants

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Beginning balance	\$ 4,677,444	\$ 2,547,022
Arising during the period	591,086	2,131,264
Recorded in profit or loss:		
Other operating income	(2,663,843)	(841,091)
Exchange effect	(57,665)	123,833
Ending balance	<u>\$ 2,547,022</u>	<u>\$ 3,961,028</u>
Current (classified under other current liabilities)	\$ 717,457	\$ 906,935
Non-current (classified under other noncurrent liabilities)	<u>1,829,565</u>	<u>3,054,093</u>
Total	<u>\$ 2,547,022</u>	<u>\$ 3,961,028</u>

The significant government grants related to equipment acquisitions received by the Company are amortized as income over the useful lives of related equipment and recorded in the net other operating income and expenses.

(17) Refund Liabilities (classified under other current liabilities)

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Refund liabilities	<u>\$ 3,033,576</u>	<u>\$ 3,918,437</u>

(18) Provisions

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Onerous Contracts (classified under other current liabilities)	\$ 57,800	\$ 281,244
Decommissioning Liabilities (classified under other noncurrent liabilities)	602,433	695,168
Total	<u>\$ 660,233</u>	<u>\$ 976,412</u>

	Onerous Contracts NT\$ (In Thousands)	Decommissioning Liabilities NT\$ (In Thousands)
Balance as of January 1, 2024	\$ 57,800	\$ 602,433
Arising during the period	254,809	32,999
Unused provision reversed	(33,567)	—
Discount rate adjustment and unwinding of discount from the passage of time	—	17,776
Exchange effect	2,202	41,960
Balance as of December 31, 2024	<u>\$ 281,244</u>	<u>\$ 695,168</u>

When the Company expects that the unavoidable costs of fulfilling the contractual obligations exceed the expected economic benefits from the contracts, the present obligation under the onerous contract are recognized and measured as provisions.

Under certain applicable agreement, the Company is obligated to dismantling and removing the items of property, plant and equipment and restoring the site on which they are located. Accordingly, the Company recognized the liability pursuant to the present value of the estimated decommissioning and restoration cost.

(19) Equity

a. Capital stock:

- i. UMC had 26,000 million common shares authorized to be issued as of December 31, 2023 and 2024, of which 12,530 million shares and 12,561 million shares were issued as of December 31, 2023 and 2024, respectively, each at a par value of NT\$10.

- ii. UMC had 121 million and 115 million ADSs, which were traded on the NYSE as of December 31, 2023 and 2024, respectively. The total number of common shares of UMC represented by all issued ADSs were 607 million shares and 576 million shares as of December 31, 2023 and 2024, respectively. One ADS represents five common shares.
- iii. On December 5, 2023 and December 5, 2024, UMC issued restricted stocks for its employees in a total of 27 million shares and 33 million shares with a par value of NT\$10 each, respectively. The aforementioned issuance of new shares was approved by the competent authority and the registration was completed. Please refer to Note 6(20) for the information of restricted stocks.
- iv. For the years ended December 31, 2023 and 2024, UMC has recalled and cancelled 2 million shares and 2 million shares, respectively of unvested restricted stocks issued for employees according to the issuance plan. The aforementioned reduction of capital was approved by the competent authority and the registration was completed.

- b. Details of UMC's stock (thousand shares) held by the Company's associates are as follows:

	As of December 31,	
	2023	2024
HSUN CHIEH	441,371	441,371
YANN YUAN	192,963	192,963
SUBTRON, the subsidiary of UNIMICRON (Note A)	47	47
SIS (Note B)	266,580	266,580
Total	<u>900,961</u>	<u>900,961</u>

Note A: Beginning from January 2023, SUBTRON becomes an associate of the Company.

Note B: Beginning from August 2023, SIS becomes an associate of the Company.

- c. Retained earnings and dividend policies:

According to UMC's Articles of Incorporation, current year's earnings, if any, shall be distributed in the following order:

- i. Payment of taxes.

- ii. Making up loss for preceding years.
- iii. Setting aside 10% for legal reserve, except for when accumulated legal reserve has reached UMC's paid-in capital.
- iv. Appropriating or reversing special reserve by government officials or other regulations.
- v. The remaining, in addition to the previous year's unappropriated earnings, UMC shall distribute it according to the distribution plan proposed by the Board of Directors according to the dividend policy and submitted to the shareholders' meeting for approval.

Because UMC conducts business in a capital intensive industry and continues to operate in its growth phase, the dividend policy of UMC shall be determined pursuant to factors such as the investment environment, its funding requirements, domestic and overseas competitive landscape and its capital expenditure forecast, as well as shareholders' interest, balancing dividends and UMC's long-term financial planning. The Board of Directors shall propose the distribution plan and submit it to the shareholders' meeting every year. The distribution of shareholders' dividend shall be allocated as cash dividend in the range of 20% to 100%, and stock dividend in the range of 0% to 80%.

According to the regulations of Taiwan Financial Supervisory Commission (FSC), UMC is required to appropriate a special reserve in the amount equal to the sum of debit elements under equity, such as unrealized loss on financial instruments and debit balance of exchange differences on translation of foreign operations, at every year-end. Such special reserve is prohibited from distribution. However, if any of the debit elements is reversed, the special reserve in the amount equal to the reversal may be released for offsetting accumulated deficits or earnings distribution.

The appropriation of earnings for 2023 was approved by the shareholders' meeting held on May 30, 2024, while the appropriation of earnings for 2024 was proposed by the Board of Directors' meeting on February 26, 2025. The details of appropriation were as follows:

	Appropriation of earnings (in thousand NT dollars)		Cash dividend per share (NT dollars)	
	2023	2024	2023	2024
Legal reserve	\$ 6,255,736	\$ 4,738,237		
Special reserve	(2,734,057)	—		
Cash dividends	37,587,102	35,787,598	\$ 3.00	\$ 2.85

The aforementioned 2023 appropriation approved by shareholders' meeting was consistent with the resolutions of the Board of Directors' meeting held on February 27, 2024.

The cash dividend per share for 2023 was adjusted to NT\$3.00011747 per share. The adjustment was due to the decrease of outstanding common shares from cancellation of the restricted stock in April 2024.

The appropriation of 2024 unappropriated retained earnings has not yet been approved by the shareholders' meeting as of the reporting date. Information relevant to the Board of Directors' meeting resolutions and shareholders' meeting approval can be obtained from the "Market Observation Post System" on the website of the TWSE.

Please refer to Note 6(22) for information on the employees and directors' compensation.

d. Non-controlling interests:

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Balance as of January 1	\$ 223,181	\$ 343,679	\$ 340,859
Impact of retroactive applications	(66,089)	—	—
Adjusted balance as of January 1	157,092	343,679	340,859
Attributable to non-controlling interests:			
Net income (loss)	819,960	450,184	(104,674)
Other comprehensive income (loss)	8	(14)	76
Share-based payment transactions	1,490	5,817	1,913
Changes in subsidiaries' ownership	(1,339)	456	(7,910)
Non-controlling interests	5,456	4,187	26,349
Derecognition of the non-controlling interests	(638,988)	(463,450)	—
Ending balance	<u>\$ 343,679</u>	<u>\$ 340,859</u>	<u>\$ 256,613</u>

(20) Share-Based Payment

a. Restricted stock plan for employees

The equity-settled share-based payment of restricted stock plans for employees in each year are as follows:

	2024 Plan		2022 Plan		2020 Plan	
	1st tranche		1st tranche	2nd tranche	1st tranche	2nd tranche
Resolution date of UMC's shareholders meeting	May 30, 2024			May 27, 2022		June 10, 2020
Maximum shares to be issued (in thousands)	66,000			50,000		233,200
Eligible employees	Qualified employees of the Company		Qualified employees of the Company		Qualified employees of UMC	
Issuance of shares (in thousands)	32,956		23,060	26,728	200,030	1,268
Issuance date	December 5, 2024		December 5, 2022	December 5, 2023	September 1, 2020	June 9, 2021
Weighted-average fair value on the grant date (NT\$/ per share)	\$39.27		\$44.40	\$48.90	\$21.80	\$53.00

The aforementioned restricted stock plans for employees are issued gratuitously and have a duration of four years. Beginning from the end of two years since the date of grant, those employees who fulfill both service period and performance conditions set by UMC are gradually eligible to the vested restricted stocks at certain percentage and time frame. For those employees who fail to fulfill the vesting conditions, UMC will recall and cancel their stocks without consideration. Before any employee who has been granted restricted stock award shares fulfills the vesting conditions, the rights of the restricted stocks to attendance, proposal, statement, voting and election at the shareholders' meeting shall be exercised by an entrusted institution according to a custodial agreement. Other rights of restricted stocks including but not limited to, the right to distribution of cash dividends, stock dividends, legal reserves and capital reserves, and the preemptive right for new shares of capital increase by cash, shall be the same as those of the outstanding common shares of UMC, but are restricted from selling, pledging, setting guarantee, transferring, granting, or disposing of the restricted stocks in any other ways. Related information can be obtained from the "Market Observation Post System" on the website of the TWSE.

The 2024 restricted stock plan for employees includes market conditions. The compensation cost for these market conditions was measured at fair value initially by using Monte Carlo Simulation on the grant date. The assumptions used are as follows:

	2024 Plan
	1st tranche
Share price of measurement date (NT\$/ per share)	\$ 44.60
Expected volatility	23.76% - 34.32%
Expected life	2 - 4 years
Risk-free interest rate	1.40% - 1.46%

For the aforementioned 2024, 2022 and 2020 plans, the unvested restricted stocks issued on the grant date for employees are recognized in unearned employee compensation as a transitional contra equity account and such account shall be amortized as compensation expense over the vesting period. For the years ended December 31, 2022, 2023 and 2024, the compensation costs of NT\$1,352 million, NT\$1,025 million and NT\$775 million, respectively, were recognized in expenses by the Company.

b. Stock appreciation right plan for employees

In September 2020 and June 2021, the Company executed a compensation plan to grant 26 million units and 1 million units of cash-settled stock appreciation right to qualified employees of the Company without consideration, respectively. One unit of stock appreciation right to employees represents a right to the intrinsic value of one common share of UMC. The life of the plan is four years. Beginning from the end of two years since the date of grant, those employees who fulfill both service period and performance conditions set by the Company are gradually eligible to the vested stock appreciation right at certain percentage and time frame. For those employees who fail to fulfill the vesting conditions, the Company will withdraw their rights without consideration. During the vesting period, the holders of the stock appreciation right are not entitled the same rights as those of common stock holders of UMC. The compensation plan, which was implemented in September 2020, expired in August 2024.

The compensation cost for the cash-settled share-based payment was measured at fair value initially by using Black-Scholes Option Pricing Model and will be remeasured at the end of each reporting period until settlement. As of December 31, 2024, the assumptions used are as follows:

	Granted in June 2021
Share price of measurement date (NT\$/ per share)	\$ 43.05
Expected volatility	25.80%
Expected life	0.44 years
Expected dividend yield	6.46%
Risk-free interest rate	1.38%

For the years ended December 31, 2022, 2023 and 2024, the compensation costs of NT\$210 million, NT\$105 million and NT\$20 million, respectively, were recognized in expenses by the Company. The liabilities for stock appreciation right recognized which were classified under other payables and other noncurrent liabilities amounted to NT\$207 million and NT\$8 million as of December 31, 2023 and 2024, respectively. The intrinsic value for the liabilities of vested rights was nil.

(21) Operating Revenues

- a. Disaggregation of revenue
 - i. By product

	For the years ended December 31,		
	2022	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)	NT\$ (In Thousands)
Wafer	\$265,600,173	\$211,750,622	\$221,820,412
Others	13,105,091	10,782,378	10,482,172
Total	\$278,705,264	\$222,533,000	\$232,302,584

ii. By geography

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Taiwan	\$105,213,451	\$ 68,360,231	\$ 83,758,430
China (includes Hong Kong)	39,641,613	27,545,452	37,117,309
Japan	17,053,279	11,612,866	9,107,394
Korea	25,689,385	30,872,198	26,295,063
USA	67,352,671	59,103,051	58,117,650
Europe	23,711,284	24,932,099	17,902,262
Others	43,581	107,103	4,476
Total	<u>\$278,705,264</u>	<u>\$222,533,000</u>	<u>\$232,302,584</u>

Beginning from 2023, the geographic breakdown of the Company's operating revenues is based on the location where the Company's customers are headquartered, and the comparative information in respect of the preceding period is also presented on a consistent basis.

iii. By the timing of revenue recognition

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
At a point in time	\$276,175,120	\$220,283,306	\$229,505,369
Over time	2,530,144	2,249,694	2,797,215
Total	<u>\$278,705,264</u>	<u>\$222,533,000</u>	<u>\$232,302,584</u>

b. Contract balances

i. Contract assets, current

	As of January 1,		As of December 31,	
	2023 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Sales of goods and services	\$ 766,691	\$ 1,132,477	\$ 1,043,680	\$ 1,043,680
Less: Loss allowance	(393,373)	(392,949)	(417,967)	(417,967)
Net	\$ 373,318	\$ 739,528	\$ 625,713	\$ 625,713

The loss allowance was assessed by the Company primarily at an amount equal to lifetime expected credit losses. The loss allowance was mainly resulted from the suspension of the joint technology development agreement as disclosed in Note 9(7).

ii. Contract liabilities

	As of January 1,		As of December 31,	
	2023 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Sales of goods and services	\$ 3,985,003	\$ 3,681,352	\$ 2,660,181	\$ 2,660,181
Current	\$ 3,546,815	\$ 3,250,712	\$ 2,200,561	\$ 2,200,561
Non-current	438,188	430,640	459,620	459,620
Total	\$ 3,985,003	\$ 3,681,352	\$ 2,660,181	\$ 2,660,181

The movement of contract liabilities is mainly caused by the timing difference of the satisfaction of a performance of obligation and the consideration received from customers.

The Company recognized NT\$2,871 million and NT\$3,416 million, respectively, in revenues from the contract liabilities balance at the beginning of the period as performance obligations were satisfied for the years ended December 31, 2023 and 2024.

- c. The Company's transaction price allocated to unsatisfied performance obligations amounted to NT\$195 million and NT\$355 million as of December 31, 2023 and 2024, respectively. The Company will recognize revenue as the Company satisfies its performance obligations over time that aligns with progress toward completion of a contract in the future. The estimate of the transaction price does not include any estimated amounts of variable consideration that are constrained.

- d. Asset recognized from costs to fulfill a contract with customer

As of December 31, 2023 and 2024, the Company recognized costs to fulfill engineering service contracts eligible for capitalization as other current assets which amounted to NT\$877 million and NT\$584 million, respectively. Subsequently, the Company will expense from costs to fulfill a contract to operating costs when the related obligations are satisfied.

(22) Operating Costs and Expenses

The Company's employee benefit, depreciation and amortization expenses are summarized as follows:

	For the years ended December 31,								
	2022			2023			2024		
	Operating costs	Operating expenses NT\$ (In Thousands)	Total	Operating costs	Operating expenses NT\$ (In Thousands)	Total	Operating costs	Operating expenses NT\$ (In Thousands)	Total
Employee benefit expenses									
Salaries	\$ 30,074,528	\$ 13,928,646	\$ 44,003,174	\$ 26,693,905	\$ 12,002,205	\$ 38,696,110	\$ 25,959,209	\$ 11,485,738	\$ 37,444,947
Labor and health insurance	1,368,803	471,788	1,840,591	1,502,553	557,543	2,060,096	1,383,016	527,153	1,910,169
Pension	1,489,076	424,752	1,913,828	1,240,577	460,079	1,700,656	1,511,302	501,915	2,013,217
Other employee benefit expenses	373,739	165,114	538,853	421,871	196,739	618,610	401,329	207,925	609,254
Depreciation	39,305,321	1,756,609	41,061,930	36,006,021	1,545,067	37,551,088	43,740,758	1,595,934	45,336,692
Amortization	1,470,912	1,370,422	2,841,334	1,277,920	1,448,561	2,726,481	1,041,562	1,654,002	2,695,564

According to UMC's Articles of Incorporation, the employees and directors' compensation shall be distributed in the following order:

UMC shall allocate no less than 5% of profit as employees' compensation and no more than 0.2% of profit as directors' compensation for each profitable fiscal year after offsetting any cumulative losses. The aforementioned employees' compensation will be distributed in shares or cash. The employees of UMC's subsidiaries who fulfill specific requirements stipulated by the Board of Directors may be granted such compensation. Directors may only receive compensation in cash. UMC may, by a resolution adopted by a majority vote at a meeting of the Board of Directors attended by two-thirds of the total number of directors, distribute the aforementioned employees and directors' compensation and report to the shareholders' meeting for such distribution.

The Company recognized the employees and directors' compensation in the profit or loss with corresponding other payables during the periods when earned for the years ended December 31, 2022, 2023 and 2024. The Board of Directors estimates the amount by taking into consideration the Articles of Incorporation, government regulations and industry averages. If the Board of Directors resolves to distribute employee compensation through stock, the number of stock distributed is calculated based on total employee compensation divided by the closing price of the day before the Board of Directors' meeting. If the Board of Directors subsequently modifies the estimates significantly, the Company will recognize the change as an adjustment in the profit or loss in the subsequent period.

The distributions of employees and directors' compensation for 2022 and 2023 were reported to the shareholders' meeting on May 31, 2023 and May 30, 2024, respectively, while the distributions of employees and directors' compensation for 2024 were approved through the Board of Directors' meeting on February 26, 2025. The details of distribution were as follows:

	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Employees' compensation – Cash	\$ 9,160,485	\$ 5,439,059	\$ 4,509,603
Directors' compensation	45,000	45,000	45,000

The aforementioned employees and directors' compensation for 2022 and 2023 reported during the shareholders' meeting were consistent with the resolutions of the Board of Directors' meeting held on February 22, 2023 and February 27, 2024, respectively.

Information relevant to the aforementioned employees and directors' compensation can be obtained from the "Market Observation Post System" on the website of the TWSE.

(23) Net Other Operating Income and Expenses

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Government grants	\$ 5,058,658	\$ 3,862,001	\$ 1,337,458
Rental income from property, plant and equipment	192,833	202,082	202,010
Gain on disposal of property, plant and equipment	482,983	268,293	72,402
Others	(394,827)	(330,050)	(287,961)
Total	<u><u>\$ 5,339,647</u></u>	<u><u>\$ 4,002,326</u></u>	<u><u>\$ 1,323,909</u></u>

(24) Non-Operating Income and Expenses

a. Other gains and losses

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Loss on valuation of financial assets and liabilities at fair value through profit or loss	\$ (1,247,962)	\$ (40,553)	\$ (320,956)
Gain (loss) on disposal of investments accounted for under the equity method	50,553	163,395	(2,093)
Others	62,869	100,254	20,345
Total	<u><u>\$ (1,134,540)</u></u>	<u><u>\$ 223,096</u></u>	<u><u>\$ (302,704)</u></u>

b. Finance costs

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Interest expenses			
Bonds payable	\$ 486,079	\$ 444,424	\$ 500,757
Bank loans	1,100,840	833,548	963,263
Lease liabilities	166,928	179,367	196,457
Others	31,464	16,390	18,225
Financial expenses	81,018	96,645	77,398
Total	<u>\$ 1,866,329</u>	<u>\$ 1,570,374</u>	<u>\$ 1,756,100</u>

(25) Components of Other Comprehensive Income (Loss)

	For the year ended December 31, 2022				
	Reclassification adjustments during the period NT\$ (In Thousands)	Other comprehensive income (loss), before tax NT\$ (In Thousands)	Income tax effect NT\$ (In Thousands)	Other comprehensive income (loss), net of tax NT\$ (In Thousands)	
Items that will not be reclassified subsequently to profit or loss:					
Remeasurements of defined benefit pension plans	\$ 296,804	\$ —	\$ 296,804	\$ (59,361)	\$ 237,443
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	(4,646,064)	—	(4,646,064)	(71,121)	(4,717,185)
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	(1,694,965)	—	(1,694,965)	123,483	(1,571,482)
Items that may be reclassified subsequently to profit or loss:					
Exchange differences on translation of foreign operations	9,292,308	—	9,292,308	883,238	10,175,546
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	91,442	—	91,442	(23,672)	67,770
Total other comprehensive income (loss)	<u>\$ 3,339,525</u>	<u>\$ —</u>	<u>\$ 3,339,525</u>	<u>\$ 852,567</u>	<u>\$ 4,192,092</u>

	For the year ended December 31, 2023				
	Arising during the period NT\$ (In Thousands)	Reclassification adjustments during the period NT\$ (In Thousands)	Other comprehensive income (loss), before tax NT\$ (In Thousands)	Income tax effect NT\$ (In Thousands)	Other comprehensive income (loss), net of tax NT\$ (In Thousands)
Items that will not be reclassified subsequently to profit or loss:					
Remeasurements of defined benefit pension plans	\$ 402,234	\$ —	\$ 402,234	\$ (80,447)	\$ 321,787
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	5,530,359	—	5,530,359	(243,057)	5,287,302
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	1,610,116	—	1,610,116	(90,891)	1,519,225
Items that may be reclassified subsequently to profit or loss:					
Exchange differences on translation of foreign operations	(2,386,278)	—	(2,386,278)	386,660	(1,999,618)
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	(73,005)	(1,413)	(74,418)	3,768	(70,650)
Total other comprehensive income (loss)	<u>\$ 5,083,426</u>	<u>\$ (1,413)</u>	<u>\$ 5,082,013</u>	<u>\$ (23,967)</u>	<u>\$ 5,058,046</u>
	For the year ended December 31, 2024				
	Arising during the period NT\$ (In Thousands)	Reclassification adjustments during the period NT\$ (In Thousands)	Other comprehensive income (loss), before tax NT\$ (In Thousands)	Income tax effect NT\$ (In Thousands)	Other comprehensive income (loss), net of tax NT\$ (In Thousands)
Items that will not be reclassified subsequently to profit or loss:					
Remeasurements of defined benefit pension plans	\$ 188,451	\$ —	\$ 188,451	\$ (37,690)	\$ 150,761
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	(539,327)	—	(539,327)	25,123	(514,204)
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	301,134	—	301,134	28,783	329,917
Items that may be reclassified subsequently to profit or loss:					
Exchange differences on translation of foreign operations	8,902,745	—	8,902,745	153,317	9,056,062
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	324,191	(817)	323,374	(24,317)	299,057
Total other comprehensive income (loss)	<u>\$ 9,177,194</u>	<u>\$ (817)</u>	<u>\$ 9,176,377</u>	<u>\$ 145,216</u>	<u>\$ 9,321,593</u>

(26) Income Tax

a. The major components of income tax expense (benefit) for the years ended December 31, 2022, 2023 and 2024 were as follows:

- i. Income tax expense (benefit) recorded in profit or loss

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Current income tax expense (benefit):			
Current income tax charge	\$ 17,582,039	\$ 6,426,598	\$ 6,105,080
Adjustments in respect of current income tax of prior periods	(585,941)	(217,891)	(124,430)
Deferred income tax expense (benefit):			
Deferred income tax related to origination and reversal of temporary differences	2,276,015	2,239,309	2,441,278
Deferred income tax related to recognition and derecognition of tax losses and unused tax credits	60,178	—	(34,010)
Deferred income tax related to changes in tax rates	—	—	68
Adjustment of prior year's deferred income tax	8,611	(120,230)	(3,227)
Deferred income tax arising from write-down or reversal of write-down of deferred tax assets	(14,007)	(16,516)	(14,565)
Income tax expense recorded in profit or loss	<u>\$ 19,326,895</u>	<u>\$ 8,311,270</u>	<u>\$ 8,370,194</u>

- ii. Deferred income tax related to components of other comprehensive income (loss)

- (i) Items that will not be reclassified subsequently to profit or loss:

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Remeasurements of defined benefit pension plans			
Remeasurements of defined benefit pension plans	\$ (59,361)	\$ (80,447)	\$ (37,690)
Unrealized gains or losses from equity instruments investments measured at fair value through other comprehensive income	(71,121)	(243,057)	25,123
Share of other comprehensive income (loss) of associates and joint ventures which will not be reclassified subsequently to profit or loss	123,483	(90,891)	28,783
Income tax related to items that will not be reclassified subsequently to profit or loss	<u>\$ (6,999)</u>	<u>\$ (414,395)</u>	<u>\$ 16,216</u>

(ii) Items that may be reclassified subsequently to profit or loss:

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Exchange differences on translation of foreign operations	\$ 883,238	\$ 386,660	\$ 153,317
Share of other comprehensive income (loss) of associates and joint ventures which may be reclassified subsequently to profit or loss	(23,672)	3,768	(24,317)
Income tax related to items that may be reclassified subsequently to profit or loss	\$ 859,566	\$ 390,428	\$ 129,000

iii. Deferred income tax charged directly to equity

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Adjustments of changes in net assets of associates and joint ventures accounted for using equity method	\$ (2,720)	\$ (1,117)	\$ 1,174

b. A reconciliation between income tax expense (benefit) and income before tax at UMC's applicable tax rate were as follows:

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NTS (In Thousands)
Income before tax	\$109,625,660	\$68,450,404	\$57,044,820
At UMC's statutory income tax rate	21,925,132	13,690,081	11,408,964
Adjustments in respect of current income tax of prior periods	(585,941)	(217,891)	(124,430)
Net changes in loss carry-forward and investment tax credits	(465,152)	(2,179,234)	(2,026,085)
Adjustment of deferred tax assets/liabilities for write-downs/reversals and different jurisdictional tax rates	(281,319)	211,639	559,386
Tax effect of non-taxable income and non-deductible expenses:			
Tax exempt income	(4,384,566)	(1,428,035)	(472,756)
Investment loss (gain)	1,827,822	(755,800)	205,207
Dividend income	(423,027)	(323,182)	(231,267)
Others	(340,745)	(145,520)	(610,092)
Basic tax	—	43,506	13,414
Estimated income tax on unappropriated earnings	1,247,910	(1,160,324)	(743,264)
Deferred income tax related to changes in tax rates	—	—	68
Effect of different tax rates applicable to UMC and its subsidiaries	605,929	234,510	15,673
Taxes withheld in other jurisdictions	35,979	38,346	44,489
Others	164,873	303,174	330,887
Income tax expense recorded in profit or loss	<u>\$ 19,326,895</u>	<u>\$ 8,311,270</u>	<u>\$ 8,370,194</u>

c. Significant components of deferred income tax assets and liabilities were as follows:

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Deferred income tax assets		
Depreciation	\$ 2,396,554	\$ 2,616,538
Pension	436,129	281,385
Refund liabilities	306,408	318,156
Allowance for inventory valuation losses	682,909	726,023
Investment loss	314,427	328,241
Unrealized profit on intercompany sales	689,124	471,583
Others	304,860	482,577
Total deferred income tax assets	5,130,411	5,224,503
Deferred income tax liabilities		
Depreciation	(2,085,916)	(4,387,572)
Investment gain	(2,888,534)	(3,093,367)
Amortizable assets	(283,405)	(283,111)
Others	(374,109)	(354,201)
Total deferred income tax liabilities	(5,631,964)	(8,118,251)
Net deferred income tax assets (liabilities)	\$ (501,553)	\$ (2,893,748)

d. Movement of deferred tax

	For the years ended December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Balance as of January 1		
Amounts recognized in profit or loss during the period	(2,102,563)	(2,389,544)
Amounts recognized in other comprehensive income (loss)	(23,967)	145,216
Amounts recognized in equity	(1,117)	1,174
Exchange adjustments	(37,706)	(149,041)
Balance as of December 31	\$ (501,553)	\$ (2,893,748)

- e. The Company is subject to taxation in Taiwan and other foreign jurisdictions. As of December 31, 2024, income tax returns of UMC and its subsidiaries in Taiwan have been examined by the tax authorities through 2022, while in other foreign jurisdictions, relevant tax authorities have completed the examination through 2013.
- f. UMC's branch in Singapore obtained two tax incentives granted by the Singapore government for a period of five years from August 2020. The qualifying incomes are either tax-exempt or taxed at concessionary tax rate. The incentive period will end in July 2025.
- g. The information of the unused tax loss carry-forward for which no deferred income tax assets have been recognized were as follows:

Expiry period	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
1-5 years	\$15,395,514	\$19,761,573
6-10 years	22,128,180	11,407,986
Total	<u>\$37,523,694</u>	<u>\$31,169,559</u>

- h. As of December 31, 2023 and 2024, deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT\$3,410 million and NT\$3,727 million, respectively.
- i. As of December 31, 2023 and 2024, the taxable temporary differences of unrecognized deferred tax liabilities associated with investments in subsidiaries amounted to NT\$20,389 million and NT\$28,072 million, respectively.
- j. UMC KOREA, UME BV and USJC, the subsidiaries of UMC, are operating in jurisdictions where the Pillar Two legislation has been enacted or substantively enacted. The legislation will gradually come into effect or be implemented in the aforementioned jurisdictions beginning from 2024. The subsidiaries had no current tax expense related to the Pillar Two legislation for the year ended December 31, 2024.

(27) Earnings Per Share

a. Earnings per share-basic

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Net income attributable to the parent company	\$89,478,805	\$59,688,950	\$48,779,300
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,095,312	12,137,954	12,173,188
Earnings per share-basic (NTD)	\$ 7.40	\$ 4.92	\$ 4.01

b. Earnings per share-diluted

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Net income attributable to the parent company	\$89,478,805	\$59,688,950	\$48,779,300
Weighted-average number of ordinary shares for basic earnings per share (thousand shares)	12,095,312	12,137,954	12,173,188
Effect of dilution			
Restricted stocks for employees	156,098	114,974	69,881
Employees' compensation	238,242	129,196	122,400
Weighted-average number of ordinary shares after dilution (thousand shares)	12,489,652	12,382,124	12,365,469
Earnings per share-diluted (NTD)	\$ 7.16	\$ 4.82	\$ 3.94

(28) Reconciliation of Liabilities Arising from Financing Activities

For the year ended December 31, 2022

Items	As of January 1, 2022 NT\$ (In Thousands)	Cash Flows NT\$ (In Thousands)	Non-cash changes		As of December 31, 2022 NT\$ (In Thousands)
			Foreign exchange NT\$ (In Thousands)	Others (Note A) NT\$ (In Thousands)	
Short-term loans	\$ 1,924,124	\$ (1,965,684)	\$ 41,560	\$ —	\$ —
Long-term loans (current portion included)	36,624,907	(18,816,259)	1,470,694	—	19,279,342
Bonds payable (current portion included)	40,536,658	(13,305,050)	—	953,079	28,184,687
Guarantee deposits (current portion included)	14,369,769	14,984,941	1,402,291	—	30,757,001 (Note B)
Lease liabilities	5,068,754	(712,854)	153,406	1,227,789 (Note C)	5,737,095
Other financial liabilities	20,966,209	—	306,902	176,376	21,449,487

For the year ended December 31, 2023

Items	As of January 1, 2023 NT\$ (In Thousands)	Cash Flows NT\$ (In Thousands)	Non-cash changes		As of December 31, 2023 NT\$ (In Thousands)
			Foreign exchange NT\$ (In Thousands)	Others (Note A) NT\$ (In Thousands)	
Short-term loans	\$ —	\$ 13,530,000	\$ —	\$ —	\$ 13,530,000
Long-term loans (current portion included)	19,279,342	3,857,704	(253,702)	—	22,883,344
Bonds payable (current portion included)	28,184,687	9,989,245	—	185,420	38,359,352
Guarantee deposits (current portion included)	30,757,001	10,423,345	419,040	—	41,599,386 (Note B)
Lease liabilities	5,737,095	(666,439)	(24,106)	346,637	5,393,187
Other financial liabilities	21,449,487	(21,209,443)	(330,783)	90,739	—

For the year ended December 31, 2024

Items	As of January 1, 2024 NT\$ (In Thousands)	Cash Flows NT\$ (In Thousands)	Non-cash changes		As of December 31, 2024 NT\$ (In Thousands)
			Foreign exchange NT\$ (In Thousands)	Others (Note A) NT\$ (In Thousands)	
Short-term loans	\$ 13,530,000	\$ (5,015,000)	\$ —	\$ —	\$ 8,515,000
Long-term loans (current portion included)	22,883,344	13,178,434	415,131	—	36,476,909
Bonds payable (current portion included)	38,359,352	(8,500,465)	—	192,681	30,051,568
Guarantee deposits (current portion included)	41,599,386	(572,321)	1,847,429	—	42,874,494 (Note B)
Lease liabilities	5,393,187	(731,138)	92,617	1,664,350 (Note C)	6,419,016

Note A: Other non-cash changes mainly consisted of discount amortization measured by the effective interest method.

Note B: Guarantee deposits mainly consisted of deposits of capacity reservation.

Note C: Mainly due to the addition to lease properties.

7. SIGNIFICANT RELATED PARTY TRANSACTIONS

- a. Significant intercompany transactions between consolidated entities were as follows:

For the year ended December 31, 2022

Entity	Counterparty	Transactions (Note A)		
		Account	Amount NT\$ (In Thousands)	Terms (Note B)
UMC	UMC-USA	Sales	\$ 68,554,072	Net 60 days
UMC	UMC-USA	Accounts receivable	9,502,922	—
UMC	USCXM	Sales	1,143,280 (Note C)	Net 30 days
UMC	USCXM	Accounts receivable	16,774	—
UMC	UDS	Sales	656,472	Net 30 days
UMC	UDS	Accounts receivable	6,734	—
UMC	USJC	Sales	164,855	Net 60 days
UMC	USJC	Accounts receivable	151,430	—
USJC	UMC-USA	Sales	4,272,900	Net 60 days
USJC	UMC-USA	Accounts receivable	744,082	—
USCXM	UMC-USA	Sales	1,565,670	Net 60 days
USCXM	UMC-USA	Accounts receivable	310,431	—
USCXM	UMC	Sales	1,035,407 - Net 45 days	Net 30 days
USCXM	UMC	Accounts receivable	173	—
USCXM	UDS	Sales	148,259	Month-end 30 days
USCXM	UDS	Accounts receivable	171	—
WAVETEK	UMC-USA	Sales	716,357	Net 60 days
WAVETEK	UMC-USA	Accounts receivable	81,819	—
WAVETEK	UMC	Sales	124,178	Month-end 30 days
HEJIAN	UMC-USA	Sales	551,913	Net 60 days
HEJIAN	UMC-USA	Accounts receivable	147,265	—
HEJIAN	UDS	Sales	311,972	Month-end 30 days
HEJIAN	UDS	Accounts receivable	9,500	—

For the year ended December 31, 2023

Entity	Counterparty	Transactions (Note A)		
		Account	Amount NT\$ (In Thousands)	Terms (Note B)
UMC	UMC-USA	Sales	\$ 61,923,652	Net 60 days
UMC	UMC-USA	Accounts receivable	5,827,800	—
UMC	USCXM	Sales	1,127,275	Net 30 days (Note C)
UMC	USCXM	Accounts receivable	11,688	—
UMC	UDS	Sales	364,948	Net 30 days
UMC	UDS	Accounts receivable	10,800	—
USJC	UMC-USA	Sales	3,487,292	Net 60 days
USJC	UMC-USA	Accounts receivable	342,835	—
USCXM	UMC-USA	Sales	1,208,630	Net 60 days
USCXM	UMC-USA	Accounts receivable	17,816	—
USCXM	UMC	Sales	134,303	Net 30 days - Net 45 days
USCXM	UDS	Sales	286,087	Month-end 30 days
USCXM	UDS	Accounts receivable	362	—
WAVETEK	UMC-USA	Sales	505,806	Net 60 days
WAVETEK	UMC-USA	Accounts receivable	53,916	—
HEJIAN	UMC-USA	Sales	384,067	Net 60 days
HEJIAN	UMC-USA	Accounts receivable	43,863	—
HEJIAN	UDS	Sales	159,523	Month-end 30 days
HEJIAN	UDS	Accounts receivable	2,696	—

For the year ended December 31, 2024

Entity	Counterparty	Transactions (Note A)		
		Account	Amount NT\$ (In Thousands)	Terms (Note B)
UMC	UMC-USA	Sales	\$ 58,145,772	Net 60 days
UMC	UMC-USA	Accounts receivable	6,970,670	—
UMC	USCXM	Sales	1,210,478	Net 30 days (Note C)
UMC	USCXM	Accounts receivable	12,623	—
UMC	UDS	Sales	337,007	Net 30 days (Note D)
USJC	UMC-USA	Sales	4,755,322	Net 60 days
USJC	UMC-USA	Accounts receivable	713,962	—
USCXM	UMC-USA	Sales	639,413	Net 60 days
USCXM	UMC-USA	Accounts receivable	137,666	—
USCXM	UDS	Sales	287,522	Month-end (Note D) 30 days
WAVETEK	UMC-USA	Sales	397,260	Net 60 days
WAVETEK	UMC-USA	Accounts receivable	39,086	—
HEJIAN	UMC-USA	Sales	240,749	Net 60 days
HEJIAN	UMC-USA	Accounts receivable	31,132	—

Note A: The significant intercompany transactions listed above include downstream and upstream transactions.

Note B: The sales price to the above related parties was determined through mutual agreement in reference to market conditions.

Note C: UMC authorized technology licenses to its subsidiary, USCXM, in the amount of US\$0.35 billion, which was recognized as deferred revenue to be realized over time.

Note D: In August 2024, HEJIAN has disposed of its 100% of ownership interest in the subsidiary, UDS.

b. Significant transactions between the Company and other related parties were as follows:

(i) Name and Relationship of Related Parties

Name of related parties	Relationship with the Company
FARADAY TECHNOLOGY CORP. and its Subsidiaries	Associate
UNIMICRON TECHNOLOGY CORP.	Associate
SILICON INTEGRATED SYSTEMS CORP. and its Subsidiaries	Associate (Note A)
PHOTRONICS DNP MASK CORPORATION	Other related party
XIAMEN JINYUAN INDUSTRIAL DEVELOPMENT CO., LTD.	Directors and supervisors of subsidiary (Note B)
FUJIAN ELECTRONICS & INFORMATION INDUSTRY ENTREPRENEURSHIP INVESTMENT LIMITED PARTNERSHIP	Directors of subsidiary (Note B)

Note A: Prior to August 2023, SIS held one board seat on UMC's Board of Directors. Therefore, SIS was classified as other related party. Beginning from August 2023, the Company determines that it has significant influence over SIS and accounts for its investment in SIS as an associate. Please refer to Note 6(7) for the relevant information.

Note B: Beginning from July 2023, the company is no longer serving as the directors and supervisors of subsidiary, and therefore is no longer considered a related party to the Company.

(ii) Operating revenues

	For the years ended December 31,		
	2022 NTS (In Thousands)	2023 NTS (In Thousands)	2024 NTS (In Thousands)
	\$ 5,744,098	\$ 3,018,171	\$ 3,611,015
Associates	40,474	4,463	—
Other related party			
Total	\$ 5,784,572	\$ 3,022,634	\$ 3,611,015

(iii) Accounts receivable, net

	As of December 31,	
	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)
Associates		
FARADAY TECHNOLOGY CORP. and its Subsidiaries		
FARADAY TECHNOLOGY CORP.	\$ 302,828	\$ 456,332
ARTERY TECHNOLOGY CORPORATION, LTD.	40,886	148,508
Others	3,602	493
Other associates	648	14,680
Total	\$ 347,964	\$ 620,013

The sales price to the above related parties was determined through mutual agreement in reference to market conditions. The collection periods for domestic sales to related parties were month-end 30 - 60 days, while the collection periods for overseas sales were month-end 30 - 60 days.

(iv) Significant asset transactions

Acquisition of subsidiaries' ownership

For the years ended December 31, 2022 and 2024: None.

For the year ended December 31, 2023:

	Trading Capital Amount RMB¥ (In Thousands)	Transaction underlying	Purchase price NT\$ (In Thousands)
XIAMEN JINYUAN INDUSTRIAL DEVELOPMENT CO., LTD.	3,741,862	Ownership of USCXM	\$17,945,970
FUJIAN ELECTRONICS & INFORMATION INDUSTRY ENTREPRENEURSHIP INVESTMENT LIMITED PARTNERSHIP	674,762	Ownership of USCXM	3,263,473
Total	4,416,624		\$21,209,443

Acquisition of investments accounted for under the equity method

For the year ended December 31, 2022: None.

For the year ended December 31, 2023:

	Trading Volume (In thousands of shares)	Transaction underlying	Purchase price NT\$ (In Thousands)
Associates	4,945	Stock of UNIMICRON	<u>\$ 608,224</u>

For the year ended December 31, 2024:

	Trading Volume (In thousands of shares)	Transaction underlying	Purchase price NT\$ (In Thousands)
Associates	1,723	Stock of FARADAY	<u>\$ 533,973</u>

Please refer to Note 6(7) for the relevant information.

Acquisition of intangible assets

	Purchase price		
	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
FARADAY TECHNOLOGY CORP.	<u>\$ 266,053</u>	<u>\$ 323,551</u>	<u>\$ 310,460</u>

Disposal of subsidiary ownership

For the years ended December 31, 2022 and 2023: None.

For the year ended December 31, 2024:

	Transaction underlying	Trading Capital Amount RMB¥ (In Thousands)	Disposal price NT\$ (In Thousands)	Gain on disposal NT\$ (In Thousands)
Associates				
Subsidiary of SIS - SIS SEMICONDUCTOR (SHANDONG) CO., LTD.	Ownership of UDS	30,000	\$ 341,387	\$ 352

On April 2, 2024, the Board of Directors of HEJIAN approved to dispose of its 100% of ownership interest in the subsidiary, UDS. The disposal was completed in August 2024.

(v) Others

Mask expenditure

	For the years ended December 31,		
	2022	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)	NT\$ (In Thousands)
Other related party	<u>\$ 2,581,409</u>	<u>\$ 2,375,225</u>	<u>\$ 2,285,797</u>

Other payables of mask expenditure

	As of December 31,		
	2022	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)	NT\$ (In Thousands)
Other related party	<u>\$ 812,185</u>	<u>\$ 751,763</u>	<u>\$ 621,737</u>

c. Key management personnel compensation

	For the years ended December 31,		
	2022 NT\$ (In Thousands)	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Short-term employee benefits	\$ 2,047,118	\$ 1,462,964	\$ 1,223,667
Post-employment benefits	2,782	2,732	2,603
Share-based payment	719,786	500,391	298,500
Others	649	618	417
Total	\$ 2,770,335	\$ 1,966,705	\$ 1,525,187

8. ASSETS PLEDGED AS COLLATERAL

The following table lists assets of the Company pledged as collateral:

	As of December 31,		Party to which asset(s) was pledged	Purpose of pledge
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)		
Refundable Deposits (Time deposit)	\$ 813,289	\$ 1,009,000	Customs	Customs duty guarantee
Refundable Deposits (Time deposit)	236,556	237,051	Science Park Bureau	Collateral for land lease
Refundable Deposits (Time deposit)	18,647	18,647	Science Park Bureau	Collateral for dormitory lease
Refundable Deposits (Time deposit)	64,950	64,950	National Property Administration, Ministry of Finance	Guarantee for the application of national non-public use land for development
Refundable Deposits (Time deposit)	8,118	8,118	Bureau of Land Administration, Tainan City Government	Guarantee for the application of national non-public use land for development
Refundable Deposits (Time deposit)	36,970	38,073	Liquefied Natural Gas Business Division, CPC Corporation, Taiwan	Energy resources guarantee
Refundable Deposits (Time deposit)	1,006,852	—	Bank of China and Agricultural Bank of China	Bank performance guarantee
Refundable Deposits (Time deposit)	459,900	490,950	CTBC Bank Singapore Branch	Collateral for letter of credit
Buildings	4,487,730	4,377,176	Taiwan Cooperative Bank and Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Machinery and equipment	6,627,761	4,057,201	Taiwan Cooperative Bank, Mega International Commercial Bank, KGI Bank, First Commercial Bank, Shanghai Commercial Bank, CTBC Bank and Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Right-of-use assets	266,650	269,152	Secured Syndicated Loans from China Development Bank and 6 others	Collateral for long-term loans
Total	\$14,027,423	\$10,570,318		

9. SIGNIFICANT CONTINGENCIES AND UNRECOGNIZED CONTRACT COMMITMENTS

- (1) As of December 31, 2024, amounts available under unused letters of credit were NT\$0.7 billion.
- (2) As of December 31, 2024, the Company entrusted financial institutions to open performance guarantee, mainly related to the customs tax and electricity supply guarantee, amounting to NT\$0.8 billion.
- (3) The Company entered into several patent license agreements and development contracts of intellectual property for a total contract amount of approximately NT\$4.0 billion. As of December 31, 2024, the portion of royalties and development fees not yet recognized was NT\$1.4 billion.

- (4) The Company entered into several construction contracts for the expansion of its operations. As of December 31, 2024, these construction contracts amounted to approximately NT\$70.9 billion and the portion of the contracts not yet recognized was approximately NT\$15.2 billion.
- (5) The Company entered into several wafer fabrication contracts with its customers. According to the contracts, the Company shall provide agreed production capacity with the customers.
- (6) The Company has entered into long-term contracts with multiple suppliers for the purchase of renewable energy. The relative duration, anticipated quantity and pricing of the energy purchase are specified in the contracts.
- (7) On August 31, 2017, the Taichung District Prosecutors Office indicted UMC based on the Trade Secret Act of R.O.C., alleging that employees of UMC misappropriated the trade secrets of MICRON TECHNOLOGY, INC. (MICRON) and of MICRON MEMORY TAIWAN CO., LTD. On June 12, 2020, an adverse ruling issued by the District Court of Taichung in a suit alleged that UMC, two of its current employees and a former employee engaged in the misappropriation of trade secrets. UMC appealed against the sentence. On November 26, 2021, UMC and MICRON announced a settlement agreement between the two companies for all legal proceedings worldwide (the “Settlement Agreement”). Accordingly, MICRON submitted a motion to withdraw the case. On January 27, 2022, the Intellectual Property and Commercial Court announced its ruling of this case and UMC was sentenced to a fine of NT\$20 million, subject to a two-year term of probation. On January 27, 2024, UMC completed the probation period successfully and the sentence has been terminated.

On December 5, 2017, MICRON filed a civil action with similar cause against UMC with the United States District Court, Northern District of California. MICRON claimed entitlement to the actual damages, treble damages and relevant fees and requested the court to issue an order that enjoins UMC from using its trade secrets in question. In accordance with the Settlement Agreement, the court issued a dismissal of the case with prejudice in January 2022.

On January 12, 2018, UMC filed three patent infringement actions with the Fuzhou Intermediate People’s Court against, among others, MICRON (XI’AN) CO., LTD. and MICRON (SHANGHAI) TRADING CO., LTD., requesting the court to order the defendants to stop manufacturing, processing, importing, selling, and committing to sell the products deploying the infringing patents in question, and to destroy all inventories and related molds and tools. On July 3, 2018, the Fuzhou Intermediate People’s Court granted preliminary injunction against the aforementioned two defendants, holding that the two defendants must immediately cease to manufacture, sell, and import products that infringe the patent rights of UMC. The court approved withdrawal of one of the patent infringement actions on our motion while the other two actions are still on trial. In accordance with the Settlement Agreement, UMC submitted a motion to withdraw the case and the application for injunctive procedure. On March 28, 2024, the court approved UMC’s withdrawal of actions and the application for injunctive procedure.

The amounts of aforementioned fine from ruling of the Intellectual Property and Commercial Court and the worldwide settlement between UMC and MICRON were recorded in non-operating other losses and have no material financial and operational effect on UMC's business for the years presented.

10. SIGNIFICANT SUBSEQUENT EVENTS

- (1) From January 1 to April 24, 2025, the Company made repayments of the long-term loans in a total amount of NT\$11,102 million which were classified as non-current liabilities.
- (2) On January 21, 2025, a magnitude 6.4 earthquake occurred in southern Taiwan, causing damage to some work-in-progress wafers at UMC's Fab 12A factory in Tainan. As the losses caused by the earthquake will be claimed under UMC's insurance policy, there is no material impact on UMC's finances and business.

11. FINANCIAL RISK AND FAIR VALUE DISCLOSURES

(1) Categories of financial instruments

Financial Assets	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Financial assets at fair value through profit or loss	\$ 17,138,461	\$ 18,456,932
Financial assets at fair value through other comprehensive income	17,683,960	17,209,328
Financial assets measured at amortized cost		
Cash and cash equivalents (cash on hand excluded)	132,547,415	104,993,968
Receivables	32,292,914	34,994,933
Refundable deposits	2,708,823	1,992,400
Other financial assets	6,353,768	3,739,224
Total	<u>\$208,725,341</u>	<u>\$181,386,785</u>

Financial Liabilities	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Financial liabilities at fair value through profit or loss	\$ 1,019,362	\$ 901,000
Financial liabilities measured at amortized cost		
Short-term loans	13,530,000	8,515,000
Payables	52,393,399	42,259,798
Guarantee deposits (current portion included)	41,599,386	42,874,494
Bonds payable (current portion included)	38,359,352	30,051,568
Long-term loans (current portion included)	22,883,344	36,476,909
Lease liabilities	5,393,187	6,419,016
Total	\$175,178,030	\$167,497,785

(2) Financial risk management objectives and policies

The Company's risk management objectives are to manage the market risk, credit risk and liquidity risk related to its operating activities. The Company identifies, measures and manages the aforementioned risks based on policy and risk preference.

The Company has established appropriate policies, procedures and internal controls for financial risk management. Before entering into significant financial activities, approval process by the Board of Directors and Audit Committee must be carried out based on related protocols and internal control procedures. The Company complies with its financial risk management policies at all times.

(3) Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks comprise currency risk, interest rate risk and other price risk (such as equity price risk).

Foreign currency risk

The Company's exposure to the risk of changes in foreign exchange rates relates primarily to the Company's operating activities (when revenue or expense is denominated in a different currency from the Company's functional currency) and the Company's net investments in foreign subsidiaries.

The Company applies natural hedges on the foreign currency risk arising from purchases or sales, and utilizes spot or forward exchange contracts to manage foreign currency risk and the net effect of the risks related to monetary financial assets and liabilities is minor. The notional amounts of the foreign currency contracts are the same as the amount of the hedged items. In principle, the Company does not carry out any forward exchange contracts for uncertain commitments. Furthermore, as net investments in foreign subsidiaries are for strategic purposes, they are not hedged by the Company.

The foreign currency sensitivity analysis of the possible change in foreign exchange rates on the Company's profit is performed on significant monetary items denominated in foreign currencies as of the end of the reporting period. When NTD strengthens/weakened against USD by 10%, the profit for the years ended December 31, 2022, 2023 and 2024 decreases/increases by NT\$1,305 million, NT\$620 million and NT\$1,095 million, respectively. When RMB strengthens/weakened against USD by 10%, the profit for the years ended December 31, 2022, 2023 and 2024 decreases/increases by NT\$572 million, NT\$582 million and NT\$615 million, respectively. When JPY strengthens/weakened against USD by 10%, the profit for the years ended December 31, 2022, 2023 and 2024 decreases/increases by NT\$538 million, NT\$290 million and NT\$237 million, respectively.

Interest rate risk

The Company is exposed to interest rate risk arising from borrowing at floating interest rates. All of the Company's bonds have fixed interest rates and are measured at amortized cost. As such, changes in interest rates would not affect the future cash flows. On the other hand, as the interest rates of the Company's short-term and long-term bank loans are floating, changes in interest rates would affect the future cash flows but not the fair value. Please refer to Note 6(11), (13) and (14) for the range of interest rates of the Company's bonds and bank loans.

At the reporting dates, a change of 10 basis points of interest rate in a reporting period could cause the profit for the years ended December 31, 2022, 2023 and 2024 to decrease/increase by NT\$19 million, NT\$36 million and NT\$45 million, respectively.

Equity price risk

The Company's listed and unlisted equity securities, investments in convertible bonds and exchange right of the exchangeable bonds issued are susceptible to market price risk arising from uncertainties about future performance of equity markets. The Company's equity investments are classified as financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income, the investments in convertible bonds which contain the right of conversion to equity instruments are classified as financial assets at fair value through profit or loss, and the exchange right of the exchangeable bonds issued is classified as financial liabilities at fair value through profit or loss as it does not satisfy the definition of an equity component. Please refer to Note 6(2), (3) and (12) for the relevant information.

The sensitivity analysis for the equity instruments is based on the change in fair value as of the reporting date. A change of 5% in the price of the aforementioned financial assets at fair value through profit or loss of listed companies could increase/decrease the Company's profit for the years ended December 31, 2022, 2023 and 2024 by NT\$285 million, NT\$270 million and NT\$261 million, respectively. A change of 5% in the price of the aforementioned financial assets at fair value through other comprehensive income of listed companies could increase/decrease the Company's other comprehensive income (loss) for the years ended December 31, 2022, 2023 and 2024 by NT\$579 million, NT\$722 million and NT\$689 million, respectively.

Please refer to Note 11(7) for sensitivity analysis information of other equity instruments or derivatives that are linked to such equity instruments whose fair value measurement is categorized under Level 3.

(4) Credit risk management

The Company only trades with approved and creditworthy third parties. Where the Company trades with third parties which have less credit, it will request collateral from them. It is the Company's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, notes and accounts receivable balances are monitored on an ongoing basis to decrease the Company's exposure to credit risk.

The Company mitigates the credit risks from financial institutions by limiting its counter parties to only reputable domestic or international financial institutions with good credit standing and spreading its holdings among various financial institutions. The Company's exposure to credit risk arising from the default of counter-parties is limited to the carrying amount of these instruments.

As of December 31, 2023 and 2024, accounts receivable from the top ten customers represent 67% and 66% of the total accounts receivable of the Company, respectively. The credit concentration risk of other accounts receivable is insignificant.

(5) Liquidity risk management

The Company's objectives are to maintain a balance between continuity of funding and flexibility through the use of cash and cash equivalents, bank loans, bonds and lease.

The table below summarizes the maturity profile of the Company's financial liabilities based on the contractual undiscounted payments and contractual maturity:

	As of December 31, 2023				
	Less than 1 year NT\$ (In Thousands)	2 to 3 years NT\$ (In Thousands)	4 to 5 years NT\$ (In Thousands)	> 5 years NT\$ (In Thousands)	Total NT\$ (In Thousands)
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$13,780,612	\$ —	\$ —	\$ —	\$ 13,780,612
Payables	52,202,821	—	—	—	52,202,821
Guarantee deposits	1,476,430	3,556,179	25,955,654	10,611,123	41,599,386
Bonds payable (Note A)	14,797,772	10,980,506	12,321,345	2,132,963	40,232,586
Long-term loans	2,872,168	14,406,101	5,071,743	2,940,524	25,290,536
Lease liabilities	649,879	1,311,239	1,223,724	3,712,729	6,897,571
Total	<u>\$85,779,682</u>	<u>\$30,254,025</u>	<u>\$44,572,466</u>	<u>\$19,397,339</u>	<u>\$180,003,512</u>
As of December 31, 2024					
	Less than 1 year NT\$ (In Thousands)	2 to 3 years NT\$ (In Thousands)	4 to 5 years NT\$ (In Thousands)	> 5 years NT\$ (In Thousands)	Total NT\$ (In Thousands)
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 8,683,215	\$ —	\$ —	\$ —	\$ 8,683,215
Payables	42,136,632	—	—	—	42,136,632
Guarantee deposits	921,134	4,571,633	27,522,150	9,859,577	42,874,494
Bonds payable (Note A)	340,976	16,675,030	12,146,745	2,118,683	31,281,434
Long-term loans (Note B)	6,354,561	11,490,087	21,478,391	93,106	39,416,145
Lease liabilities	830,618	1,509,438	1,437,870	4,442,706	8,220,632
Total	<u>\$59,267,136</u>	<u>\$34,246,188</u>	<u>\$62,585,156</u>	<u>\$16,514,072</u>	<u>\$172,612,552</u>
<u>Derivative financial liabilities</u>					
Forward exchange contracts					
Net settlement-outflow	\$ (1,039)	\$ —	\$ —	\$ —	\$ (1,039)

Note A: UMC issued unsecured exchangeable bonds where the bondholders may exchange the bonds at any time on or after October 8, 2021 and prior to June 27, 2026 into NOVATEK common shares which UMC holds and accounts for as equity instruments investments measured at fair value through other comprehensive income. The balances of equity instruments investments measured at fair value through other comprehensive income were NT\$5,753 million and NT\$5,893 million as of December 31, 2023 and 2024, respectively. Please refer to Note 6(13) for the terms of redemption.

Note B: For the long-term loans with contractual maturity within 2 to 3 years and 4 to 5 years in 2024, the Company made repayments in the amounts of NT\$1,971 million and NT\$9,131 million, respectively, from January 1 to April 24, 2025.

(6) Foreign currency risk management

UMC entered into forward exchange contracts for hedging the exchange rate risk arising from the net monetary assets or liabilities denominated in foreign currency. The details of forward exchange contracts entered into by UMC are summarized as follows:

As of December 31, 2023

Forward exchange contracts have been settled.

As of December 31, 2024

Type	Notional Amount	Contract Period
Forward exchange contracts	Sell USD 24 million	December 27, 2024 - January 21, 2025

(7) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Company.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities,

Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable,

Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognized in the financial statements on a recurring basis, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

a. Assets and liabilities measured and recorded at fair value on a recurring basis:

	As of December 31, 2023			
	Level 1 NT\$ (In Thousands)	Level 2 NT\$ (In Thousands)	Level 3 NT\$ (In Thousands)	Total NT\$ (In Thousands)
Financial assets:				
Financial assets at fair value through profit or loss, current	\$ 443,601	\$ —	\$ —	\$ 443,601
Financial assets at fair value through profit or loss, noncurrent	6,424,475	19,300	10,251,085	16,694,860
Financial assets at fair value through other comprehensive income, current	5,753,379	—	—	5,753,379
Financial assets at fair value through other comprehensive income, noncurrent	8,693,193	—	3,237,388	11,930,581
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	—	—	1,019,362	1,019,362
	As of December 31, 2024			
	Level 1 NT\$ (In Thousands)	Level 2 NT\$ (In Thousands)	Level 3 NT\$ (In Thousands)	Total NT\$ (In Thousands)
Financial assets:				
Financial assets at fair value through profit or loss, current	\$ 606,016	\$ 2	\$ —	\$ 606,018
Financial assets at fair value through profit or loss, noncurrent	5,703,325	18,800	12,128,789	17,850,914
Financial assets at fair value through other comprehensive income, current	5,893,377	—	—	5,893,377
Financial assets at fair value through other comprehensive income, noncurrent	7,879,553	—	3,436,398	11,315,951
Financial liabilities:				
Financial liabilities at fair value through profit or loss, current	—	1,039	899,961	901,000

Fair values of financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income that are categorized into Level 1 are based on the quoted market prices in active markets. If there is no active market, the Company estimates the fair value by using the valuation techniques (income approach and market approach) in consideration of cash flow forecast, recent fund raising activities, valuation of similar companies, individual company's development, market conditions and other economic indicators.

If there are restrictions on the sale or transfer of a financial asset, which are a characteristic of the asset, the fair value of the asset will be determined based on similar but unrestricted financial assets' quoted market price with appropriate discounts for the restrictions. To measure fair values, if the lowest level input that is significant to the fair value measurement is directly or indirectly observable, then the financial assets are classified as Level 2 of the fair value hierarchy, otherwise as Level 3.

During the year ended December 31, 2023, as the private placement ordinary shares held by the Company's subsidiary became publicly listed on the over-the-counter market in Taiwan in May 2023, the Company transferred NT\$655 million of the financial assets at fair value through profit or loss measured at the end of the reporting period in the quarter from Level 2 to Level 1 fair value measurement. During the year ended December 31, 2024, there was no transfers between Level 1 and Level 2 fair value measurements.

Reconciliation for fair value measurement in Level 3 fair value hierarchy were as follows:

	Financial assets at fair value through profit or loss						Financial assets at fair value through other comprehensive income		
	Common stock NT\$ (In Thousands)	Preferred stock NT\$ (In Thousands)	Funds NT\$ (In Thousands)	Convertible bonds NT\$ (In Thousands)	Others NT\$ (In Thousands)	Total NT\$ (In Thousands)	Common stock NT\$ (In Thousands)	Preferred stock NT\$ (In Thousands)	Total NT\$ (In Thousands)
	\$ 3,198,808	\$ 2,865,258	\$ 4,626,333	\$ 36,474	\$ —	\$ 10,726,873	\$ 3,427,720	\$ 182,547	\$ 3,610,267
As of January 1, 2023									
Recognized in profit (loss)	(312,149)	(277,994)	(617,764)	(8,828)	—	(1,216,735)	—	—	—
Recognized in other comprehensive income (loss)	—	—	—	—	—	—	(365,395)	(7,484)	(372,879)
Acquisition	610,153	294,046	294,245	—	154,761	1,353,205	—	—	—
Disposal	—	(89,997)	—	(27,740)	—	(117,737)	—	—	—
Return of capital	(1,384)	—	(36,346)	—	—	(37,730)	—	—	—
Transfer out of Level 3	(461,403)	—	—	—	—	(461,403)	—	—	—
Exchange effect	2,230	(4,679)	8,428	94	(1,461)	4,612	—	—	—
As of December 31, 2023	<u>\$ 3,036,255</u>	<u>\$ 2,786,634</u>	<u>\$ 4,274,896</u>	<u>\$ —</u>	<u>\$ 153,300</u>	<u>\$ 10,251,085</u>	<u>\$ 3,062,325</u>	<u>\$ 175,063</u>	<u>\$ 3,237,388</u>

Financial liabilities at fair
value through profit or loss

Derivatives NT\$ (In Thousands)
\$ 438,397
580,965

As of January 1, 2023	\$ 438,397
Recognized in loss (profit)	580,965
As of December 31, 2023	<u>\$ 1,019,362</u>

	Financial assets at fair value through profit or loss						Financial assets at fair value through other comprehensive income		
	Common stock NT\$ (In Thousands)	Preferred stock NT\$ (In Thousands)	Funds NT\$ (In Thousands)	Convertible bonds NT\$ (In Thousands)	Others NT\$ (In Thousands)	Total NT\$ (In Thousands)	Common stock NT\$ (In Thousands)	Preferred stock NT\$ (In Thousands)	Total NT\$ (In Thousands)
As of January 1, 2024	\$ 3,036,255	\$ 2,786,634	\$ 4,274,896	\$ —	\$ 153,300	\$ 10,251,085	\$ 3,062,325	\$ 175,063	\$ 3,237,388
Recognized in profit (loss)	(119,584)	187,131	128,617	3,120	4,140	203,424	—	—	—
Recognized in other comprehensive income (loss)	—	—	—	—	—	—	104,499	29,817	134,316
Acquisition	505,538	639,779	1,133,312	51,191	—	2,329,820	64,694	—	64,694
Disposal	(78,234)	(311,066)	(81,371)	—	(96,312)	(566,983)	—	—	—
Return of capital	(83)	—	(12,405)	—	—	(12,488)	—	—	—
Transfer out of Level 3	(377,121)	—	—	—	—	(377,121)	—	—	—
Exchange effect	41,412	101,455	153,398	455	4,332	301,052	—	—	—
As of December 31, 2024	<u>\$ 3,008,183</u>	<u>\$ 3,403,933</u>	<u>\$ 5,596,447</u>	<u>\$ 54,766</u>	<u>\$ 65,460</u>	<u>\$ 12,128,789</u>	<u>\$ 3,231,518</u>	<u>\$ 204,880</u>	<u>\$ 3,436,398</u>
 <u>Financial liabilities at fair value through profit or loss</u>									
<u>Derivatives</u>									
<u>NT\$ (In Thousands)</u>									
As of January 1, 2024	\$ 1,019,362								
Recognized in loss (profit)		(119,401)							
As of December 31, 2024	\$ 899,961								

The total profit (loss) of NT\$(74) million, NT\$(1,329) million and NT\$128 million for the years ended December 31, 2022, 2023 and 2024, were included in profit or loss that is attributable to the change in unrealized gains or losses relating to those financial assets without quoted market prices held at the end of the reporting period.

The total profit (loss) of NT\$829 million, NT\$(581) million and NT\$119 million for the years ended December 31, 2022, 2023 and 2024, were included in profit or loss that is attributable to the change in unrealized gains or losses relating to those financial liabilities without quoted market prices held at the end of the reporting period.

The Company's policy to recognize the transfer into and out of fair value hierarchy levels is based on the event or changes in circumstances that caused the transfer.

Significant unobservable inputs of fair value measurement in Level 3 fair value hierarchy were as follows:

As of December 31, 2023					
Category	Valuation technique	Significant unobservable inputs	Quantitative information	Interrelationship between inputs and fair value	Sensitivity analysis of interrelationship between inputs and fair value
Unlisted stock	Market approach	Discount for lack of marketability	0% - 50%	The greater degree of lack of marketability, the lower the estimated fair value is determined.	A change of 5% in the discount for lack of marketability of the aforementioned fair values of unlisted stocks could decrease/increase the Company's profit (loss) for the year ended December 31, 2023 by NT\$261 million and NT\$199 million, respectively, and decrease/increase the Company's other comprehensive income (loss) for the year ended December 31, 2023 by NT\$214 million.
Fund Embedded derivatives in exchangeable bonds	Net asset value approach Binomial tree valuation model	N/A Volatility	N/A 27.70%	N/A The higher the volatility, the higher the estimated fair value is determined.	N/A A change of 5% in the volatility could decrease/increase the Company's profit (loss) for the year ended December 31, 2023 by NT\$119 million and NT\$131 million, respectively.

As of December 31, 2024

Category	Valuation technique	Significant unobservable inputs	Quantitative information	Interrelationship between inputs and fair value	Sensitivity analysis of interrelationship between inputs and fair value
Unlisted stock	Market approach	Discount for lack of marketability	0% - 50%	The greater degree of lack of marketability, the lower the estimated fair value is determined.	A change of 5% in the discount for lack of marketability of the aforementioned fair values of unlisted stocks could decrease/increase the Company's profit (loss) for the year ended December 31, 2024 by NT\$309 million and NT\$244 million, respectively, and decrease/increase the Company's other comprehensive income (loss) for the year ended December 31, 2024 by NT\$239 million.
Fund Convertible bonds	Net asset value approach Binomial tree valuation model	N/A Volatility	N/A 54.85%	N/A The higher the volatility, the higher the estimated fair value is determined.	N/A A change of 5% in the volatility could increase/decrease the Company's profit (loss) for the year ended December 31, 2024 by NT\$0.3 million and NT\$0.4 million, respectively.
Embedded derivatives in exchangeable bonds	Binomial tree valuation model	Volatility	28.06%	The higher the volatility, the higher the estimated fair value is determined.	A change of 5% in the volatility could decrease/increase the Company's profit (loss) for the year ended December 31, 2024 by NT\$97 million and NT\$113 million, respectively.

b. Assets and liabilities not recorded at fair value but for which fair value is disclosed:

The fair value of bonds payable is estimated by the market price or using a valuation model. The model uses market-based observable inputs including share price, exchange price, volatility, risk-free interest rates and risk discount rates. The fair value of long-term loans is determined using discounted cash flow model, based on the Company's current incremental borrowing rates of similar loans.

The fair values of the Company's cash and cash equivalents, receivables, refundable deposits, other financial assets, short-term loans, payables and guarantee deposits approximate their carrying amount.

As of December 31, 2023

Items	Fair value NT\$ (In Thousands)	Fair value measurements during reporting period using			Carrying amount NT\$ (In Thousands)
		Level 1 NT\$ (In Thousands)	Level 2 NT\$ (In Thousands)	Level 3 NT\$ (In Thousands)	
Bonds payables (current portion included)	\$38,367,168	\$32,827,211	\$ 5,539,957	\$ —	\$38,359,352
Long-term loans (current portion included)	22,883,344	—	22,883,344	—	22,883,344

As of December 31, 2024

Items	Fair value NT\$ (In Thousands)	Fair value measurements during reporting period using			Carrying amount NT\$ (In Thousands)
		Level 1 NT\$ (In Thousands)	Level 2 NT\$ (In Thousands)	Level 3 NT\$ (In Thousands)	
Bonds payables (current portion included)	\$30,020,005	\$24,409,952	\$ 5,610,053	\$ —	\$30,051,568
Long-term loans (current portion included)	36,476,909	—	36,476,909	—	36,476,909

12. OPERATING SEGMENT INFORMATION

- (1) The Company determined its operating segments based on business activities with discrete financial information regularly reported through the Company's internal reporting protocols to the Company's chief operating decision maker. The Company only has wafer fabrication operating segment as the single reporting segment. The primary operating activity of the wafer fabrication segment is the manufacture of chips to the design specifications of our customers by using our own proprietary processes and techniques. There was no material difference between the accounting policies of the operating segment and those described in Note 4. Please refer to the Company's consolidated financial statements for the related segment revenue and operating results.
- (2) Geographic non-current assets information

	As of December 31,	
	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)
Taiwan	\$158,066,796	\$143,009,330
Singapore	55,322,448	107,247,569
China (includes Hong Kong)	33,424,815	38,271,386
Japan	13,415,669	12,235,336
Others	76,508	61,643
Total	\$260,306,236	\$300,825,264

Non-current assets include property, plant and equipment, right-of-use assets, intangible assets, prepayment for equipment and other noncurrent assets.

- (3) Major customers

Individual customers accounting for at least 10% of operating revenues for the years ended December 31, 2022, 2023 and 2024 were as follows:

	For the years ended December 31,		
	2022	2023	2024
	NT\$ (In Thousands)	NT\$ (In Thousands)	NT\$ (In Thousands)
Customer A	N/A (Note)	N/A (Note)	\$24,180,535
Customer B	N/A (Note)	\$29,242,973	N/A (Note)

Note: The sales amount is less than 10% of the Company's operating revenues.

13. CAPITAL MANAGEMENT

The primary objective of the Company's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios to support its business and maximize the shareholders' value. The Company also ensures its ability to operate continuously to provide returns to shareholders and the interests of other related parties, while maintaining the optimal capital structure to reduce costs of capital.

To maintain or adjust the capital structure, the Company may adjust the dividend payment to shareholders, return capital to shareholders, issue new shares or dispose assets to redeem liabilities.

Similar to its peers, the Company monitors its capital based on debt to capital ratio. The ratio is calculated as the Company's net debt divided by its total capital. The net debt is derived by taking the total liabilities on the consolidated balance sheets minus cash and cash equivalents. The total capital consists of total equity (including capital, additional paid-in capital, retained earnings, other components of equity and non-controlling interests) plus net debt.

The Company's strategy, which is unchanged for the reporting periods, is to maintain a reasonable ratio in order to raise capital with reasonable cost. The debt to capital ratios as of December 31, 2023 and 2024 were as follows:

	As of December 31,	
	2023 NT\$ (In Thousands)	2024 NT\$ (In Thousands)
Total liabilities	\$ 202,859,864	\$ 194,462,244
Less: Cash and cash equivalents	(132,553,615)	(105,000,226)
Net debt	70,306,249	89,462,018
Total equity	343,716,968	365,706,711
Total capital	\$ 414,023,217	\$ 455,168,729
Debt to capital ratios	<u>16.98%</u>	<u>19.65%</u>

(Translation)
Articles of Incorporation of United Microelectronics Corporation

Last Updated: May 30, 2024

Section I**General Provisions**

Article 1 The Company shall be incorporated as a company limited by shares under the Company Act and its name shall be “聯華電子股份有限公司” in the Chinese Language, and “United Microelectronics Corporation” in the English language.

Article 2 The scope of business of the Company shall be as follow:

CC01080 Electronics Components Manufacturing

I501010 Product Designing

F401010 International Trade

C801990 Other Chemical Materials Manufacturing

C802990 Other Chemical Products Manufacturing

CA02990 Other Metal Products Manufacturing

IG03010 Energy Technical Services

I199990 Other Consulting Service

J101090 Waste Disposal

1. Integrated circuits;
2. Various semiconductor parts and components, such as Hybrid Circuits, IC Cards and Circuit Modules, etc.;
3. Parts and components of microcomputers, microprocessors, peripheral support and system products, such as Contact Image Sensors (CIS) and Liquid Crystal Displays (LCD), etc.;
4. Parts and components of Semiconductor memory and its systems products;
5. Parts and components of semiconductor and its systems products used in digital signal acquisition and transmission system;
6. Parts and components of semiconductor and its systems products used in telecommunication systems;
7. Testing and packaging of integrated circuits;
8. Production of mask;
9. Metals, derived fuels and chemical products that are generated simultaneously from the company's manufacturing process;
10. Management consulting service in regard to sustainable development, energy/resources conservation technologies and semiconductor fab related affairs;
11. Clearance, recycle and disposal of waste and manufacturing outputs (Only for waste disposal processing outside of the science park);
12. Research and development, design, production, sales, promotion and after sale service of all above items and their application products;

13. Also engage in export/import trade business in relation to the business of the Company.

Article 2-1

The Company may act as a guarantor.

Article 2-2

When the Company becomes a shareholder of limited liability in other companies, the total amount of its investment may not be subject to the restriction of not exceeding 40% of its own paid-in capital as provided in Article 13 of the Company Act.

Article 3

The Company shall have its head-office in Hsinchu Science-based Industrial Park and, if necessary, may set up branches or business offices in and out of this country upon a resolution of its Board of Directors and approval from the competent government authority.

Article 4

Public notices of the Company shall be made in accordance with Article 28 of the Company Act.

Section II

Shares

Article 5

The total capital amount of the Company shall be Two Hundred and Sixty billion New Taiwan Dollars accounting for Twenty Six billion shares, at a par value of Ten New Taiwan Dollars (NT\$10) per share. The Board of Directors is authorized to issue the unissued shares in installments. The issue price per share will be determined by the Board of Directors pursuant to the ROC Company Act or relevant securities-related laws and regulations.

The capital, within fifteen billion New Taiwan Dollars, is for corporate bonds with equity warrants, which is one thousand and five hundred million shares, at a par value of ten New Taiwan Dollars (NT\$10) per share. The Board of Directors is authorized to issue the unissued shares in installments depending on the business needs of the Company.

Moreover, the capital, within twenty billion New Taiwan Dollars, is for warrant, which is two billion shares at a par value of Ten New Taiwan Dollars (NT\$10) per share. The Board of Directors is authorized to issue the unissued shares in installments depending on the business needs of the Company.

The recipients of treasury stock transferred to employees, issuance of shares, employee stock options and restricted stock awards can be the employees of the Company's subsidiaries who fulfill specific requirements.

Article 6

The share certificate of the Company is all name-bearing share certificates and shall be issued after duly authentication pursuant to the law.

The Company can also deliver shares by wiring into account books based on related regulations, rather printing physical shares. When issuing other securities, the same rule applies.

Article 7

Registration for transfer of shares shall all be suspended 60 days before the convocation of any ordinary shareholders' meeting, 30 days before the convocation of extraordinary shareholders' meeting, or 5 days before the record day for distribution of dividend, interest and bonus or any other benefit as scheduled by the Company.

Section III

Shareholders' Meeting

Article 8

Shareholders' meeting shall be of two types, namely general and extraordinary shareholders' meeting; the former shall be convened once a year by the Board of Directors in accordance with laws within six months after the close of each accounting fiscal year and the latter shall be convened in accordance with laws whenever necessary. Shareholders' meeting of the Company can be held by means of visual communication network or other methods promulgated by the central competent authority.

Article 9

In case a shareholder is unable to attend a shareholders' meeting, he/she may issue proxy printed by the Company setting forth the scope of authorization by signing or affixing his/her seal on the proxy form for the representative to be present on his/her behalf.

Article 10

Unless otherwise provided in the Laws, a shareholder of the Company shall have one vote for each share held by him or her.

Article 11

Unless otherwise provided in the Company Act, Securities and Exchange Act or other Laws, resolution(s) shall be made at the meeting attended by shareholders holding and representing a majority of the total number of issued and outstanding shares and at which meeting a majority of the shareholders shall vote in favor of the resolution.

Section IV**Directors and Committees**

Article 12

The Company shall have nine (9) to eleven (11) directors to be elected at a shareholders' meeting through a nominating system from persons of legal capacity to serve a term of three years. A director may be re-elected.

At least three (3) directors or one-fifth of all directors, whichever is higher, shall be the independent directors. The qualification, the limitations of shareholding and concurrently serving other positions, the methods of nomination and election and other related matters shall be subject to the applicable laws.

Article 13

The Company shall set forth the Audit Committee, which comprises of all the independent directors. The seats, the term, the authorities, the rules governing meetings and the resources the Company shall provide upon the committee's exercise of authority shall be governed by the Audit Committee Charter, which will be set forth separately.

Article 13-1

The Company established a Remuneration Committee, of which the number of members, duration of duty, rights of duty, rules of procedure, and resources that the Company must provide during the period of duty shall be separately determined by the Remuneration Committee Charter.

Article 13-2

The Company established a Sustainable Development and Nominating Committee, of which the number of members, duration of duty, rights of duty, rules of procedure, and resources that the Company must provide during the period of duty shall be separately determined by the Sustainable Development and Nominating Committee Charter.

Article 14

The Company has to purchase D&O for directors during their terms.

Article 15

The Board of Directors shall be organized by directors. The Chairman of the Board shall be elected by the majority of directors present at a meeting attended by more than two thirds of directors. The directors may also elect a vice Chairman of the Board whenever they may deem necessary to carry out the Company's activities. The Chairman of the Board shall internally be the Chairman of the meeting of shareholders, Board of Directors and managing directors' meeting and externally represent the Company.

Article 16

In case the Chairman of the Board of Directors is on leave or unable to perform his duties for cause, the vice Chairman of the Board of Directors, if any, shall act as the Chairman. If there is no vice Chairman of the Board or the vice Chairman of the Board is also on leave or unable to perform his duties for cause, the Chairman of the Board shall designate a director to act as the chairman. If there is no such designation, the directors shall elect one from amongst themselves.

Article 16-1

In case a board member is unable to attend the Board of Directors' meeting, he/she may issue proxy setting forth the scope of authorization by signing or affixing his/her seal on the proxy form for another board member to present on his/her behalf. The representative shall serve as the proxy for one director only.

Other than what is demanded by ROC Company Act, Securities and Exchange Act or other Laws, the resolution of the board of directors shall be adopted by a majority of the directors present at the meeting attended by more than half of the directors.

Article 17

Remunerations for all directors shall be decided by the Board of Directors authorized by a meeting of shareholders according to involvements and contributions to the Companies' operation and at the normal rate adopted by other firms of the same industry.

Article 18

The Board of Directors shall have the following functions and responsibilities:

1. Examination and review of operational policy and medium and long-term development plans.
2. Review of and supervision over execution of annual business plans.
3. Approval of budget and examination of the final settlement of account.
4. Examination of capital increase/decrease plans.

5. Examination of earnings distribution or making up of loss programs.
6. Examination and approval of important contracts.
7. Examination of Articles of Incorporation or amendments thereof.
8. Approval of organizational by-laws and important business rules.
9. Decision in establishment, reorganization or removal of branch offices.
10. Approval of major capital expenditure plans.
11. Appointment and discharge of managers.
12. Execution of resolutions adopted at shareholders' meeting.
13. Examination of matters proposed by the general manager for decision.
14. Convocation of shareholders' meeting and making business reports.
15. Other matters to be handled in accordance with the laws.

Article 19

Except for the authority provided under Paragraph 4, Article 14-4 of the Securities and Exchange Act, the authorities granted to each of the supervisor under the Company Act, the Securities and Exchange Act and other laws shall be granted to and exercised by the Audit Committee. Provisions of Paragraph 4, Article 14-4 of the Securities and Exchange Act which are relating to the supervisor's activities and capacity of being the representative of a company provided under the Company Act shall apply mutatis mutandis to each independent director, and a member of the Audit Committee.

Section V

Managers

Article 20

The Company may have one Chief Executive Officer and several managers, whose appointments, discharge, and remunerations shall be subject to provisions in Article 29 of the ROC Company Act as well as related regulations. The title and scope of authority of the managers are to be determined by the board of directors, and the board of directors can authorize the chairman to determine.

Section VI

Accounting

Article 21

The Board of Directors shall prepare at the close of each accounting fiscal year for the Company (1) Business Report, (2) Financial Statements, (3) Proposal of Distribution of Earnings or Making Up of Loss, etc. and submit the same to the general shareholders meeting for acceptance.

Article 21-1

The Company shall allocate no less than 5% of profit as employees' compensation and no more than 0.2% of profit as directors' compensation for each profitable fiscal year after offsetting any cumulative losses.

The aforementioned employees' compensation will be distributed in shares or cash. The employees of the Company's subsidiaries who fulfill specific requirements stipulated by the Board of Directors may be granted such compensation. Directors may only receive compensation in cash.

The Company may, by a resolution adopted by a majority vote at a meeting of the Board of Directors attended by two-thirds of the total number of directors, distribute the aforementioned employees' and directors' compensation and report to the shareholders' meeting for such distribution.

Article 22

After making the final settlement of account, the Company shall allocate the net profit ("earnings"), if any, according to the following sequence:

1. Payment of taxes.
2. Making up for loss in preceding years.
3. Setting aside 10% for legal reserve, except for when accumulated legal reserve has reached the Company's paid-in capital.

4. Appropriating or reversing special reserve by government officials or other regulations.
5. The remaining, in addition to the previous year's unappropriated earnings, the Company shall distribute it according to the distribution plan proposed by the Board of Directors according to the dividend policy in paragraph two of this clause and submitted to the shareholders' meeting for approval.

Because the company conducts business in a capital-intensive industry and continues to operate in its growth phase, the dividend policy of the Company shall be determined pursuant to factors such as the investment environment, its funding requirements, domestic and overseas competitive landscape and its capital expenditure forecast, as well as shareholders' interest, balancing dividends and UMC's long-term financial planning. The Board of Directors shall propose the distribution plan and submit it to the shareholders' meeting every year. The distribution of shareholders dividend shall be allocated as cash dividend in the range of 20% to 100%, and stock dividend in the range of 0% to 80%.

Section VII Additional Rules

Article 23 The organization by-law of the Company shall be provided otherwise.

Article 24 In regard to all matters not provided for in these Articles of Incorporation, the Company Act, Securities and Exchange Act or other Laws shall govern.

Article 25 These Article of Incorporation were enacted on Feb. 21, 1980 and amended on Feb. 21, 1981 for the first time, on May 16, 1981 for the second time, on Aug. 8, 1981 for the third time, on Oct. 20, 1981 for the fourth time, on Jan. 15, 1982 for the fifth time, on Apr. 28, 1983 for the sixth time, on Mar. 19, 1984 for the seventh time, on Aug. 7, 1984 for the eighth time, on Apr. 30, 1985 for the ninth time, on Apr. 26, 1986 for the tenth time, on May 23, 1987 for the eleventh time, on Mar. 5, 1988 for the twelfth time, on March 25, 1989 for the thirteenth time, on June 6, 1989 for the fourteenth time, on Apr. 14, 1990 for the fifteenth time, on Jun. 29, 1991 for the sixteenth time, on May 7, 1992 for the seventeenth time, on Apr. 22, 1994 for the eighteenth time, on May 4, 1995 for the nineteenth time, on Jun. 21, 1995 for the twentieth time, on Apr. 11, 1996 for the twenty-first time, on Jun. 24, 1997 for the twenty-second time, on May 5, 1998 for the twenty-third time, on May 13, 1999 for twenty-fourth time, on Jul. 30, 1999 for twenty-fifth time, on Apr. 7, 2000 for twenty-sixth time, on May 30, 2001 for the twenty-seventh time, on June 3, 2002 for the twenty-eighth time, on June 9, 2003 for the twenty-ninth time, on June 1, 2004 for the thirtieth time, on June 13, 2005 for the thirty-first time, on June 12, 2006 for the thirty-second time, on June 11, 2007 for the thirty-third time, and on June 13, 2008 for the thirty-fourth time, on June 15, 2011 for the thirty-fifth time, on June 7, 2016 for the thirty-sixth time, on June 8, 2017 for the thirty-seventh time, on June 12, 2018 for the thirty-eighth time, on June 10, 2020 for the thirty-ninth time, and on May 30, 2024 for the fortieth time.

List of Significant Subsidiaries of United Microelectronics Corporation

Company	Jurisdiction of Incorporation	Percentage of Ownership as of December 31, 2024
UMC Group (USA)	U.S.A.	100.00%
United Microelectronics (Europe) B.V.	The Netherlands	100.00%
UMC Capital Corp.	Cayman Islands	100.00%
TLC Capital Co., Ltd.	Taiwan, R.O.C.	100.00%
Green Earth Limited	Samoa	100.00%
Fortune Venture Capital Corp.	Taiwan, R.O.C.	100.00%
UMC Investment (Samoa) Limited	Samoa	100.00%
ECP Vita Pte. Ltd.	Singapore	100.00%
Soaring Capital Corp.	Samoa	100.00%
Unitruth Advisor (Shanghai) Co., Ltd.	China	100.00%
Tera Energy Development Co., Ltd.	Taiwan, R.O.C.	94.93%
United Microchip Corporation	Cayman Islands	100.00%
Wavetek Microelectronics Corporation	Taiwan, R.O.C.	79.54%
Everrich Energy Investment (HK) Limited	China	94.93%
Everrich (Jining) New Energy Technology Co., Ltd. (formerly Everrich (Shandong) Energy Co., Ltd.)	China	94.93%
Wavetek Microelectronics Corporation (USA)	U.S.A.	79.54%
Best Elite International Limited	British Virgin Islands	100.00%
Infoshine Technology Limited	British Virgin Islands	100.00%
Oakwood Associates Limited	British Virgin Islands	100.00%
Hejian Technology (Suzhou) Co., Ltd.	China	99.9985%
United Semiconductor (Xiamen) Co., Ltd.	China	99.9994%
UMC Korea Co., Ltd.	Korea	100.00%
Omni Global Limited	Samoa	100.00%
United Microtechnology Corporation (California)	U.S.A.	100.00%
Sino Paragon Limited	Samoa	100.00%
United Semiconductor Japan Co., Ltd.	Japan	100.00%

Policies and Procedures for Refraining from Insider Trading

Insider trading laws prohibit the trade (purchase, including short, or sale) of securities while aware of material non-public information, and prohibit disclosure of material non-public information to others who then trade in the affected securities. The potential consequences for the Company's directors, supervisors, officers and employees, as well as those who receive inside information from such persons, from a violation of these laws include civil liability, criminal fines and jail terms.

In order to avoid violations of the relevant insider trading laws and rules by directors, supervisors, officers and employees, the Company adopted the following policy and procedures regarding trading of the Company's securities. We urge you to read the policy and procedures with care. Any failure to follow the policy and procedures could subject you to discipline, including possible termination of employment. If you have any questions about the policy, procedures, or any particular action, you should promptly contact the Director of Legal & Compliance Division (the "Compliance Officer"): z_Legal@umc.com.

I. Insider Trading Policy :

Each director, supervisor, officer or employee of the Company who is aware of material non-public information relating to the Company may, directly or through family members or other persons or entities, (a) may not trade (i.e., purchase or sell, or engage in other transactions concerning) or recommend such trade of, the Company's securities, (b) may not engage in any other action to take personal advantage of that information, and (c) may not disclose that information to any person outside the Company, including family and friends, other than those who need to know such information in connection with doing business with or for the Company and who are legally bound to keep such information confidential. This prohibition applies not only to you but also to your spouse, other members of your family and household and any entities under your control.

These restrictions terminate only after the inside information has been publicly disclosed, and the public has had a reasonable amount of time to absorb, evaluate and react to the information. Although there is no absolute rule, it is normally assumed the market has absorbed and reacted after 48 hours from proper disclosure. Accordingly, by Company policy, UMC adopts the 48 hours guideline¹. Therefore, after material information is precise, the blackout periods will be the time prior to the public disclosure of such information and within 48 hours after such public disclosure.

1. What is "Non-Public" Information?

"Non-public" information is knowledge of any event or situation that has not been effectively disseminated to the public through such means as the news media, financial publications, Bloomberg, Reuters or other public disclosure statements (e.g., prospectuses, proxy statements, etc.). Information received under circumstances that suggest that it is not yet in general circulation and that was provided, directly or indirectly, by the Company or its directors, supervisors, officers or employees should be considered non-public information. Prior to using or disclosing this information, you must be able to demonstrate that the information is publicly available. If you have any doubt, ask the person providing the information to you if it is public, and speak to the Compliance Officer.

2. What is "Material" Information?

Information is material if (i) it is reasonably certain to have a substantial effect on the price of the Company's securities, (ii) there is a substantial likelihood that a reasonable investor would likely consider the information important in determining whether to buy, sell or hold the Company's securities or (iii) there is a substantial likelihood that a reasonable investor would consider disclosure of the information to significantly alter the "total mix" of public information relating to the Company's securities.

As a common sense guide, you should consider information to be material if disclosure of the information would likely affect the price of the Company's securities or a persons decisions concerning those securities. Examples of information that may be material include (but are not limited to):

- A. merger or acquisition plans (including tender offers) involving the Company;
- B. Company or major division financial results;
- C. projections of future earnings or losses, or other earnings guidance;
- D. dividend policy changes;
- E. public offerings or private sales of equity or debt securities;
- F. calls, redemption or purchases of the Company's own securities;
- G. extraordinary management developments;
- H. liquidity, cash flow or other financial problems;
- I. bankruptcy proceedings;

J. significant financing transactions;

- K. debt rating changes;
- L. recapitalization;
- M. information relating to the Company's financial condition or operations; and
- N. information which would affect the liquidity and/or trading volume of the Company's securities in the market.

3. What Types of Securities are Subject to the Company's Policy?

The prohibitions concerning inside information apply to all types and classes of securities - debt or money market securities, equities (including common stock, American Depository Shares and American Depository Receipts), and derivative products.

II. Compliance Procedures :

In order to help prevent inadvertent violations of insider trading laws and to avoid the appearance of potential misuse of inside information, all directors, supervisors, officers (assistant vice presidents and above) and such other persons as described under Article 157-1, Paragraph 1 of the Securities and Exchange Act must comply with the following procedures with respect to blackout periods. The term "such other persons as described under Article 157-1, Paragraph 1, Subparagraph 3 to 5 of the Securities and Exchange Act" will be designated as follows:

- (a) Routine designation: such other persons that are designated by Function manager or Level 1 Manager, including but not limited to any person from subsidiaries that has knowledge of information due to occupational or controlling relationship.
- (b) Special designation: such other persons that are designated by project leaders pursuant to 3.1 to 3.2, Strictly Confidential Information/Data Management for Projects Involving External Affairs (no. 00E-600-008). Any person shall notify Compliance Officer immediately upon their appointment as such project leaders.

The Company's announcement of its financial results may have a material effect on the market for the Company's securities. Therefore, Insiders may not engage in transactions involving any of the Company's securities during the following periods: (1) announcement of revenue: beginning from the first day of each month and until 48 hours after announcement of revenue, (2) announcement of quarterly financial reports: beginning from 15 days before the announcement of quarterly financial reports (including unaudited financial statements) and until 48 hours after the announcement, and (3) announcement of annual financial reports: beginning from 30 days before the announcement of annual financial reports (including unaudited financial statements) and until 48 hours after the announcement.

The Company may on occasion issue interim earnings guidance or other potentially material information by means of a press release, filing with securities regulatory authorities or other means designed to achieve widespread dissemination of the information. Trading will be blacked out while the Company is in the process of assembling the information to be disseminated and until at least 48 hours following dissemination when the information will have been fully absorbed by the market.

From time to time, a material event may occur that is known by only a few directors or officers. So long as the event remains non-public, Insiders who are aware of the event may not engage in transactions involving any of the Company's securities nor disclose their awareness. The existence of an event-specific blackout will not be announced, other than to those who are aware of the event giving rise to the blackout. Persons who learn of the existence of an event-specific blackout should not disclose the existence of the blackout to any other person.

An Insider may not engage in transactions involving the Company's securities until a blackout period has ended even if his or her employment term terminates during the blackout period. No Insider may encourage, advise or guide others concerning potential transactions of Company securities during any blackout period; it is safest for Insiders to avoid all communication on such matters in any form during the blackout period.

III. Miscellaneous

This policy is not a complete statement of all obligations of Insiders with respect to Company securities and information. For example, Insiders must comply with all aspects of the law, as well as with other Company policies and procedures, including but not limited to those concerning confidential and proprietary information and relating to communications with analysts and the media. Insiders are required to educate themselves about and to be aware of these requirements so that they can comply. Anyone having questions should contact the Compliance Officer and/or FIN/FIS (FIN-FIS_Dept_Manager@umc.com).

Remark:

1. UMC adopted the 48-hours policy as a precaution, even though in some circumstances, as a purely technical matter, the law might not require this.

CERTIFICATION OF OUR CO-PRESIDENT

I, Jason Wang, certify that:

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

Date: April 24, 2025

By: /s/ Jason Wang
 Name: Jason Wang
 Title: Co-president and Director

CERTIFICATION OF OUR CO-PRESIDENT

I, Shan-Chieh Chien, certify that:

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

Date: April 24, 2025

By: /s/ Shan-Chieh Chien

Name: Shan-Chieh Chien

Title: Co-president and Director

CERTIFICATION OF OUR CHIEF FINANCIAL OFFICER

I, Chitung Liu, certify that:

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

Date: April 24, 2025

By: /s/ Chitung Liu

Name: Chitung Liu
 Title: Chief Financial Officer and
 Senior Vice President

**CERTIFICATION OF PERIODIC FINANCIAL REPORT
Pursuant to 18 U.S.C. Section 1350**

In connection with the Annual Report of United Microelectronics Corporation, or the Company, on Form 20-F for the fiscal year ended December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof, or the Report, I, Jason Wang, Co-president of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

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

Date: April 24, 2025

By: /s/ Jason Wang
Name: Jason Wang
Title: Co-president and Director

* A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to us and will be retained by us and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION OF PERIODIC FINANCIAL REPORT
Pursuant to 18 U.S.C. Section 1350

In connection with the Annual Report of United Microelectronics Corporation, or the Company, on Form 20-F for the fiscal year ended December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof, or the Report, I, Shan-Chieh Chien, Co-president of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

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

Date: April 24, 2025

By: /s/ Shan-Chieh Chien
Name: Shan-Chieh Chien
Title: Co-president and Director

* A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to us and will be retained by us and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION OF PERIODIC FINANCIAL REPORT
Pursuant to 18 U.S.C. Section 1350**

In connection with the Annual Report of United Microelectronics Corporation, or the Company, on Form 20-F for the fiscal year ended December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof, or the Report, I, Chitung Liu, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

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

Date: April 24, 2025

By: /s/ Chitung Liu
Name: Chitung Liu
Title: Chief Financial Officer and
Senior Vice President

* A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to us and will be retained by us and furnished to the Securities and Exchange Commission or its staff upon request.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-269038) pertaining to 2022 Plan Governing the Issuance of Restricted Stock Awards for Employees of United Microelectronics Corporation, and
- (2) Registration Statement (Form S-8 No. 333-284047) pertaining to 2024 Plan Governing the Issuance of Restricted Stock Awards for Employees of United Microelectronics Corporation

of our reports dated April 24, 2025, with respect to the consolidated financial statements of United Microelectronics Corporation and the effectiveness of internal control over financial reporting of United Microelectronics Corporation included in this Annual Report (Form 20-F) of United Microelectronics Corporation for the year ended December 31, 2024.

/s/ Ernst & Young
Taipei, Taiwan,
Republic of China
April 24, 2025